

## CHAPTER III

### RESEARCH METHODOLOGY

In this chapter, the researcher explains and discuss about research design, the subject of the research (population and sample), the setting of the research (research location), the instruments of the research (research instruments), the data collection technique, data analysis technique

#### **A. Research Design**

This study includes a Quantitative experimental research. The quantitative experimental research is used in conducting the research to answer the explanation on statement problem in the first chapter. This study aims is to get facts by using quantitative experimental research because this research uses a media and teaching process to find the cause and effect (causal relation) between two factors or to find the effects of a treatment.<sup>1</sup>This research itself is also described as research conducted to investigate teachers' professional practice of their own in an effort to understand and improve the nature and specifics of their work and to develop it.

Such as described, this study involves teaching practice in research. This means that researchers be real teachers and teaching in a real classroom. And as material for teaching researchers develop new method movie with English

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<sup>1</sup>Suharsimi Arikunto, *prosedur penelitian*, (PT. Rieneka Cipta : Jakarta, 1998), p.03

subtitles taught to develop students' writing. This study is not only to teach but also it participates to increase language ability of students. The first class studies the media that be used as research material is movie uses English subtitles. The media is designed to improve students' writing skill in the classroom by assessing the results of their work after seeing the media. The students' results formed into document which it writes by students' hands. And second class studied with difference media. The class uses a movie without subtitles. The collection methods and types of movie are used the same instruments.

After the study ended, the result of writing of two classes are compared as a result of the comparison to determine the effectiveness of the media used in class whether the influence of the subtitle could affect the students' understanding or not . After that, this study involves a teacher as an observer who fills questionnaire or checklist obsevation that adds to the effectiveness of the media whether or not. The results are translated into descriptive sentences to explain the results of this research.

#### **B. Research Subject (Population and Sample)**

The research subject of this research is SMP Wachid Hasyim 7 Surabaya. That school chooses because there are many classes to be options. The amount level of the class rather than seven classes each grade. Each class consists of 30-35 students which some of it be tested. The researcher does the research in the grade eight as a subject and does it in two classes; there are VIII A and VIII B.

The researcher chooses two classes because to know this media is able or not used is by using it into a class and the other class which does not use this media and get the same material to be a comparative class. The purpose of research is to know the effectiveness of this media and that influence for the students of this school. The researcher chooses two classes by seeing same level and same test to make this research fair. Other reason why this grade is chosen because in this grade there are recount text and descriptive text. Those texts have specialty to express and retell what activity that happened to the students. In this case, this students' level still young and interest with media like movie.

There are several steps in leading this research. According to Glanz stated that quantitative experimental research consist of there are four steps which are planning or selecting the focus, collecting data, analyzing the data, and taking action (reflecting).<sup>2</sup> McNiff also stated that the last cycle continues until the quantitative experiment approach can solve the problem.<sup>3</sup> The last cycle determines this research can be called succeed or yet.

In every step teacher should do many things, as like in the first step that selecting a focus. This step includes three actions: 1. Know what you want to investigate; 2. Develop some questions about the area have chosen; and 3. Establish a plan to answer the questions. The second step is collecting data. After identifying a specific area of concern, developed some research questions, and

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<sup>2</sup>Glanz J, *Action research: An educational leader's guide to school improvement*, (Norwood, MA Christopher- Gordon : 1998), pp.21-22

<sup>3</sup>McNiff J, *Action research principal and practice*, op.cit, p.22

decided how you plan on answering them, the researcher ready to gather information to answer the research questions. The third step is analyzing and interpreting data. After collecting relevant data, the reaseacher can begin to analyze and interpret in order to arrive at some decision. The purpose has three purposes: 1. to describe or summarize data clearly; 2. to search for consistent patterns or themes among the data; and 3. to enable answering the research questions and/or prove hypotheses.

The last step is taking action. The reached stage must be made and decided. After that answering the questions about the new program. After finish that step, three possibilities will exist: the researcher should continue the program as originally established, disband the program, or modify the program.<sup>4</sup> Here, the researcher uses quantitative value to process all of the data, to collect the data, to identify the data, until to analyze the data. It means that for processing the data the researcher uses number and statistic form.

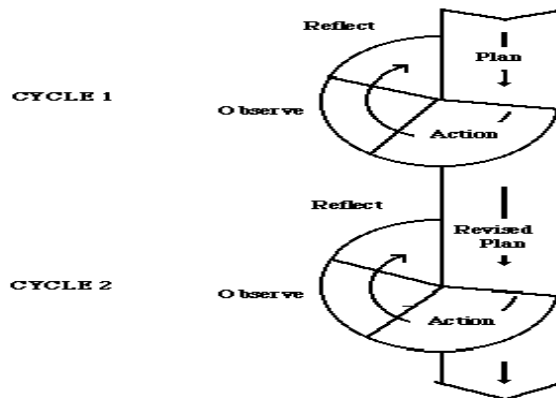
The describe explanation above the steps in quantitative experimental research as said by McNiff can be illustrated as follow.<sup>5</sup>

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<sup>4</sup>Glanz J, *Action research: An educational leader's guide to school improvement*, (Norwood, MAChristopher- Gordon : 1998), p.23

<sup>5</sup> McNiff J, *Action research principal and practice*, op.cit, p.40

**Figure 3.1**  
**Steps of Quantitative Experimental Research**



### **C. The Setting of The Research**

This research is conducted at SMP Wachid Hasyim 7 Surabaya. It is located on Jalan Pakal Kecamatan Benowo, Kota Madya Surabaya. This school is beside SMK Wachid Hasyim 2 Surabaya. This school is very strategic and easy to reach by everyone. The location of this school is beside main road of Surabaya.

### **D. The Instrument of The Research**

Instruments are the most important parts of the research. There are some instruments used in this research. Those are observations' checklist and documents. All of them are explained below:

#### **1. Observations' checklist**

This observation checklist is presented in the table sheet. It presents in the *yes* or *no* form of statements. This research is signed by ( ) to choose the answer that they predict suitable with their want. The data is needed to find out results of subtitle criterias in English movie as media to write. The

checklist is for the real teacher to criticize the movie and other things as long as teacher teaches students. This checklist have five indicators consist of the movie itself, then the subtitle, teachers' technique and the process of learning writing in the class.<sup>6</sup> The real teacher chooses an option between *yes* or *no* answer.

The first indicator is the movie. Generally, this indicator criticizes whether the movie is appropriate. Second is the subtitle, the checklists is about the role of subtitle in the movie. The third indicator is teachers' technique. These indicators examine teachers' preparation before the teacher teaches using the media. The last indicator is the process of teaching and learning writing in the class. This indicator asks the way of teacher to teach in the class. The concern is students can accept the main points of teachers' mean.

## 2. Worksheets

Worksheets of this research presents a subtitle in movie as media to teach in the class. The students are asked to make the writing text in every step. In this part, student in the writing composition takes the score based on ESL (English as a Second Language) form. This score takes and uses to find out the improvement of the students' writing composition. These criteria of

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<sup>6</sup>Modified from Fitri Khoirun Nisa, "*Teaching Descriptive writing by using photo as a media to eight grade students of smp jati agung taman sidoarjo (Thesis)*", (Surabaya : Sunan Ampel Islamic University :2009), p.44

scoring are guided by ESL guide to assess in writing text.<sup>7</sup> In that rubric there are five aspects or criteria to assess the students' writing. First is content. It has 30 percents from all scores. From highest to lowest, there are criteria to put the score. 30 until 27 is Excellent, which means that students' writing is relevant to the topic. 26 until 22 is good, which means students' writing are mostly relevant to the topic but lack of detail. 21 until 17 is fair, which means that students should be inadequate development the topic. Then 16 until 13 is very poor, which means that the writing is unrelated from the topic.

Second is organization. It has 20 percents from all scores. From highest to lowest, there are criteria to put the score. The score 20 until 18 is excellent, which means that students' writing is logic, clear and cohesive. 17 until 14 is good, which means that students' writing is logic but incomplete to the idea. 13 until 10 is fair, which means that students' writing do not logic and need to develop their writing ideas. Then 9 until 7 is very poor, which means that the writing does not communicate and it is not organize there. The important one is the third criteria that is vocabulary. It also has 20 percents from all scores. From highest to lowest, there are criteria to put the score. The score 20 until 18 is excellent, which means that students' writing is full of effective word or idiom choice to use. 17 until 14 is good, which

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<sup>7</sup>Elli, *The ESL Composition Profile – A Guide To The Principles Of Writing*, <http://eli.tamu.edu/resources/ext-crit-lot.html> accessed:06/04/2014

means that students' writing do not have effective word or idiom choice to use. 13 until 10 is fair, which means that students put error of word and make the sentence meaningless. Then 9 until 7 is very poor, which means that the vocabulary do not really enough to evaluate. Fourth aspects are language used. This aspect has 25 percents from the scores. From highest to lowest, there are criteria to put the score. The score rather 25 until 22 score is excellent, which means that students' writing is right in grammatical as like full of using articles, preposition, and etc. 21 until 18 is good, which means that students' writing is grammatical as like full of using articles, preposition, etc, but the meaning is obscure. 17 until 11 is fair, which means that students' writing ideas are dominated by error and confused. Then 10 until 5 is very poor, which means that the writing does not communicate and it is really hard to understand.

The last aspect is mechanics. It has only 5 percents from all scores. From highest to lowest, there are criteria to put the score. The score is 5 percents is excellent, which means that students have mastered English spelling and paragraphing and also punctuation. 4 percents is good, which means that students have mastered English spelling and paragraphing and also punctuation, but meaning is not clear. 3 percents is fair, which means that students have some errors in English spelling and paragraphing and also punctuation, but meaning not really clear. Then 2 percents is very poor,



which means that students have dominated with error in English spelling and paragraphing and also punctuation, but meaning does not clear.

#### **E. Data Collection Technique**

In the research, the researcher uses some types of technique to collect the data. This research uses quantitative experimental as a technique. Those techniques are:

##### **1. Observation**

In this case, the researcher observes the class directly using checklist which is adapted from media's observation rubric. The researcher observes during the class activity. First step is researcher prepares the media to teach in the class. After that second step is researcher gives the checklist to the observer. The next step observer see teaching and learning process. Then observer answer the questionnaire and giving the comments. And the last step is researcher summarize the answer and the opinion from the observer, after that the researcher has role to describe those observation checklist into a paragraph.

##### **2. Students' writing composition**

Students' writing composition takes important role in this research. In this technique, the researcher gives students of VIII B and VIII A class from SMP Wachid Hasyim 7 Surabaya for writing. The researcher uses a writing text or the documents of students based on the movie to describe the data.

## **F. Data Analysis Technique**

In this step, the researcher analyzes data and explains how condition the class as a report to a real English teacher there. Researcher uses quantitative experimental consider observation checklist and students' writing composition. The data is collected from those techniques are described as follows:

In the research, especially for this part there are some types of technique to collect the data. This Research uses task based learning as a technique, it means researcher uses task from the students to analyze as data. Analyzing the data uses t tets statistic. For the observation checklist, researcher uses descriptive ways. researcher explains some of criterias from the questionnaire. Researcher give criterias 1 until 4 points which can be choosen by the respondents. those question sheet by considering opinion from the observer. It hopes the opinion can make the teaching and learning process in the future better than previous teaching.

The researcher applied the use of English movies' subtitle at SMP Wachid Hasyim 7 Surabaya to the grade eight students. Before doing the research, researcher wants permission to english teacher for doing reseearch. Teacher give explanation about the class that the condition of the class really crowded and it is very hard to arrange. Teacher give suggestion to choose VIII A and VIII B as an object because both of class is smarter than other class. and both of class have same ability, condition and level of attention. So the researcher choose two classes as participants of the test. It limits to VIII B as the experiment

class and VIII A as the control class. The researcher gave three treatments to the class by using English movies' subtitle as a means of teaching and learning. Three movies are presented during the teaching and learning. The researcher used movie selection from BBC and other sources that are acceptable with the level of student. The complete description are:

There are three treatments for this research, every treatment has some techniques. First treatment tests about the skill from recount text. This treatment chooses movie from movie have title "New Headways episode 04" about surprise. In this movie, there is friends who prepared their friend birthday party. This movie have lenght 7 minutes. There are some steps of teaching and learning. First, when teacher comes to class then the teacher gave explanation about definition of recount text and the pattern of it. Because students had learned before, teacher only reviews a little bit of recount text explanation. The teacher gives a paper containing an example of recount text and asked students to determine the pattern of recount text based on the text. After that the teacher gives another paper containing blank sheet inscribed with part of pattern of recount text above. Teacher gives explanation that students should fill the blank paper by watching the movie. After teacher orders students to fill the blank based on the movie. The teacher played the movie three-four times to make students really understand with the content of movie. After students done with the task, the teacher collected the students' work. This steps is occured for both of classes containing control class and experiment class.

The second treatment researcher test about the skill also from recount text. This treatment chooses movie has titled English today. In this movie, there is person who introduces himself to neighbour. This movie has length 5 minutes. Researcher teaches class again as a teacher with the similar steps. In this meeting teacher comes to class then the teacher evaluated the previous learning. Then the teacher gave tips about how to make good writing. The teacher played the movie three-four times to make students really understand with the content of movie. The last the teacher collected the students' work and finishing the lesson.

The third treatment researcher test about the skill also from descriptive text. This treatment chooses movie has titled English today. This treatment was hold on 07<sup>th</sup> June 2014. In this movie, there are some people formed into news programers and they introduce to an audience of television. This movie has length 6 minutes. There are some steps of teaching and learning. First, when teacher comes to class then the teacher gave explanation about what are descriptive text is and the pattern of it. Because students had already learned before, teacher only reviews a little bit of descriptive text explanation. The teacher gives a paper containing an example of decriptive text and asked students to determine the pattern of descriptive text based on the text. Then the teacher divided students into pairs and asked them to describe their favorite things then students are asked to describe their friends based on writing. Teacher gives explanation that students should fill the blank paper by watching the movie. After that teacher orders students to write the descriptive text based on the movie. The

teacher played the movie three-five times to make students really understand with the content of movie. After students finishes with the task, the teacher collected the students' work. This steps is occurred for both of classes which containing between control class and experiment class.

The researcher has done two weeks research in SMP Wachid Hasyim 7 Surabaya. There are three times for teaching and learning activities for each class. In doing research, the researcher gave similar treatments to the experiment class and control class, while the experiment class gets a lesson as usual. The topic lessons were same with the real teacher but the method of teaching was different, using movie are seldom and for this research movies are used as experimental media to the control group and control class. In the experiment class movies are used by using a subtitle but in the control class, movies does not using the subtitle.

For the scoring, the researcher made his own standard, but it was related to the English for Second Language Composition essay rubric scale. For each aspect such as content, organization, vocabulary, language use and mechanic, it was fixed by experimental school. The researcher used many criteria to make the score very detail. Each of aspects has minimum and maximum score to clear explanation about this minmum and maximum for details of score does explain the previous chapter. The maximum of score is 100 and it consists of content which calculating the main point of the research and the points are rather 13 and maximum 30 points, and the organization calculates the grammar of the data it

has 7 until 20 points, and the vocabulary is checking the kinds of vocabulary which students write in the text it has 7 until 20 points, then language use is relating to grammar but specifically for this research are using the past tense words and this criteria checks the language role for each text and this criteria has 5 until 25 points, and the last criteria is and the last is mechanic, it checks the writing structure of the essay structure because the text should has main sentence and supporting sentence in each text. The researcher determined the score based on important role of the aspect, the maximum score will be 100.

The writing section or the students' writing composition is using t statistic. In t statistic, researcher compares two of class as experiment and control classes. researcher takes a sample as an appendices. Researcher uses steps for this study by accounting normality test, the homogeneity test, and the differences between means. The researcher uses the students' results as a contains to calculate the value using those steps above.

In the normality test includes making distribution frequency list of each group, determining alpha of each class, calculating mean, calculating standard derivation, calculating list of expectation frequency. Calculating list of expectation frequency consists of determining under limit of each interval, calculating standard number of each interval calculating class interval, expectation frequency, determining alpha and value of X using chi square, and also using hypothesis to complete the calculating and it can be concluded. For the hypothesis there are two possibilities are the score of student who use English

movies subtitle is higher than the student who does not use English subtitle or the score of student who use English movies subtitle is same with the student who does not use English subtitle.

For the some procedures of homogeneity test, there are arranging hypothesis, determining alpha, calculating test statistic and it can be concluded. And for the differences between means, the procedures are arranging hypothesis, determining alpha, determining receiving criteria  $H_0$  calculating test statistic and it can be concluded. Those steps above uses complete formula as follows:

### 1. The Normality Test

This is test to measure whether or not the data (Sample) from the population distributes normal<sup>8</sup> in this test includes:

- a. Making distribution frequency list of each group

This step discusses the score and the number of class members.

After finding the list of group score, it will multiply to the number of score.

**Formula :** ( $F_i = \text{Score of students} \times F$ )

- b. Calculating Mean

Formula :

$$\bar{x} = \frac{\sum_{i=1}^n x_i}{n}$$

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<sup>8</sup> Subana dkk, *statistik pendidikan*, (CV, Pustaka Setia : Bandung, 2000), p. 123 – 126

## c. Calculating Standard Derivation

Formula :

$$s^2 = \frac{\sum (x_i - \bar{x})^2}{n - 1}$$

*Note* :  $\bar{x}$  : Final Score of mean $X_i$  : Mean Score

n = Many Data

## d. Calculating Expectation Frequency, this test consists of :

- Determining Under Limit ( $X_i$ ) of each interval

Formula :  $X_i = x - 0,5$  for  $i = 1, 2, 3 \dots n$ 

- Calculating Standard Number ( $Z_i$ ) of each interval

Formula :  $Z_i = \frac{(x_i - \bar{x})}{S}$  for  $i = 1, 2, 3 \dots n$ *Note* : $Z_i$  : Standard Number $X_i$  : Under Limit I class $\bar{x}$  : Final Score of mean $S$  : Standard Derivation

- Calculating Expectation Frequency ( $E_i$ )

Formula :  $E_i = L \cdot n$ *Note* :



$L$  : Area of each class interval

$n$  : Many data

e. Determining Hypothesis and Experiment Criteria

- This Research has Hypothesis:

$H_0$  = Samples is from distributes Normal

$H_1$  = Samples is from population does not distributes Normal

- This Reseach has Experiment criteria:

$H_0$  is received if  $X^2_{hit} \leq X^2(1 - \alpha) (k - 3)$ , that sample distributes normal.

$H_0$  is refused if  $X^2_{hit} \geq X^2(1 - \alpha) (k - 3)$ ,that sample does not distributes normal.

f. Calculating the Value ( $X^2_{hit}$ ) by Chi Square

**Formula :**

$$X^2_{hit} = \frac{\sum_{i=1}^k (O_i - E_i)^2}{E_i}$$

*Note :*

$k$  : Many Interval Class

$O_i$  : Under Limit I class

$E_i$  : Expectation Frequency

g. Finding for the Value ( $X^2$ )

**Formula :**  $\chi^2 = (1 - \alpha) (k - 3)$

*Note :*  $\alpha = \text{alpha} (0,01)$

h. Concluding by looking Experiment Criteria

## 2. The Homogeneity Test

Homogeneity test is test to compare the biggest and the smallest variants. This research used variants by harlest test<sup>9</sup> in this test uses formula:

$$F = \frac{S^2_{big}}{S^2_{small}}$$

This test has procedure as follows :

a. Arranging Hypothesis

$H_0 =$  Samples is from populations that has variants homogeneity

$H_1 =$  Samples is from that populations has not variants homogeneity

b. Determining alpha ( $\alpha$ )

$\alpha = 0,05$

c. Determining F (Formula is in above)

d. Determining  $F_{tabel} = F; S_{big}, S_{small}$

e. This Reseach has Experiment criteria:

If  $F \leq F_{tabel} = H_0$  is received.

If  $F \geq F_{tabel} = H_0$  is refused.

f. Concluding by looking Experiment Criteria.

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<sup>9</sup> Subana dkk, *statistik pendidikan, Op.cit*, p. 135 - 137

### 3. The Calculation of Differences between Means

This test are used when The Normality and The Homogeneity was found, This test has steps a follows :

a. Arranging Hypothesis

$H_0$  = the final score of students who are using English Movies' Subtitle is Worse than students who are not using English Movies' Subtitle.

$H_1$  = the final score of students who are using English Movies' Subtitle is Better than students who are not using English Movies' Subtitle.

b. Determining alpha (0,05)

c. Determining receiving criteria  $H_0$

$H_0$  is received if  $t_{hit} < (a, v)$  and if contrast  $H_0$  is refused.

d. Calculating test statistic

**Formula :**

$$t_{hit} = \frac{\bar{x}_1 - \bar{x}_2}{\frac{\sqrt{S_1^2} + \sqrt{S_2^2}}{n_1 + n_2}}$$

$$\text{With } v = \frac{\left( \frac{S_1^2}{n_1} + \frac{S_2^2}{n_2} \right)^2}{\frac{\left( \frac{S_1^2}{n_1} \right)^2}{n_1 - 1} + \frac{\left( \frac{S_2^2}{n_2} \right)^2}{n_2 - 1}}$$

*Note :*

$\bar{X}_1$ : Mean score sample 1

$\bar{X}_2$ : Mean score sample 2

$n_1$ : Many of sample data 1

$n_2$ : Many of sample data 2

$S_1^2$ : Sample variants 1

$S_2^2$ : Sample variants 2

- e. Concluding by looking criteria of receiving  $H_0$ .

By using that reference, the teacher and observer know that this media is appropriate to improve students' writing skill or not by seeing the hypothesis. And by using descriptive analysis, the researcher also explain how this media can change the condition from the situation and it can improve the students from the scores' sides. This research also explain by using data will be formed as a table to know the improvement and differences of the previous lesson before teacher used this media and after teacher used this media. This research also can show the result to the table and it can explain the result of research. So, the researcher makes a decision to choose this analysis for this research technique.