

CHAPTER III

RESEARCH METHOD

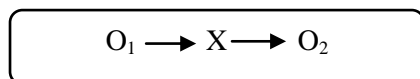
In this chapter the researcher present research method. It consist of research design, population, sample and sampling, technique of data collecting, technique of data analysis, research instrument.

A. Research Design

Research can be defined as the process of problems solving, it can be described as a general plan that will conducted to answer the research question. Based on the problem and expectation to find out the effectiveness of using animation movie as the medium in writing narrative text, it was consider that the method of research that used in this study is an experimental design using quantitative approach, with one group pretest-posttest design. This study using pre-experimental design because it does not have random assignment of subject to group or other strategy to control extraneous variable. According to Sugiyono (2012:109) experimental research is a method used to find a specific treatment effect toward the other in a controlled condition. It's why in this study the researcher only takes one group or class and the result of treatment is found by comparing pretest and posttest score.

Allaga and Gunderson (2002:1) describes that quantitative research is explaining phenomena by collecting numerical data that are analysed using mathematically based methods (in particular statistics). Quantitative research uses objective measurement and statistical analysis of numeric data to explain the phenomena.

In this study took two group from same class and given 2 kind of almost the same material. Arikunto (2010:85) the researcher conducting observation directly to a subject group with two condition and implemented without compare group. It is the shape of one group pre-test post-test design:



Where:

O₁: pre-test

X: treatment

O₂: post-test

This research intended to find out the effectiveness of using animation movie as the medium in teaching writing narrative text for first grade students at MAN Rejotangan. The use of treatment is aimed at proving if there is a significant difference of students' score before and after the treatment. So, the effectiveness of treatment is known the significant score when the students taught using movie as the medium in teaching.

B. Population and Sample and Sampling technique

1. Population

Population is a set of data that have the same characteristic and be the object. According to Arikunto (2010: 173), the population is all members of the research object. The research present, the population were the first grade students of MAN Rejotangan which consist of eight class. There are 276 students of the first grade students of MAN Rejotangan.

2. Sample

In this research, the researcher not take all of population become the sample. So, the researcher needed to select sample by using technique called sampling. Sample is a part of population representative which is researched based on Arikunto (2010: 174). Sample is part of amount and characteristic in population that taken in a procedure until can represent the population. It means that good sample must represent of entire as possible, so that the generalization of the sample as true as population. This research the sample was the X-IPS 1 class that consist of 36 students, there are 15 male and 21 female students.

3. Sampling

In this research, the researcher used random sampling technique with simple random sampling. This sample was chosen randomly by lottery technique from all of available population. The researcher take X IPS 1 class in MAN Rejotangan.

C. Research Instrument

Research instrument is the tool of collecting data that should be valid and reliable. According to Fraenkel (1996) the device the researcher uses to collect data is called instrument. In this research the writer used a test as an instrument to get the data. The test was given into two section, the researcher applied pre-test and post-test. Pre-test was given before treatment, here students asked to watch movie during 45 minutes on April 20th 2017, and for the 45 minutes for doing their task. And the next meeting

on 23th April 2017, students given first treatment about definition and generic structure of narrative text during 40 minutes and play the movie during 50 minutes. The next on 25th April 2017, students given a second treatment about types and language features of narrative text during 40 minutes and play the movie also give a test such as in treatment before. Next, on 26th April 2017, students given a third treatment about example of narrative text during 60 minutes and play the movie than students do the work until they are understood about narrative text and how to write narrative text, students' also give a test such as in pre-test process, the students watching movie then write the story of movie that have been watched. In fifth meeting on 27th April 2017, here the researcher conducting post-test after students given a treatment, conducting post test conducted if the students understanding well about narrative text from conducting treatment. In the post-test process students asked to watching movie again such as in pre-test process during 45 minutes and 45 minutes again for done their task after giving treatment. The test which was given should be matching to the curriculum including core competence and basic competence of English subject for ten grade level. The researcher decided to take some topics related the basic competence of curriculum about narrative text. For detailed instrument of the test and also scoring rubric to getting score that researcher used in this research can be seen in Apendix 2.

The students' ability in writing narrative text can be assessed by using scoring rubric for writing narrative text as follows:

Table 3.1 Scoring Rubric based on Cohen for Writing Narrative Text

No.	Aspect	Score
1	Content	1-5
2	Organization	1-5
3	Vocabulary	1-5
4	Grammar	1-5
5	Mechanics	1-5
Maximum score		25

After the researcher got the score for every students in every items of aspect in scoring rubric, the maximum of all items was 25 points.

D. Validity and Reliability Testing

1. Validity

Validity is test that used to measure what should measured. Based on Azwar (1986) validity is the extent to which a test measures what it is supposed to measure.

In this study, the instrument tested by using *construct validity*, *content validity* and *face validity* because those are related with this research.

a. Content validity

Content validity refers to the appropriateness of the content of an instrument. In other words, do the measures (questions, observation logs, etc.) in this case the content validity must refer to the "K13 curriculum". Based on standard competence in syllabus of K13 curriculum are mentioned expected able to express meaning in functional written text or

simple short essay in the form of narrative and descriptive in daily life context

Table 3.2 content validity

No.	Main competence	Basic competence	Indicators	Instruction	Item(s)
1.	3. mengungkapkan makna dalam teks tulis fungsional atau essay pendek sederhana berbentuk <i>narrative</i> dan <i>descriptive</i> sederhana dalam konteks kehidupan sehari-hari.	3.3 mengungkapkan makna dalam teks tulis atau essay pendek sederhana dengan menggunakan ragam bahasa tulis secara akurat, lancar dan berterima dalam berbagai konteks kehidupan sehari-hari dalam teks berbentuk <i>narrative</i> dan <i>descriptive</i>	3.31 Siswa mampu menuliskan kembali teks narrative berdasarkan struktur yang benar.	<u>Pretest</u> Write about the story of the movie that you have been watched, by using your own language!	1
			3.3.2 Siswa mampu menulis cerita pendek atau paragraf sederhana berdasarkan cerita di film	<u>Posttest</u> Write about the story of the movie that you have been watched, by using your own language!	1

b. Face validity

A test is said to have face validity if it looks as if it measures what it is supposed to measure (Isnawati, 2014:29). If the contents of measuring instrument were seen appropriate of what is to be measured then, face validity has been fulfilled. Here, the researcher analyzed the students' level by consulting an expert. The expert here was the advisor, English teacher. Then, the items which were prepared were matched to senior high school level. And then asked the students to write a narrative text. It showed that the test was valid on face validity.

c. Construct validity

It is the degree of test measuring that supposed to measure. It can examine the items and decide what that specific item is intended to measure.

In this research, the researcher conducted research about writing. In the test the researcher asked the students to write narrative text based on movie that they have watched to measure students' writing ability, valid in the term of construct validity through aspect that underlying writing, such as content, organization, vocabulary, grammar, mechanics. The researcher using scoring rubric for writing narrative text in the form of analytic scoring which measured the students' mastery in content, organization, vocabulary, grammar, mechanics.

In the test the researcher administered written test to measure students' writing ability. The researcher made this test based on the course objectives in the syllabus of first grade at MAN Rejotangan. Therefore, this test is valid in the term of content validity.

2. Reliability

Reliability is constancy in measurements based on Walizer (1987). Measuring result obtained relative consistent although it's doing continually.

In this research, the researcher conducted a try out in order to measure the validity and reliability of the instrument before conducting pre-test and post-test. The researcher only took 10 students to be a samples in conducting try out. The instrument of this try out was test. In try-out process, the researcher asked the students to write narrative text based on movie that they had watched. The scoring was based on writing analytical scoring rubric and scored by two raters, the English teacher of first grade class and the researcher herself. In this research, to get reliability of the test is by uses (*inter-rater reliability*). Inter-rater reliability is achieved when two scorer or two raters do the scoring then, the result of two scores will be calculated to get correlation coefficient. Then, after finishing try-out, the data is shown in the table below:

Table 3.3 try-out result analysis

No.	Subject	Score		Mean
		Researcher	Teacher	
1	ANM	13	14	13.5
2	AAS	12	13	12.5
3	CDS	15	13	14
4	DPW	13	14	13.5
5	ELA	14	14	14
6	IFR	14	14	14
7	FNA	19	18	18.5
9	MRH	13	15	14
10	TWN	13	12	12.5
10	WWS	19	19	19
TOTAL		145	146	145.5

The ideal test must be valid and reliable. In this research, the researcher used SPSS 16.0 for window Alpha Cronbach reliability coefficient to analyze the data.

According to Ridwan (2004) reliability of the test distribution can be categorized into 5 classes as follows:

- a. If the alpha cronbach score 0.00-0.20: less reliable
- b. If the alpha cronbach score 0.21-0.40: rather reliable
- c. If the alpha cronbach score 0.41-0.60: enough reliable
- d. If the alpha cronbach score 0.61-0.80: reliable
- e. If the alpha cronbach score 0.81-1.00: very reliable

Based on the computation the result of reliability testing by using *inter-rater reliability* with SPSS 16.0 version, showed that the Alpha Cronbach's score in try-out. The result of reliability testing by using SPSS 16.0 can be seen on the table below:

Table 3.4 Result of Reliability

Case Processing Summary

		N	%
Cases	Valid	10	90.9
	Excluded ^a	1	9.1
	Total	11	100.0

- a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.932	.935	2

Related with the categories of the reliability testing according Ridwan, the result of computation Alpha Cronbach's score was 0.932 it means that score categorized into very reliable test.

E. Normality and Homogeneity Testing

1. Normality testing

Normality testing are used to know whether a data set is well-modelled by a normal distribution or not, or to measure how likely an underlying random variable is to be normally distributed. The researcher uses *Kolmogorov-smirnov* formula by using SPSS 16.0. Based on the computation the result of normality testing by using *inter-rater reliability* with SPSS 16.0 version. For detailed of computation can be seen in the chapter IV.

2. Homogeneity Testing

Homogeneity testing is used to know homogeneous or not the variance of the sample from population. Homogeneity testing was done after doing normality testing. To know homogeneity, the researcher uses Test of Homogeneity of variances with SPSS. 16.0. For detailed of computation can be seen in the chapter IV.

F. Technique of Data Collection

Data collection is done by observing a situation, setting or interaction using the constructed instrument. Data collecting method is the method to obtain the data in the research. The purpose of data collecting in conducting scientific research was to get material that needed in the research. The researcher collect the data from the students' score in pre-test and post-test.

This study used test as the way to collect the data. Before the test was administered for pre-test, the writer did the validity test to examined are the test valid and suitable to get the data from students. In this research, the technique of collecting data was clarified as follow:

1. Pre-test

Pre-test is test that conduct before treatment. Pre-test was given before treatment, pre-test held on Thursday, April 20th, 2017 at 11.20 until 13.00 am. Students were asked to watch movie during 45 minutes, and for the next 45 minutes for doing their task then collected. It's to know the student's ability in writing narrative text before the treatment was carried out. In the pre-test process, the students had to write a narrative text based on movie but they are not give a treatment yet. The procedure of scoring has been explained on the sub chapter research instrument.

2. Post-test

Post-test is done after the student being taught and given the treatments. Post-test held on Thursday, April 27th 2017 at 11.20 until 13.00 am. The researcher conducting post-test after students given a treatment. In the post-test process students asked to watching movie again such as in pre-test process during 45 minutes and 45 minutes again for done their task after giving treatment. From the score of this test, the researcher is intended to find out student's ability in writing materials after given the treatment. The result of the scoring then will compared with score result in pre-test.

G. Technique of data analysis

To analyze the data the researcher will use statically calculation of the test to determine the final calculation of observation which will be done to measure the last score of the research test.

The data obtained from research result is the results of student's test that were analyzed quantitatively. Quantitative analysis was done using statistics which is called statistical analysis or inferential statistics. The quantitative data of this research in analyzed using statistical computation. This technique was used to find the significant difference on the students' writing after being taught by using animation movie as medium in teaching writing narrative text. To analysing the data, the researcher uses SPSS version 16.0 for windows with formula t-test. The researcher uses paired sample T-test formula in order to computing the different data between pre-test and post-test.