Chapter Three

Methodology

This chapter presents research design, research setting, population and sampling, data collection method and data collection procedure. Data analysis is also presented in this chapter.

Research Design

This research used experimental design with quasi-experimental technique. Walser (2014, p. 2) stated that "Quasi-experimental studies are similar to examine in that they compare treatment to non-treatment conditions; however, participants are not randomly assigned to conditions". It means that, the researcher chose two classes, namely experimental group and control group. For this experiment, the researcher did not use random assignment. Hence, Cohen, Manion, and Morrison (2011) clarified that the simulation of quasi-experimental design in the figure below:

Experimental	0_1	*X*	0_2
Control	0_3		0_4

Figure 3.1 **Quasi-Experimental adopted from Cohen, Manion and Morrison (2011)**

In the figure 3.1, the researcher assigned two groups, namely experimental and control group. Sukardi (2003) identified that experiment group is for view and record all phenomena that appear to cause the difference between

the two groups. Besides, Gay (1982) as cited in Fatoni (2013, p. 37) stated that "Control group is an effort on the part of researcher to remove the influence of any variable other than the independent variable that ought to affect performance on a dependent variable".

In addition, the researcher gave pre-test and post-test in two groups. In the beginning, the researcher gave pre-test to both experimental group and control group. For the pre-test and post-test, the researcher designed a test in order to measure the students' narrative writing skill. In the middle of meeting the researcher gave a treatment to the experimental group and for the control group there was no treatment. The tool of treatment that was given to the experimental group was short animation movie. Thus, the researcher compared two groups in the experimental group and the control group, if the experimental group was given a treatment by using short animation movie while the control group there was no treatment.

Research Setting

This research was conducted at Senior High School (SMA) Muhammadiyah 4 Yogyakarta. The researcher had three reasons why conducting the research in SMA Muhammadiyah 4 Yogyakarta as following.

Firstly, it was because the researcher did internship in the school. The researcher had chosen the place to collect the research data because the researcher had experiences in teaching the students and knowing the real condition there. According to Akdağ & Haser (2010, p. 25), "Teachers' experiences could bring a comprehensive understanding of what they need and how they would overcome

problems". The researcher's experiences during the internship program would enable her to identify and address problems. This was because she had already been familiar with the situation and known the students well.

Secondly, the researcher found a problem faced by the students which was a problem in developing writing skill. Based on the researcher's experiences, the students were not attracted in writing activity because they were not interested in the media of learning process. Using short animation movie the researcher hoped that the students enjoy in writing activity.

The last reason is that Universitas Muhammadiyah Yogyakarta (UMY) was a partner school with this institution, so it made easier the researcher did the research in the institution. It means that, the researcher got the permission to conduct this research in the institution. Therefore, those are the reasons why the researcher conducted this research in this institution.

The researcher conducted the research in eight meetings. It was done in a month in which there were two meetings in a week. This research was conducted in academic year 2015/2016 from the middle of April to the middle of May 2016.

Population and Sampling

Population. The researcher had taken population in 11th grade Natural Science (IPA) of SMA Muhammadiyah 4 Yogyakarta in the academic year of 2015/2016. According to Margono (2010), the population is a whole subject in research. Besides, in the 11th grade IPA consists of 3 classes, namely: class XI IPA I, which consisted of 30 students, class XI IPA II which consisted of 30 students and class XI IPA III which consisted of 25 students.

There were two reasons why the researcher chose 11th grade IPA at SMA Muhammadiyah 4 Yogyakarta. First, it was because narrative writing is included in the syllabus for 11th grade. Then, based on the researcher observation, the students faced some problems in writing so the researcher needed to conduct the research on the class.

Sampling. The researcher had taken two classes in 11th grade IPA, there were class XI IPA I and class XI IPA II of SMA Muhammadiyah 4 Yogyakarta, Kota Gede, in the academic year 2015/2016. Therefore, the researcher took two classes of XI IPA I and XI IPA II because the sample of two classes is same including 30 students. It means that they were 60 students through 16-17 years old as the sample of this research.

After the researcher did the pre-test and post-test activity the participants became only 32 students of two groups. It was because most of the students had absent in the pre-test and post-test activity. So, the participants of this research were consisted 32 students of two classes. In addition, those participants assigned to experimental (class of XI IPA I) and control groups (class of XI IPA II). In this research, the technique used to determine the sample was choosing by purposive sampling. Sugiyono (2011) argues that purposive sampling is technique to choose the sample by certain consideration. It was because purposive sampling allowed the researcher to make her own criteria to become her participants. Moreover, the criteria of this research were: the students that had been getting narrative subject, the students had basic in narrative writing skill and the average score for the students was 7.5.

Research Instruments

Instruments. This study aimed at investigating the effectiveness of using short animation movie on students' narrative writing skill. The data was collected by tests. Brown (1994) argues that test is a method of measuring a person's ability or knowledge in a given area. The researcher created the tests consisted writing pre-test and writing post-test in order to measure the students' narrative writing skill. A form of test was an essay that related with the materials, that was narrative text. These pre-test and post-test were assessed using a scoring rubric (Appendix 8). The scoring rubric was taken from (Gutiérrez, Puello, and Galvis, 2015).

The second instrument was short animation movie. The researcher collected the teaching materials from www.youtube.com. The treatment was six times, so the researcher provided six short animation movies as the teaching materials. Short animation movie also had some themes such as fable, myth, fairy stories, romance or legends. Nevertheless, the duration for each short animation movie was around 4 to 5 minutes.

The last instrument was lesson plan. The researcher created some lesson plans to be taught because the researcher had eight meetings to the teaching process. Lesson plan was a detailed guide for teaching a lesson. Richards (2002) argues that lesson plan is often viewed as a key aspect in teaching a successful lesson. The elements of lesson plan included goals, resources, activities, timing and grouping. Therefore, using lesson plans helped the researcher easier to compile learning activities in class.

Validity of the instrument. Validity was a measurement of the instrument, whether the instrument was valid or not. The researcher used expert judgment to check whether the instrument of test can be used to measure the narrative writing skill. According to United nation (2012) "Expert judgment is an approach for seeking opinion papers on issues requiring policy responses". It means that, the instrument of test and lesson plan were checked by lecturers or teachers to know the validity from the instrument. Therefore, the normality of the data could be checked by using *Shapiro-Wilk*in SPSS.

Reliability of the instrument. Creswell (2012, p. 159) stated that "Reliability is scores from an instrument are stable and consistent". It means that if scores of pre-test and post-test were not reliable, they were not valid. Moreover, the scores have to be stable and consistent. Additionally, more the value of the reliability scores is high, more the instrument is valid. Thus, the reliability of the data could be checked using *Homogeneity of Variance* using Anova in SPSS.

Data Collection Method

The data is collected by using a test. The researcher applied pre-test and post-test to measure students' narrative writing skill. The tests were given before and after the treatments.

Test. Pre-test was done before the implementation of the treatment. This test was conducted to measure the students' narrative writing skill before getting the treatment. Therefore, post-test was done after the students got some treatments. This test aimed to know the students' writing achievement after the treatments given.

Treatment. To know the effectiveness of using short animation movie, the researcher did some treatments. There were two groups involved, namely the experimental group which received the treatment and the control group which did not get the treatment. The treatments were given six times to the students. In the treatment process, the students watched a short animation movie to get a story in the movie, generic structures in the movie and got some words and then the students reviewed the story in the animation movie. The time allocation for each meeting was 60 minutes.

Data Collection Procedure

To collect the data, the researcher came to institution at SMA Muhammadiyah 4 Yogyakarta on last October 2015 to confirm that the researcher could conduct the research in this school. Then, administration staff of SMA Muhammadiyah 4 Yogyakarta explained the procedure in conducting the research. Thus, there were the several procedures in the table below:

Table 3.1 *Administration*

No.	Date and time	Activities
1.	October 26, 2015	Asked the procedures in the institution at SMA Muhammadiyah 4 Yogyakarta
2.	October 27, 2015	Submitted the permission letter to the university
3.	October 30, 2015	Submitted the permission letter to Pimpinan Daerah Muhammadiyah (PDM)
4.	November 9, 2015	Submitted the permission letter from PDM to SMA Muhammadiyah 4 Yogyakarta

The researcher had completed all of the terms and stuff such as the research permit that were needed by SMA Muhammadiyah 4 Yogyakarta. Finally, the researcher got the permission to conduct the research at SMA Muhammadiyah

4 Yogyakarta on the middle of April up to the middle of May. Then, after got the permission to conduct in this school, the researcher had several plans to collect the data. This research had eight meeting from the middle of April up to the middle of May.

First meeting held in the middle of April on 2016, the researcher gave an introduction and gave a pre-test for the students at the class. Second meeting, the researcher gave a short animation movie of Pinocchio story as a treatment for the students and then asked the students to make a draft and also gave the treatment using short animation movie. Third meeting up to sixth meeting, the researcher gave a several treatments for the students by using short animation movies. In addition, the researcher asked the students to write some vocabularies, some characters and characteristics, and a story related the movie. Fourth meeting, the researcher asked the students to edit the draft that they have made in previous lesson. Thus, in the last meeting the researcher gave a post-test to the students.

Based on the several plans above, the researcher used a technique in process of writing (Harmer, 2004). These were to apply a planning, drafting, editing and final version in process writing for the students. Therefore, the students were easier in order to produce writing because every stage in process of writing had a lot of function to help the students in writing. So, these were several planning to collect the data in the research timeline table below:

Table 3.2 *Data Collection Procedures*

No.	Objectives	Meetings					
		1st March week 4	2nd – 3rd April week 2-3	4th – 5th April week 3-4	6th April week 4	7th May week 1	8th May week 1
		Students' activities					
1.	Pre-test	Written a narrative text about snow White story.					
2.	Language features (verb, adverb, adjectives and preposition) of narrative text		- Write and mention some vocabularies. - Write some sentences of Snow White story. (***Planning***)				
3.	Language focus (simple past tense) of narrative text			- Write and mention some vocabularies. - Write a character and characteristic of Snow White story. (***Planning***)			
4.	Identify the generic structure of narrative text				- Made a draft about Snow White story which were write an orientation, complication and resolution. (***Drafting***)		
5.	Editing a draft narrative text					Editing the draft based on the previous lesson.(***Editing***)	
6.	Post-test						Write down a narrative text about Snow White story. (***Final version***)

Data Analysis

To see the significant of the research instruments, the researcher gave score to the students' narrative writing skill, it was shown by T-test. Seltman (2015, p. 141) argues, "T-test is used as an example of the basic principles of statistical inference". It can be inferred that sometimes t-test is used to data manipulation to know the statistical (score) result. Moreover, t-test was also used as a comparison test between two independent samples (experimental group and control group). This test was applied to analyze the data which aimed to determine whether two sample groups were different in particular variables or not. Then, the data could be entered and analyzed using the Statistical Package for Social Science (SPSS) version 22.0. The statistical techniques used in this study were independent sample test including mean, standard deviation and also result of t-test analysis.

However, to find out the mean scores the researcher calculated the gained scores from two groups experimental group and control group for the result scores of pre-test and post-test to measure the significant difference between two groups. In addition, the researcher used standard deviation (SD) to calculate the deviation of pre-test and post-test score in which it was used to check the difference scores between each test. Using standard deviation was also central because it was used to calculate many statistics. So, the last result the researcher got the mean score, standard deviation and t-test analysis that indicated there was a significant difference between the experimental and control group in particular variables.