CHAPTER III

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3.1. Research Design

The method used in this study is *quantitative* method. The quantitative is the research to collect data by using statistical data. The design in this quantitative method was an experimental study. This study wants to know the effect of independent variable and dependent variable. In this case of study, the writer wants to know whether the treatment significant or not. There is also pre-test and post-test to measure the students' achievement about the lesson that the writer will be given. There are two classes in this study, they are; experimental class and control class. The experimental class receives treatment. And control class uses conventional treatment

3.2. Population and Sample

3.2.1. Population

Population is a generalization area consisting of object / subject that has qualities and characteristics determined by the researcher to be studied and then draw conclusions. Before the data was collected, the writer determines the population. According to Sugiono (2010:117) population is geographic generalization, there are: object and subject has quality and certain of characteristics that set by researcher to learning then make the conclusion.

The population of this study is all of the students in SMA PAB 2 Helvetia . It is in Jl. Veteran Pasar IV Kota Medan, Sumatera Utara 20373.

Table 3.1.

Population are all of the tenth grade students in SMA PAB 2 HELVETIA

No	Class	Population
1.	XI MIA 1	30
2.	XI MIA 2	33
3.	XI IIS 1	36
TOTAL		99

3.2.2. Sample

According to Sugiono (2010:118), sample is part of number and characteristic those set-in population. Sample form a part of population representative population, if the researcher finds information from the sample, it was means it constitutes from the population.

In this study, the sampling technique was used to take sample is purposive sampling. According to Arikunto (2010:118), purposive sampling was the process of selecting sample by taking subject that was not based on level or area, but it was taken based on the specific purpose. So, the writer only takes two classes named X MIA 1 and X MIA 2 as samples.

Table 3.2.

The sample of the study

No	Classes	Sample
1	XI MIA 1	30
2	XI MIA 2	33
	Total	63

3.3. Treatment

The experimental group was taught by using engaged study activate method. This method as a treatment to know the differences marks between experimental group and control group. The following are the treatment steps during the study.

1. At the time of conducting quasi-experimental research in the eleventh grade MIA 1 and ten MIA 2, the research would carried out once a week and carried out for one month.
2. Giving a pre test in the form of a listening skill test or listening to a story in the experimental class and the control class.
3. Giving a pre test for the experimental class using the esa method.
    a. ESA is a learning method developed by Jeremy Harmer. He stated that in the learning process, ESA is like a computer system where everything is interconnected.
    b. The Engaged stage is carried out to provoke students to think and

speak in English, as well as a first step towards learning. During the Engage phase, the teacher tries to arouse students' interest and engage their emotions. This can be done through games, the use of pictures, sound recordings, videos, stories, or funny anecdotes. Its purpose is to arouse student interest, curiosity and attention.

c. At the Study stage, usually most of the lessons focus on the core of the lesson, namely by focusing on listening to the lessons that have been given by the teacher. and answer pretest questions from video or radio. When finished, each student reads their answer or writes it on the board.

d. At the Activate stage, exercises and activities are carried out aimed at getting students to use language communicatively according to their respective abilities. At this stage, students are not focused on language construction or specific language practice patterns, but use their language knowledge in carrying out assignments. Activities that can be carried out include telling stories, composing sentences, role playing, answering questions, and playing communication.

4. Giving a pre test for the control class not using the esa method.

   a. the control group and the experimental group were given the same thing pre test and are considered to have the same ability. The next step is to provide treatment determine the effect of listening to the video story. Give the treatment earlier aims to retrieve data in both classes. In this case, the treatment in the control class

5. Giving post test for experiment class and control class.
    a. After the group received treatment, the next step was to provide the same treatment posttest for both groups. Giving posttest listening to the video story to see differences in learning outcomes after the two groups were treated. In this process, that is unknown whether the experimental group experienced a greater increase and Significance of the control group.

3.4. Research Instrument

The instruments to collected data used pre-test, post-test, and observation. The data from control and experiment class was measured by using statistical data. The scores from pre-test and post-test was used to know the differences of the listening skill of both classes. This result was also used to know the method works well or not.

3.5. Reliability and Validity of Instruments

3.5.1. Reliability of Instruments

Johnson and Christensen (2008: 144) state that reliability refers to the consistency or stability of the test scores. After that, researcher used *inter-rater reliability* to measure the reliability of the instrument. To obtain inter-rater reliability, researcher used correlation coefficient among two raters (Interclass Correlation Coefficient). Inter-rater reliability is the degree of agreement between two or more raters or scorers, (Johnson and Christensen, 2008: 150).

Table. 3.3. Value of the Reliability Coefficient (Suharto 2006:84)

Reliability Coefficient	Reliability Category
0.800-1.000	Very High
0.600-0.799	High
0.400-0.599	Fair
0.200-0.399	Low
0.000-0199	Very Low

3.5.2. The Validity of The Research Instrument

An instrument is valid if it is able to measure what is desirable and it can reveal the data of the variables appropriately (Arikunto, 2006: 158). In this study, the instrument used is a writing test. Validity is used to determine how much these instruments have reflected the results. The test will constructed based on the course outline of the tenth grade SMA curriculum. The validity that will applied in the test will content and constructs validity.

3.6. Technique of Data Collection

Collecting data is an important thing, and in this research the technique of data collection which is used is: pre test and post test, Here is the step of pre-test and post test :

a. Pre Test

Students in the control class and the experimental class were given a

test called the pre test. The pre test was carried out by testimonials for the learning process. Students are given a song consisting of 10 items of multiple choice questions in the English video story. after treatment and explanation. A pre test basically measures whether the experimental group and the control group are equal. Post Test

b. Post test

The post test is held at the end. Both MIA 1 as the experimental class and MIA 2 as the control class were given a Post test. The post test was given to the experimental class after being given treatment and explanation. This was given to find out whether using English story videos was more effective or not in learning listening comprehension.

After obtaining the test results, they are assessed. The test used was a close test that skipped several words, which was divided into 10 multiple choice questions in English.

It also means that the student's grade will range from zero (when the student can answer all the questions). The highest score is 100 (when students cannot answer all questions). These results areapplied as research results.

When scoring the students' worksheet, is the rating as follow:

Table. 3.4. The rating scored for listening test

Criteria of Mastery	Level
91-100	Excellent
81-90	Very Good
71-80	Good
61-70	Fair
51-60	Poor
Less than 50	Very Poor

3.7. The Technique of Data Analysis

The data was collected and analyzed as follows:

1. Scoring the students' correct answer used formula as follows:

$$Score = \frac{Students' correct\ answer}{Total\ number\ of\ items}\ X\ 100$$

2. The researcher used listening rubric assessment to assess the students' test and classify the students' score.

Table 3.5. Listening Rubric Assessment

Criteria	Description
Excellent (100-90)	- Excellent at identifying the setting, problem and solution, theme, and moral of the story.

	- All words are spelled correctly.
Very Good (89-80)	- Very good at identifying the setting, problem and solution, theme, and moral of the story. - Almost all words are spelled correctly.
Good (79-70)	- Good at identifying the setting, problem and solution, theme, and moral of the story. - Some spelling errors occur, but not impedeunderstanding.
Fair (69-60)	- Still able to identify the setting, problem and solution, theme, and moral of the story. - Spelling errors impede understanding.
Poor (59-0)	Unable to identify the setting, problem and solution, theme, and moral of the story. - Numerous spelling errors prevent understanding.

3. To know the students‘ percentage improvement, the researcher used formula as follows:

$$\boldsymbol{P = \frac{X2 - X1}{X1} X\ 100\%}$$

P = Percentage

X2 = Post test mean score

X1 = Pre-test mean score

4. The research data were gathered from the students‘ test and analyzed by using IBM SPSS (Statistical Package for the Social Science) 25 Software program in order to know the improvement of students‘ listening ability by calculating the mean score, median, mode and standard deviation

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5. T-test

The researcher applied IBM SPSS 25 Software program to find out the significant difference between pre-test and post test. The criteria of hypothesis testing are if Sig. (2-tailed) lower than the level of significant (Sig. (2-tailed) = 0.000 < α = 0.05). It indicates that the students‘ score between pre-test and post test is significantly different.

Where: $t = \frac{Ma - Mb}{(\frac{da^2 + db^2}{Na + Nb - 2})(\frac{1}{Na} + \frac{1}{Nb})}$

t = Total score

Ma = The mean of experiment group

Mb = The mean of control group

da = The standart deviation of experiment group

db = the standart deviation of control group

Na = The total number sample of experiment group

Nb = the total number sample of control group.