CHAPTER III

RESEARCH METHODS

This chapter delivers research design, population, sampling and sample, research instrument, research variable, validity and reliability testing, normality and homogenity, procedure of the research, data collecting methods, and hypothesis testing.

A. Research Design

Research is careful study on investigation, especially in order to discover new facts or information, such as scientific, historical research (Homby, 1995:996). It means that the study carefully and accurately on investigation of an event, problem, phenomenon about scientific to find out new information.

One of the important things that should be considered in conducting research is research design. Research design is a set of systematic procedures or strategies to conduct research. The research design is essence to find scientific truth. By using research design, the researcher will get the answer of research question. This study is belonged to quantitative approach by using two groups with pre-test and post-test. The experimental research design has purpose in testing the effectiveness of something. Moreover, according to John W. Creswell (2012: 295), experimental study is for the researcher to know the

cause-effect between dependent and independent variables. In conducting quantitative research, the researcher has used experimental design.

In this study, the researcher used a Quasi-Experimental as the design of the research to see the effectiveness of short cartoon movie on students' writing ability. As stated by Mujis (2004: 200), Quasi-Experimental research is especially suited to looking at the effects of an educational invention, such as a school improvement program, a project to improve a specific element. The researcher determined to select two instacts group. The first group give a treatment, was called experimental group and the other which not given a treatment was called control group. The data were collected from pre-test and post-test in order to know whether the usage of Short Cartoon Movie is effective in improving students' writing ability. The table 3.1 below shows the design of the research.

Table 3.1: The Pattern of Research Design

Group	Y1	X	Y2
Experimental class (X MIPA 5)	Pre-test	Short Cartoon Movie Treatment	Post-test
Control class (X MIPA 4)	Pre-test	-	Post-test

Based on the table before, the procedures of using two groups pre-test and post-test design are:

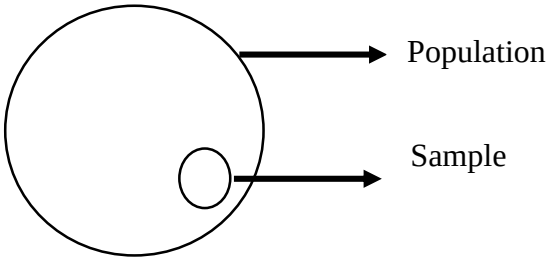
1. Administering pre-test to both classes to measure preliminary knowladge of students' writing narrative text achievement.
2. Applying the treatment in experimental class to teach writing by using Short Cartoon Movie as teaching media, and applying the control treatment in control class to teach writing by using conventional method.
3. Administering post-test in both clasess to measure the score of students' writing narrative text achivement after being taught by using Short Cartoon Movie in the experimental class and conventional method in the control class.

B. Population, Sampling and Sample

1. Population

According to Gay (1992:124), population is the group of interest to the researcher, the group which she or he would like the result of the study to generalizable. Population is the main focus of scientific query. Gay (1992:124) also said that the population is choosen by the researcher whose study on the research that can be generalized to the group that has a population at least one characteristic that distinguishes it from the other group. In simply way, Arikunto (1998:115) stated that population is the whole of research subject. The figure of population and sample can be seen in the figure 3.1 below:

Figure 3. 1. The Illustration of Population and Sample



The population of this research was all the students at the first grade of MA Ma'arif Bakung Udanawu who major in MIPA which has around 290 students. The school has 8 classes of MIPA. They are X MIPA-1, X MIPA-2, X MIPA-3, X MIPA-4 X MIPA-5, X MIPA-6, X MIPA-7, and X MIPA-8 in academic year 2020/2021 and each class has similar number of students.

2. Sampling

Sampling is technique to take sample from population. Sampling is essence process in research to gain specific subject from the whole. According to Gay (1992:123) sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected. This sampling has function to get information in population. Therefore, the researcher took sample through *random cluster* technique. The researcher choose two classes as the sample. The researcher considered the homogeneous sample, in this case was class with average proficiency in written narrative text. The researcher

learned about this situation from the english teacher who taught those classes. It means that if students are stimulated, they would be able to improve their skills. When selecting samples, regardless of whether the average level of the two categories is high, the researcher used the t-test in SPSS 16.0 to prove it.

3. Sample

Sample is a part of population who participate in the current study. According to Cresswell (2012:142) sample is a subgroup of the target population that the researcher plans to study for generalizing about the target population. Arikunto (2006) also explained that if the subject is less than one hundred it is better to take the entire subject. In addition, if there are more than one hundred subjects, a ration of 10-15% or 20-25% can be adopted. In conclusion, sample is a small group who taken from the larger group who would be the subject of the study.

In this study, the sample was choosen by applying cluster random sampling. Therefore, two classes are choosen by using certain criterion in which both of them are normal or in average proficiency in writing narrative text. Based on the criterion above, the sample of this study were the student of X MIPA-5 which consist of 36 students as experimental group and X MIPA-4 which consist of 36 students as the control. Briefly, the research sample displayed in the table 3.2 after:

Table 3.2: The Research Sample

No	Class	Number of Student
1	X MIPA-5	36
2	X MIPA-6	36

The table above displayed that the sample is consist of two classess. The first was the class of X MIPA-5 as the experimental group which was given Short Cartoon Movie as treatment. The second was the class of X MIPA-4 as the control group was given conventional method in teaching writing. While, the distribution of the treatmentcan be seen in the table 3.3 as follow:

Table 3.3: The Treatment Distribution

Group	Class	Number of Student	Treatment
Experimental	X MIPA-5	36	Short Cartoon Movie
Control	X MIPA-4	36	Conventional Method

Based on the table 3.3, the treatment by using Short Cartoon Movie was only given to experimental group in teaching narrative text. While the control group was done by the same material of writing narrative text without using Short Cartoon Movie.

C. Research Instrument

In every research is always needed an instrument of research to collecting the result of data. Wilkinson & Birmingham (2003:3) defines research instruments as devices to obtain relevant information for the research project. Sugiyono (2013) stated that research variable is a tool for measuring and observing, in order to produce the result of quantitative data. Creswell (2008:5) said that the researcher uses the instrument to measure achievement, asses individual ability, observe behavior, develop a psychology profile of an individual, or interview a person. Thus, research instruments is the way how the researcher gathering the data, without research instrument, data would be impossible to collect.

The researcher applied test as a research instrument to obtain the data. According to Ary, 2010:210 test is a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned. Shohany (1985:3) supports a test is a sample of knowledge and needs to be a good representation of it. Moreover, Burhan (2014:117) stated that there were two types of test used as instrument, namely essay test and objective test. In this research, the writing test served as the research instrument. The writing test have been hold twice, in the pre-test and post-test. The test was in the form of essay.

The pre-test was given as the first step of collecting the data. Both of the groups, experimental and control group was given pre-test. The pre-test used to identify the students' preliminary knowledge of narrative text and their

achievement in writing a text. In the other hand, pre-test is also used to know that both of class are equal. The test itself ask the students to make a narrative text about urban legend. The post-test was administered after the experimental group finished got the treatment by using Short Cartoon Movie and control group did not receive the treatment.

D. Research Variable

Variable is a key term in any research. Variable is the focus of the research. Variable based on Arikunto (2013) are research topics or key research areas. According to Frankel and Wallen (2006: 40), a variable is a concept, a noun, that represents varoation within topics such as gender, skin color, motivation, eyes, achievement or running speed. According to these definitions, variables are the research objects emphasized by researcher. In this study, there were two variables:

1. Independent Variable (X)

Independent variable is variable influences or affects another variable. It can appear or exist by itself without any other supported. In this study, teaching writing using Short Cartoon Movie is an independent variable because it affected the students' writing narrtive text achievement.

2. Dependent Variable (Y)

Dependent variable is a variable influenced or affected by independent variable. Dependent variable of this study is students' writing narrative text achievement.

E. Data Collecting Methods

Data collecting method is the method to obtaining the data. In the other words, it shows the way of the researcher to collect the data. The data of this study was collected by administering test. According to Arikunto (2013: 266) test is a tool or procedure used to know or measure something in a condition, ways, and the rules are determined. As what had been said before, the instrument used in this study was writing assignmnet. There were two kinds of test used in this study, they were:

1. Pre-test

Pre-test was given to both of class, experimental class and control class. This test was conducted to know the students' background knowledge of writing narrative text. The pre-test was in the form of essay or writing assignment.

2. Post-test

After getting the treatment, students were given post-test to know their final score. This score was used as the comparison between the different achievement before and after they got the treatment. The post-test was also in the form of essay or writing assignment.

F. Data Analysis Methods

After the data had been collected, it would be analyzed to know the effectiveness of using Short Cartoon Movie toward students' writing narrative text ability. The data were divided into two group, they were the test result from

the experimental group and the result of control group. The data were obtained from the post-test from both experimental class and control class. Then, it would be analyzed statistically using *Independent-Sample T-Test* trought SPSS 16.0 for windows. The researcher used this kind of test to know the significant value was higher or lower than 0.05. The technique of data analysis for this study was belonged to quantitative data analysis.

In analyzing data, the researcher used the scoring rubric before entering the score of students into SPSS 16.0. In giving the scores, the researcher used analytical scoring. It means the process of scoring would be completed from part by part. The scale of scoring here had five items, which its item had its score.

The analytic scoring rubric was adopted from Jacobs et al. 1991 in Haswell (2007), which displayed in the table as follows;

Table 3.4 Table of Scoring Rubric by Jacobs et al (1991)

SCORE	LEVEL	CRITERIA	DESCRIPTION
Content	27-30	Excellent to Very Good	Knowladgeable, substantive, Thorough development of ideas, relevant to the assigned topic
	22-26	Good to Average	Some knowledge of subject, adequate range, Limited development of ideas, mostly relevant to topic, but lacks detail

Continued

Continuation **Table 3.4 Table of Scoring Rubric by Jacobs et al (1991)**

	17-21	Fair to Poor	Limited knowledge of subject, little substance, inadequate development of ideas
	13-16	Very Poor	Does not show knowledge of subject, non-substantive, not pertinent, or not enough to evaluate
Organization	18-20	Excellent to Very Good	Fluent expression, ideas clearly stated/supported, succinct, well-organized, logical sequencing, cohesive
	14-17	Good to Average	Somewhat choppy, loosely organized but main ideas stand out, limited support, logical but incomplete sequencing
	10-13	Fair to Poor	Non-fluent, ideas confused or disconnected, lacks logical sequencing and development
	7-9	Very Poor	Does not communicate, no organization, not enough to evaluate
Vocabulary	18-20	Excellent to Very Good	Sophisticated range, effective word/idiom choice and usage, word form mastery, appropriate register
	14-17	Good to Average	Adequate range, occasional errors of word/idiom form, choice, usage but meaning not obscured
	10-13	Fair to Poor	Limited range, frequent errors of word/idiom, choice, usage, meaning confused or obscured
	7-9	Very Poor	Essentially translation, little knowledge of English vocabulary
Language Use	22-25	Excellent to Very Good	Effective complex constructions, few errors of agreement, tense, number, word order/function, articles, pronouns, preposition
	18-21	Good to Average	Effective but simple construction, minor problems in complex constructions, several errors of agreement, tense, number, word order/function, articles, pronouns, preposition but meaning seldom obscured

Continued

Continuation **Table 3.4 Table of Scoring Rubric by Jacobs et al (1991)**

	11-17	Fair to Poor	Major problems in simple/complex constructions, frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, preposition and/or fragment, runons, deletions, meaning confused or obscured
	5-10	Very Poor	Virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate
Mechanics	5	Excellent to Very Good	Demonstrate mastery of convention, few errors of spelling, punctuation, capitalization, paragraphing
	4	Good to Average	Occasional errors of spelling, punctuation, capitalization, paragraphing but meaning obscured
	3	Fair to Poor	Frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting, meaning confused or obscured
	2	Very Poor	No mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting Illegible, or not enough to evaluate.

G. Procedure of the Research

Procedure of the research describes how the research was carried out. It told the steps completed by the researcher. In this study, treatment was only given to the experimental class by using Short Cartoon Movie media. While

the control class they received treatment as usual or conventional method. It was administered three meetings. After the experimental class finished receiving treatment, both classes were given a post test to get their final score. Concisely, the schedule of procedure the research can be seen on the table 3.5 below:

Table 3.5 Reseach Schedule

No	Group	Meeting	Date	Time	Activity
1.	Experimental (X MIPA-5)	1	Thursday, April 1st 2021	1-2	Introduction and Pre-test
	Control (X MIPA-4)		Saturday, April 3rd 2021	5-6	
2	Experimental (X MIPA-5)	2	Thursday, April 8th 2021	1-2	Treatment 1 by Short Cartoon Movie
	Control (X MIPA-4)		Saturday, April 11th 2021	5-6	Teaching-learning activity by conventional method
3	Experimental (X MIPA-5)	3	Thursday, April 15th 2021	1-2	Treatment 2 by Short Cartoon Movie
	Control (X MIPA-4)		Saturday, April 17th 2021	5-6	Teaching-learning activity by conventional method
4	Experimental (X MIPA-5)	4	Thursday, April 22nd 2021	1-2	Treatment 3 by Short Cartoon Movie
	Control (X MIPA-4)		Saturday, April 24th 2021	1-2	Teaching-learning activity by conventional method

Continued

Continuation **Table 3.5 Reseach Schedule**

5	Experimental (X MIPA-5)	5	Thursday, April 29th 2021	1-2	Post-test
	Control (X MIPA-4)		Saturday, May 1st 2021	1-2	

The treatment by using Short Cartoon Movie was only given to X MIPA-5 students as the experimental group. While X MIPA-4 students were given the materials by using conventional treatment or common method. Furthermore, the test instrument was tried out to X MIPA-3 students on Thursday, 8th April 2021. The explaination about the procedure of the research was displayed as follow:

1. First Meeting

Since the covid 19 pandemic, the school in Indonesian country was applying an online learning. Students were asked to study individually at their home. In this study, the researcher began their research by conducting pre-test to the both class, experimental and control class. Before giving the pre-test, the researcher introduced their self and stated that for a month the class would be handed by the researcher. Then, the researcher explained about the basic material from narrative text. Afterwards, the researcher asked the students to do the pre-test.

2. Second Meeting

In the second meeting, the students were given the treatment (using Short Cartoon Movie) to learn and improve their ability in writing narrative text. The materials is about the generic structure, the function and the language feature of narrative text. Afterward, the researcher asked the students to watch the urban legend movie that had been shared in the WAG and gave the task to write the language feature of language feature according to movie.

While, in the control class were taught by using the same material without given the treatment or done by using conventional method.

3. Third Meeting

In the third meeting, students continued to learn narrative text by using Short Cartoon Movie as their teaching media. Before the researcher shared the movie, students were given the material about direct-indirect speech. Afterward, the researcher shared the movie trought WAG and asked the students to watch the movie then the researcher gave them a task to write and change the direct-indirect speech according to the movie.

4. Fourth Meeting

In the fourth meeting, the school was tried to applying the face-to-face teaching-learning activity. The class was divided into two section, and in every subjects had 20 minutes done to learn. Because this study was to know the effectiveness of Short Cartoon Movie through online learning, so the researcher consult it to the teacher of their class to still conducting

the research by online learning. In this meeting, the teaching-learning activity was done by two ways, offline learning was to explaine the material and online learning done to give the treatment. The materials in offline learning is about the deeply explaination of the generic structure of narrative text. In online learning, the researcher shared the urband legend movie and asked the students to write a question about the generic structure from the movie they have watched such as the orientaion, complication and resolution.

5. Fifth Meeting

After the experimental class completed given the treatment. The researcher conducted post-test to both of class, experimental and control one. The post-test was conducted to get the final score of students' writing narrative text after getting the Short Cartoon Movie treatment.

H. Validity and Reliability Testing

To collect the data the researcher used instrument. The use of valid instrument was very essential to determine the validity of the data. In this research, the researcher used writing test to measure the students' writing achievement before and after taught by using Short Cartoon Movie. The tests were constructed by the writer herself using some source. Before using the test, the researcher had been tried-out to get the reliability of the test. The researcher do the tryout for pre-test and post-test hold on the first grade of MA Ma'arif

Bakung Udanawu, Blitar to X MIPS-4 class to find out the validity and reliability of test.

1. Validity Testing

According to Gay (1992:155), validity is that is the degree to which a test measures what it is supposed to measure. Validity is the development of sound evidence to demonstrate that the test interpretation (of scores about the concept or construct that the test is assumed to measure) (Cresswell, 2012:159). Since tests are designed for a variety of purposes and since validity can be evaluated only in terms of purpose. To measure whether the test has good validity, the researcher analyzed the test from content validity, construct validity and face validity.

a. Content Validity

Content validity is the degree to which a test measures an intended content area (Gay, 1992:156). Content validity requires both item validity where it represente measurement in the intended content area and sampling validity which will be used to know how well the test samples the total content area or relevant with the purpose of the test. Content validity is determined by expert judgment (Gay, 1992: 157). There is no formula by which it can be computed and there is no way to express it quantitatively. Usually experts in the area covered by the test are asked to assess its content validity.

A test with good content validity adequately samples the appropriate content area. So, content validity is prime importance for

achievement test, because test score can not accurately reflect a student's achievement if it does not measure what the students was supposed to learn. In this study, the researcher make sure the test used is relevant with the test spesification, syllabus and curriculum used at MA Ma'arif Bakung Udanawu for the first grade in academic year 2020/2021.

The test that will be measured by researcher is narrative text of tenth grader students of MA Ma'arif Bakung Udanawu. In order to meet the requirements of content validity, the researcher choose a course curriculum of tenth grader students. The curriculum is K13 (Curriculum 2013). In this study, the researcher obtain narrative text materials in the form of written text. The curriculum display in the table 3.6 as follows:

Table 3.6 Curriculum of the 10th Grade of Senior High School

Main Competence	4. Mengolah, menalar, dan menyaji dalam ranah konkret dan ranah abstrak terkait dengan pengembangan dari yang dipelajarinya di sekolah secara mandiri, dan mampu menggunakan metode sesuai kaidah keilmuan.

Continued

Continuation **Table 3.6 Curriculum of the 10th Grade of Senior High School**

Basic Competence	4.8 Menangkap makna secara konstektual terkait fungsi sosial, struktur teks, dan unsur kebahasaan teks *naratif*, lisan dan tulis sederhana terkait legenda rakyat.
Indicators	4.8.3 Murid dapat menceritakan teks narrative. 4.8.4 Murid dapat menulis teks narrative pendek disertai dengan gambar
Instrument	Writing test

b. Construct Validity

A test is said to have construct validity if it can be demonstrated that it measures just the ability which is supposed to measure. According to Brown (2004:25), construct validity is any theory, hypothesis, or model that attempts to explain observed phenomena in our universe of perception. The researcher consults the test to Maam Dr. Erna Iftanti,S.S., M.Pd, as lecture of English Department in IAIN Tulungagung and the advisor of researcher. On the other hand, the researcher also ask the English teacher of MA Ma'arif Bakung Udanawu to give judgement of the test. Finally, it

would be tried out to the tenth grade students' of MA Ma'arif Bakung Udanawu to find out the validity of the test.

c. Face Validity

According to Gay (1992:156), face validity refers to the degree to which a test appears to measure what it purports to measure. Face validity is almost always perceived in terms of content: if the test samples the actual content of what the learner has achieved or expects to achieve, then face validity will be perceived. Face validity will fulfill the requirement if:

a. A test has the ecpected format for familiar tasks.
b. A test has time allocation
c. A test has clear test items.
d. The instruction/direction of a test are clearly stated.
e. Test relate to the course of content validity.

To fulfill the face validity, the researcher tries to distribute a test according to the criterian, test indicator was shown in the table 3.7 as follows:

Table 3.7: Test Indicator

Variable	Indicator of Learning	Instrument	Item of the Instrument
Writing achievement	4.8.4 Murid dapat menulis teks narrative pendek disertai dengan ilustrasi gambar	Writing test	Themes that appropriate with the book.

2. Reliability Testing

Reliability is a necessary characteristics of any good test for it to be valid at all and test must be reliable as measuring instrument. A reliable test is consistent and dependable. According to Gay (1992:161), reliability is the degree to which a test consistently measures whatever it measures. In this study, to examine the reliability of the test, the researcher tried test out to the other class of the tenth-grade students. Here, the researcher choose the students of X MIPA-3 class which have similar proficiency of writing narrative text with the classes before.

Moreover, to get two row scores as prove of the test consistency, the researcher used inter-rater reliability. It is one of the way to arrive the reliabilty of test instrument to get 2 row score. Then, the reliability index are calculated to get the correlation coefficient.

The students' assignments of X MIPA 3 had been scoring twice. The first scoring was called rater 1, and the second scoring was called rater 2. After getting two rows of score, the researcher used Pearson Product Moment formula in SPSS 16.0 for windows to find out the reliabilityof the test instrument. The result of the computation (Cronbach Alpha) than was compared with the table 3.8 as follow to know its reliability level.

Table 3.8 Criteria of Test Reliability

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent or perfect reliability
$0.9 > \alpha \geq 0.8$	Good or strong reliability
$0.8 > \alpha \geq 0.7$	Acceptable or sufficient reliability
$0.7 > \alpha \geq 0.6$	Questionable or moderate reliability
$0.6 > \alpha \geq 0.5$	Poor or moderate reliability
$0.5 > \alpha$	Unacceptable or low reliability

The tried test out was done on April, 08th 2021 at X MIPA-3 class. The scores of trying out the test instrument showed in the table 3.9 as follows;

Table 3. 9: Score of Try Out Instrument

No	Name	Rater 1	Rater 2
1	**AA**	70	75
2	**ATB**	72	72
3	**AZR**	68	62
4	**AN**	58	64
5	**AFP**	74	74
6	**AAS**	63	68
7	**AMS**	75	72
8	**ANL**	62	64
9	**AF**	68	74

Continued

Continuation **Table 3. 9: Score of Try Out Instrument**

10	**DS**	56	62
11	**DKS**	76	70
12	**DA**	70	74
13	**DFA**	63	58
14	**DR**	46	58
15	**EAP**	52	62
16	**FNS**	64	60
17	**FRP**	66	72
18	**F**	67	72
19	**HA**	72	76
20	**HAZ**	74	74
21	**ISU**	54	52
22	**IUM**	42	40
23	**KR**	62	62
24	**LSA**	46	52
25	**MD**	48	56
26	**NRA**	42	42
27	**NAZ**	76	85
28	**NKS**	44	52
29	**PS**	54	58
30	**QM**	74	70
31	**SJU**	42	52
32	**SCN**	78	80
33	**SDI**	68	64
34	**SAA**	64	62
35	**VA**	62	76

The computation result from SPSS 16.0 for windows in reliability testing can be seen on the table 3.10 as follows:

Table 3.10 The Result of Reliability Testing

Reliability Statistics

Cronbach's Alpha	N of Items
.935	2

To find out whether the instrument was reliable, it can be seen from the Cronbach's Alpha column. The table 3.10 above displayed that the coefficient was 0.935. According to the criteria of the reliability in the table 3.10, if the $\alpha \geq 0.9$ it meant the test instrument used by the researcher was excellent or perfect reliable. In conclusion, the instrument could be used in post test to measure students' writing narrative text achievement.

I. Normality and Homogenity

Normality and homogenity are one of the pre-requisite test used to analyze data at independent sample t test to find out whether the data has been distributed normally and there is any difference variance in the two groups choosen. The definition of normality and homogenity testing as follow:

1. Normality Testing

Normality test is used to determine whether the data set is well modeled by a normal distribution or to compute how the undelying random

variable is distributed normally. Based on Priyatno (2012: 22 in Arumsari 2014:56) said that the normally of data is important because the data can be considered to represent the population when it is in normal distribution. In this study used *kolmogorv-smirnove test* with SPSS 16.0 to know the normality of large sample.

2. Homogenity Testing

Homogenity testing used to make sure that the manipulation data collected is truly taken from population which is too different each other. This study uses T-test of Homogenity of Variances with SPSS 16.0 to test the homogenity.

J. Hypothesis Testing

In this study, the design was quasi-experimental design and the purpose was to investigate the effectiveness of Short Cartoon Movie. Then the researcher compared the result of before and after treatment from both group, experimental and control group. Furthermore, the researcher formulated the hypothesis as follows:

1. Null Hypothesis (H_0)

   There is no significant different score in writing narrative text achievement of the students taught by using Short Cartoon Movie and those who been taught by using conventional method at the 10^{th} grade of MA Ma'arif Bakung in academic year 2020/2021.

2. Alternative Hypothesis (H_1)

   There is significant different score in writing narrative text achievement of the students taught by using Short Story Movie and those who been taught by using conventional method at the 10^{th} grade of MA Ma'arif Bakung in academic year 2020/2021.

In testing the hypothesis, researcher used the standarts rules. After getting the calculation by using SPSS 16.0, the result of t-test can be seen with the criteria:

- If t-test (t_0) > t-table (t_t) in significant degree of 0.05, H_0 (null hypothesis) is rejected.
- If t-test (t_0) < t-table (t_t) in significant degree of 0.05, H_0 (null hypothesis) is accepted.