CHAPTER III

RESEARCH METHOD

This study focuses on the effectiveness of comic strips as a media in teaching writing in helping students in generating idea to start writing. This chapter presents the methodology of the research. It consists of the research design, the variable of the research, the research subject, the data collection technique and the research instrument, the scoring technique, the research procedure, and the data analysis technique.

A. Research Design

This study was a quantitative research. As this research aims at the effectiveness of comic strips as a media in teaching English writing text, the quantitative method appropriate to the purpose of this research. This study is educational research so the researcher used a quasi experimental research design.[1]

Experimental research is the way to find a causal relationship between two factors that are deliberately caused by the researcher by reducing or setting aside other factors that interfere. Experiments are always done to examine a treatment seriously.[2] A quasi experimental design is similar with an experimental design but the key ingredient-random assignment is definite. In this design, the

[1] Donald Ary. *Introduction to Research in Education 8th Edition*. (USA: Wadsworth.2010). 316
[2] Suharsimi Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktek* (Jakarta: Bima Aksara, 1987). 3

subject cannot be decided randomly to either the experimental or the control group.[3]

With this quasi experimental design, there were two groups, the control group and the experimental group. The two classes of the eighth grade in MTs. At-Taqwa Kalangayar Lamongan were selected as the control group and experimental group. Before the treatment, both of them were given a test. The purpose of the test was to know if both groups had similar ability in writing before the implementation of comic strips as a media. On the next meeting, the treatment was given to the experimental group for two times. It is based on the head master permission. The treatment was administered to the experimental group, while the control group was taught as usual without manipulation. The control group was taught by traditional media (LKS) and the experimental group was taught by comic strips as a media. On the last meeting, a final test was conducted on two classes of control and experimental groups. The purpose of this test was to know whether teaching writing using comic strips as a media is more effective than teaching writing using traditional media.

B. Variable of the Research

There were two variables in this study. They were independent variable and dependent variable. Independent variable is a variable that who's variable

[3] William M. K. Trochim, *The Research Methods Knowledge Base*, 2nd Edition (Ithaca, N.Y: Cornell Custom Publishing, 1999).215

that is selected, manipulated, and measured for investigation.[4] In this study, the application of comic strips is the independent variable. While, the dependent variable is a variable that is observed and measured in order to determine the effect of the independent variable. The students' writing ability is the dependent variable.[5]

C. Population and Sample

The population is the students in junior high school in Indonesia. As Ary states that the first step in sampling is the identification of the target population, the large group to which the researcher want generalize the results of the research.[6] The target population of this study was the students of Junior High School in medium quality in Indonesia. This medium level is approved by the accreditation "B" from BAN (National Accreditation). The population of junior high school students in Indonesia is so large that cannot be listed all to determine a sample. We make a distinction between the target population and the accessible population, which is the population of subjects accessible to the researcher for determine a sample.[7] In this case, the accessible population that has medium quality is MTs. At-Taqwa, Lamongan.

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[4] Susanto, *Developing a Research Proposal a Practical Guideline*. (Surabaya: UNESA University Press.2002).10
[5] Ibid.10
[6] Donald Ary. *Introduction to* 149
[7] Ibid.149

Then, the sample was the eighth grade at MTs. At-Taqwa, Lamongan. It was selected because the students have some problem in writing class. Based on the pre-observation, the teacher said that the students' writing achievement was poor. In addition the worst one was the eighth grade, so the research focused on the eighth graders. Besides, the researcher was an alumnus from this school. Therefore the researcher wants to give a kind of contribution to increase the quality there.

D. Data Collection Technique and Research Instrument

1. Data Collection Technique

In this study, the data were collected from the test. First, before the treatment, the test was administered to both groups to measure the students' English writing ability. The data was collected through the test in both classes in order to know whether the experimental group and control group had similar ability before the implementation of comic strips as a media in teaching writing.

Then, a final test was given to the experimental group and control group. It was used to give information about students' ability to write texts after getting the treatment. The use of the final test also determines whether the treatment was effective by comparing the achievement of final test scores in both classes those experimental and control. The treatment was done for two times which was based on head master permission.

2. Instrument

Instrument is needed to collect the data. The appropriate instrument for this research is test. The test was by conducted by asking the students both in experimental and control classes .to write a recount text. Then, the scoring criteria were established before assessing writing.

a. Validity

This study used content validity to construct the test. Content validity demands that the test should be constructed as to contain a representative of the course, the relationship between the test items and the course of objective always being clear.[8] To fulfill the content validity, the content of the test was matched with the curriculum provided i.e. text books material that was used this school and based on the teacher. In this case, the instrument was validated by the teacher.

E. Scoring Technique

In this study, it used methods of scoring which each number of aspects is analyzed and needs separate the score.[9] The scoring technique can be modified based on the specific assessment rubric.[10] In this study, the scoring technique is according to Jacob et.al.[11] by a little modification.

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[8] Sugiyono, *Statistika untuk Penelitian,* (Bandung: Alfabeta.2010). 353
[9] Arthur Huges, *Testing for Language Teachers.* (Cambridge: Cambridge University Press).100
[10] Ristyana Primadani. *The Effectiveness of Using Short Note in Teaching Writing at SMP Negeri 1 Bangsal Mojokerto*. (Unpublished S1 Thesis English Education Department IAIN Sunan Ampel Surabaya, 2011).31
[11] Arthur Huges, *Testing For* 104

Table 3.1
Writing Proficiency Score Categories
ESL Composition Profile[12]

Component	Score		Criteria
Content	Excelent	30-27	Knowledgeable; the content of the paragraph relevant to the assigned topic. Thorough development details
	Good	26-22	Most of content support the topic but lack details.
	Fair	21-17	Limited knowledge; the content of the paragraph has to be more develop, inadequate development of the topic.
	Poor	16-13	The content of the paragraph is not develop,
Organization	Excelent	20-18	Well organize and complete generic structure of recount (orientation, events, conclusion), ideas are clearly stated, logical sequencing of events.
	Good	17-14	Logical sequence of generic structure (orientation, events, conclusion), loosely organized but main ideas stand out, limited supported
	Fair	13-10	Lack logical sequencing of generic structure (orientation, events, conclusion), Ideas confused or disconnected,
	Poor	9-7	No generic structure (orientation, events, conclusion), does not communicate
Vocabulary	Excelent	20-18	Appropriate language feature of recount text,

[12] Ibid.104

			effective word choice and usage, the meaning is understandable.
	Good	17-14	Appropriate language feature of recount text, occasional errors of word choice but meaning not obscured
	Fair	13-10	Inappropriate language feature of recount text, frequent errors of word choice but meaning obscured
	Poor	9-7	Inappropriate language feature of recount text, many errors of word choice, not enough to evaluate
Language use	Excelent	25-22	Words showing the order events, the use of simple past tense, action verb, articles, proper noun and pronouns.
	Good	21-18	Limited showing the order events, the use of simple past tense, action verb, articles, proper noun and pronouns but meaning seldom obscured.
	Fair	17-11	Mention the order of event rarely, major problem in the use of simple past tense, action verb, articles, proper noun and pronouns but meaning obscured.
	Poor	10-5	Did not mention the order of event, dominated by errors the use of simple past tense, action verb, articles, proper noun and pronouns, did not communicate
Mechanics	Excelent	5	Readable, few errors of spelling
	Good	4	Readable but occasional errors of spelling

			but meaning not obscured
	Fair	3	Readable but frequent errors of spelling but meaning obscured
	Poor	2	Unreadable, dominated by errors of spelling, did not Communicate

Score**:**

Content+ organization+ Vocabulary+ Language use+ Mechanics = ____ (total)

(appendix 8)

F. Research Procedure

The procedure of this study covered the following steps, namely: pre treatment, treatment of experimental, treatment of control group and final test.

Table 3.2
Research Schedule

NO	Task	Description	Output	Target completion date
1.	Pre observation	Observe the eighth class while the teacher teaches writing	To know they way of the English teacher to teach writing class	11 May 2013
2.	Pre-treatment test	All of the students at MTs At-Taqwa is given the pre test to know the score which is to determine the sample	To decide two classes that have same level in writing to determine the sample	18 May 2013
3.	Treatment 1 for	Taught using Comic strips	Students can write recount easily to	23 May 2013

	experimental class	As media to write recount	generate their idea by using comic strips	
4.	Treatment 2 for experimental class	Taught using Comic strips As media to write recount	Students can write recount easily to generate their idea and coherently by using comic strips	23 June 2013
5.	First meeting in control class	Taught using Traditional technique by using LKS	The students difficult to start writing	30 June 2013
6.	second meeting in control class	Taught using Traditional technique by using LKS	The students difficult to start writing and their writing are not coherent	30 June 2013
7.	Post-test	All of the students at MTs At-Taqwa is given the post test to know the score after the treatment	Know the students' achievement in writing after the treatment	9 June 2013
8	Analysis data	Accumulate all the data collection to be analyzed	Find out the result	10 June 2013 – 24 July 2013

Before applying the activities above, any requirements that needed has been prepared. Such us, lesson plan, appropriate material, the treatment (comic strips), and others.

1. Pre treatment

Before the treatment, a test was conducted. The test is to know the students' ability in writing before implementation of comic strips as a media in teaching writing. It was used to give information about students' ability in writing recount texts to decide the level. The result of the test was to

determine the control group and experimental group. The test was conducted by asking the students to write a recount text but without any help (media). The result of this test is presented in the following table.

Table 3.3
The Result of Control Group

Component	The Result of Control Group				
	C	O	V	L	M
Total	601	541	509	510	140
Mean	19	17	16	16	4

Table 3.4
The Result of Experimental Group

Component	The Result of Experimental Group				
	C	O	V	L	M
Total	609	533	506	500	141
Mean	19	17	16	16	4

The result above shows that the students' ability in writing was similar. The mean of the content component was 19. It means that the students had limited knowledge in the content of the paragraph, the content had to be developed more, and it also showed inadequate development of the topic.

At the organization component the mean was 17. It means that logical sequence of generic structure (orientation, events, and conclusion), loosely organized but main ideas were stand out. And also the supported ideas were limited.

For vocabulary component, the mean was 16. It means that the use of language feature of recount text were appropriate. And there were occasional errors of word choice but the meaning was obscured.

Meanwhile the mean of the language use component was 16. It means that the students' writing rarely mentioned the order of event, and there were major problem in the use of simple past tense, action verb, articles, proper noun and pronouns but meaning were obscured.

And the last one is the mean of mechanic component. It was 4 which mean students' writing was readable and there were occasional errors of spelling but meaning was not obscured.

Table 3.5
The Result of Mean, Standard Deviation, and Variants

No	Experimental	Control
Total	2289	2301
Mean	71,5	71,9
Standard dev	7,4	6,4
Variants	54,06	41,57

From the calculation using form at Microsoft excel (=average) and drag all the score of experimental group, it was found that the mean of the experimental group was 71.5. Then using the same form, it is found that the mean of the control group was 71.9. The mean of the both class were almost same. And using form of the Microsoft excel (=STDEV) it was found that the standard deviation of the experimental group was 7.4 and the control group was 6.4. And the variants at each group were 54.06 and 41.57. It means that the dispersion was stabile. Even, their score in each skill in five components was also similar. The result is described through the following figure:

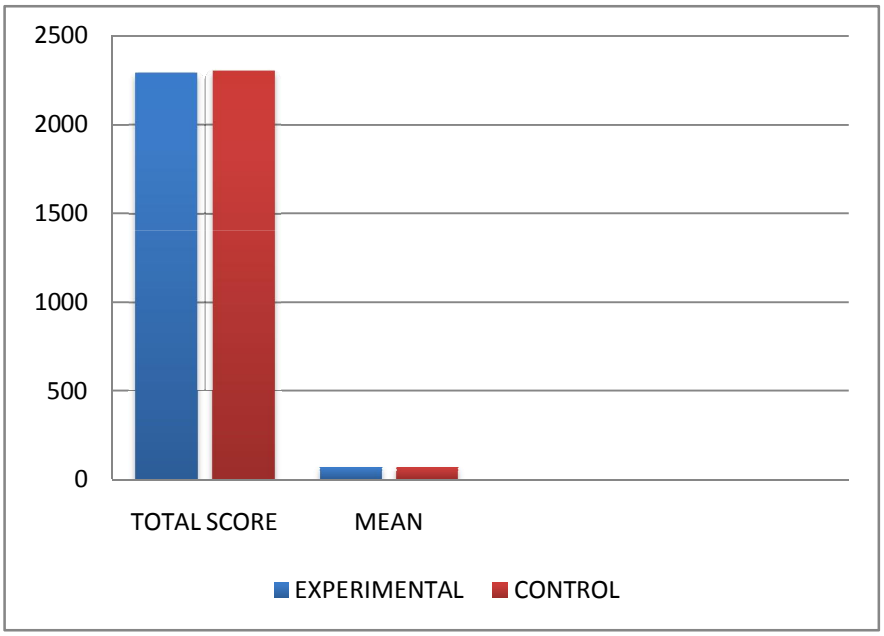

Figure 3.1
Chart of the Total Score and Mean in the Both of Group

Then, to know whether it was significant that those groups were not different or it was just by chance, it was tested using t-test. The terms of use

the t-test are normal distribution and homogeneous variants. Therefore, the normality data and the homogeneity data were analyzed.

From the calculation of the normality test (appendix 1), it was found that X^2_{hit} was 8.89 and X^2_{table} was 11.070 with df= 5 and α=0.05. Compared X^2_{hit} and X^2_{table}, X^2_{hit} was smaller than X^2_{table}, It could be concluded that the data distribution is normal.

Then from the calculation of the homogeneity test (appendix 1), it was found that F_{hit} 1.30 and F_{tabel} was 1.66. So, F_{hit} was smaller than the F_{tabel}. It meant that the score of the test of the both group was homogenous. Therefore, the comparative test could go on using t-test.

After it was found that the data is normal and homogeneous, the t-test formula was used to find out whether there was not a significant difference score between the students of the experimental group and control group before the treatment or only by chance.[13]

Table 3.6
The result of the test (pre-treatment)

No	Exp	contr	X	x^2	Y	y^2
Total	2289	2301	0	1676	0	1289

[13] Anas Sudijono. *Pengantar Statistik Pendidikan.* (Jakarta: Raja Grafindo Persada. 2006). 277

To answer the question above, it should have an alternative hypothesis (H_a) and null Hypothesis (H_o).[14]

H_a : there is a sigificant difference score between the students of the experimental group and control group before the treatment.

H_o : there is no significant difference score between the students of the experimental group and control group before the treatment

Using the t-test form, it was found that the result of t was 0.2169. (appendix 1) Then, the score of df=62 was assessed on a table by significance level 5%. T-table score was 2.000. The criteria was if $t_{score} \leq t_{tabel}$ means = H_0 is accepted and Ha rejected. Or if $t_{score} \geq t_{tabel}$ means H_0 is rejected and Ha is accepted.[15] It is seen that t score is smaller than t table.

Look at the result above, it means that the null hypothesis (H_0) that say there is no significant difference score between the students of the experimental group and control group before the treatment was accepted. It concluded that the students of the two groups had similarity skill before the treatment was given. Therefore, the research was done to the two classes as control group and experimental. Next, to determine which one is experimental group and which one is control group was based on the recommendation from the English teacher.

[14] Ibid. 319
[15] Sugiyono, *Statistika untuk* 97

2. Treatment

The next step was applying the experimental treatment of independent variable to the experimental group for two times. To avoid differences in factors of teachers, the researcher was responsible for these two groups. In this study, the researcher acted as the practitioner who taught both classes. Therefore, the researcher did an observation to the English teacher at MTs At-Taqwa before the treatment conducted. This observation was to know the way the original teacher teaches. Then, the researcher taught the control class while act as the original teacher who only used the LKS as a media in teaching writing.

a. Control Group

The control group was taught as usual without a media as in experimental group. The teacher taught the control class while acting as the original teacher which was only use LKS as a media in teaching writing. When teaching writing, the teacher did not use any media other than LKS.

The teacher prepared the teaching process first before administering the activities. The researcher prepared an appropriate material for teaching writing process. In this control group, researcher discussed with English teachers to create lesson plans as they were used by the teacher.

a) First Treatment

The first treatment was held on 23rd May, 2013. In this time the students were taught using traditional media, it is LKS. The material was recount.

The first treatment was started with the greeting and shared the purpose of the study. Then the teacher ordered the students to open the book and gave some explanation based on the subject. The teacher asked the students to do the exercise in the book. After that, the teacher asked the students to submit the work. The teacher gave the students a home work to write about "your last experience".

b) Second Treatment

The second treatment was held on 1st June, 2013. In this time the students were taught using LKS. The material was recount.

The second treatment was started with the greeting and sharing the purpose of the study. Then the teacher ordered the students to open the book and gave some explanation based on the subject. Teacher asked the students to make a recount text and exercises contained in LKS. After that, the teacher asked the students to submit the work. In the end, the teacher gave some questions to check the students' understanding about the material.

b. Experimental Group

The experimental group was taught in different way as control group. The teacher gave a treatment to the experimental group. The treatment of this study was the use of comic strips as a media for the experimental group in teaching writing. Comic strips as a media would be a help for the students to ease students in order to choose, find and create the ideas of writing and then developing students' ideas into paragraph. The use of comic strips as a media is very useful to help the students to generate and organize ideas into a good composition of writing. So, the product of writing can be understood more easily by the reader. Therefore, in this study, the teacher taught the experimental group using comic strips as a media in teaching writing.

a) First Treatment

The first treatment was held on 23rd May, 2013. In this time the students were taught using comic strips as a media. The material was recount.

The first treatment was started with the greeting. And teacher shared the purpose of the study. The teacher explain about the material. Before giving treatment by comic strips as a media, the teacher introduced students the way comic strips are constructed to be an outline to write. The teacher showed the comic strips. She

gave some question about the picture of the comic strips and the students answered orally. The following question were:

a. Do you like reading comic?

Then the teacher showed some pictures of comic strips. Next, she asked the following questions;

b. What do you think about this picture?
c. What is on the picture?
d. What do you think is going on the picture in the first box?
e. What do you think is going on the picture in the second box?
f. What do you think is going on the picture in the next box?

Then the teacher divided the students into groups each 4 students. After asking some questions, the teacher sticked the comic strips up on the class board. The students choose one of the the comic strips on the board.

Then, the teacher asked the students to write their own writing using comic strips as an outline. By looking at the event of the comic strips, the students wrote down the words that related to the topic of the comic strips for each box. The words above might help the students in writing. Then, the teacher asked to students to applyed all the the sentences to be paragraph based on the box of comic strips. After that, the teacher asked the students to submit the work.

Then, the teacher gave a home work for the students to make a recount text using another comic strips on the newspaper.

b) Second Treatment

The second treatment was held on 1st June, 2013. In this time the students was taught using comic strips as a media. The students taught recount with different comic strips as the first meeting but the activities was similar.

The second meeting was not so different with the first meeting. The treatment was started with the greeting and shared the purpose of the study. Then the teacher asked the students to submit their home work. The teacher asked to the students if they still remember what they have done in the last meeting. And the teacher showed some pictures of comic strips. She gave some question about the picture of the comic strips and the students answered orally. The following questions were:

a. What do you think about this picture?
b. What is on the picture?
c. What is going on the picture in the first box?
d. What is going on the picture in the second box?
e. What is going on the picture in the next box?

After asking some question, the teacher sticked the comic strips up on the class board. The students choose one of the the comic strips on the board.

Then, the teacher asked the students to write their own writing using comic strips as an outline. By looking at the event of the comic strips, the students wrote down the words that related to the topic of the comic strips for each box. The words above might help the students in writing. Then, the teacher asked to students to applyed all the the sentences to be paragraph based on the box of comic strips. After that, the teacher asked the students to submit the work.

In the end, the teacher gave some questions to check the students' understanding about the material.

c. Final test

At the last meeting, the teacher made a final test to both control group and experimental group. The test was to know the students' ability in writing after the treatment. The result of the test was to determine whether there is a significant difference between students who were taught using comic strips as a media and those who were taught using LKS as a media.

The test was asking the students to write a recount text but with different way. The students in experimental group were asked to write a recount text using comic strips as a media. and the students in control group were asked to write a recount text without any media.

The next step, finding the result used t-test. It was to know whether there was a significant differences result of the students' writing skill between students who were taught through comic strips as a media and those who were taught only using LKS as a media.

G. Data Analysis Technique

The data concern with result of the students' category in writing recount texts. Then the data were analyzed by using statistical calculation of t-test to find out the difference score of final test between the experimental and control group the treatment was significant or not.

The data obtained in this study is quantitative data from the test score. To be able to analyze this study, it used t-test formula. The terms of using t-test are the data should have normal distribution and homogeneous variants.[16] So that, before analyzed using t-test, the subject must be necessary to test the normality

[16] Muh. Ali Rumansyah. & Lamijan Hadi Susarno. *Penerapan Model Pembelajaran Kooperatif Tipe Group Investigation untuk Meningkatkan Hasil Belajar Produktif Multimedia Siswa Kelas SMKN 1 Cerme Gresik.* (http://blog.tp.ac.id/penerapan-model-pembelajaran-kooperatif-tipe-group-investigation-untuk-meningkatkan-hasil-belajar-mata-pelajaran-produktif-multimedia-siswa-kelas-x-smkn-1-cerme-gresik, accessed on May 24, 2013)

of the data. While the homogeneity of variance test required to determine the subjects taken are homogeneous or not.

1. Normality test

The normality test was used to check whether the test score of experimental group and control group were normally distribution, the following steps are:[17]

a. Determine the number of intervals class. For normality using Chi Square test, the number of interval is 6. This appropriate with 6 fields in Standard Normal Curve.

b. Determine the limitation of interval class, the formula is:

The long interval class = $\frac{biggest\ data\ -smallest\ data}{6\ (the\ number\ of\ interval)}$

c. Arrange the data into a frequency distribution table

Interval	f_0	f_h	$f_0 - f_h$	$(f_0 - f_h)^2$	$\frac{(f_0 - f_h)^2}{f_h}$
Total					

f_0 = frequency / the number of data from the result of pretest

f_h= the number / frequency of the expected (percentage area of each field multiplied by *n*)

[17] Sugiyono, *Statistika untuk* 75

$f_0 - f_h$= the differences between f_0 and f_h

d. Determine f_h

It based on the percentage area of each field in normal curve, than multiplied by the number of data (the number of individuals in the sample). Number of individuals in the sample = *n*.

1. The first line : 2,7 % x *n*
2. The second line : 13,53 % x n
3. The third line : 34,13 % x n
4. The fourth line : 34,13 % x n
5. The fifth line: 13,53 % x n
6. The sixth line: 2,7 % x *n*

e. put the each f_h score to the table columns f_h, and than calculate the $(f_0 - f_h)^2$ score and $\frac{(f_0-f_h)^2}{f_h}$. The value of $\frac{(f_0-f_h)^2}{f_h}$ is the chi square count (X^2).

f. Compare X^2_{hit} with X^2_{table}. If X^2_{hit} is smaller than X^2_{table}, so the data distribution is normal.

2. Homogeneity test

The homogeneity test was used to check whether the final test score of experimental group and control group have same variants. The following steps of homogeneity test as followed:

a. Find the biggest and the smallest variant score, the formula is:

$$F_{hit} = \frac{S1^2}{S2^2}$$

Explanation:
$S1^2$ = the larger of variance
$S2^2$ = the smaller of variance

b. Compare Fhit with Ftabel, the criteria is Fhit ≤ Ftabel. It means the data is homogenous and comparative test will go on.

3. Test-t

T-test was used to find out whether there is a significant difference score between the students of the experimental group and control group after the treatment or only by chance.[18].

To answer the question above, it should have an alternative hypothesis (H_a) and null Hypothesis (H_o). [19]

H_a : there is a sigificant difference score between the students of the experimental group and control group before the treatment.

H_o : there is no significant difference score between the students of the experimental group and control group before the treatment

Next, the students' score of the test was calculated using the formula bellow:[20]

[18] Anas Sudijono. *Pengantar Statistik* 277
[19] Ibid. 319
[20] Ibid. 324

$$t = \frac{Mx - My}{\sqrt{\left[\frac{\sum X^2 + \sum Y^2}{Nx + Ny - 2}\right]\left[\frac{1}{Nx} + \frac{1}{Ny}\right]}}$$

t = the t-test
Mx = Mean of experimental group
My = Mean of control group
$\sum X^2$ = The sum of mean of experimental group
$\sum Y^2$ = The sum of mean of control group
Nx = The sum of students in experimental group
Ny = The sum of students in control group

After all data were calculated, the number of degree of freedom was calculated. The formula was:

$$df = (N1+N2)-2$$

df = Degree of freedom

N1= Number of Individual in experimental group

N2 = Number of individual in control group

Then, the next step the t_{score} with t_{tabel} were compared. The criteria is if $t_{score} \leq t_{tabel}$ means = H_0 is accepted and Ha rejected. Or if $t_{score} \geq t_{tabel}$ means H_0 is rejected and Ha is accepted.[21]

[21] Sugiyono, *Statistika untuk* 97