

CHAPTER III

RESEARCH DESIGN

This chapter will focus on research design which including first is research design, second is subject of the study, third is research variable, the fourth is research instrument, fifth is data collection technique, sixth is validity and reliability, and the last is technique of analysis data.

3.1 RESEARCH DESIGN

In this research used to find out the difference in vocabulary mastery between students who were taught using comic strip and NHT strategy and not taught with it in teaching English vocabulary to the eight graders of SMPN 1 DAWARBLANDONG. This study was conducted in an pre-experimental design using quantitative method with one-group pretest-posttest design. The subject was not randomized and there was no pre treatment.

Research is finding theory, try out the theory or solving the problem (Sevilla 1993:2). Experimental is an scientific investigation in which the researcher manipulates one or more independent variables, controls, any other relevant variables, and observes the effect of the manipulations on the dependent variables (Ary 1985:284). Experimental research is unique in two very important respect : it is the only type of research that directly attempts to influence a particular variable, and when properly applied, it one or more dependent variable. An experimental usually involves two groups of subjects, an experimental group and a comparison group, although it is possible to conduct an experiment with one group (by providing all treatments to the same groups).

This study uses pre-experimental with one-group pretest-posttest design. According to Arikunto (2010:123) there are kind of pre-experimental design, those are: one shot case study, pre-test and post-test group and static group comparison. In pre-test and post-test group of observation do two times, those are: before experiment and after experiment. The research which is done before experiment is called pre test, and The research which is done after experiment is called post test (Arikunto 2010:124)

This study is classified as pre-experimental design because it is little or no control of extraneous variables. In the one-group pre-test post-test design, a single group is measured or observed not only after being exposed to a treatment of same sort, but also before.

A diagram of one-group pretest posttest design.

Y1	X	Y
Pretest	Treatment	posttest
	(independent variable)	(dependent variable)

The procedures of pre-experimental research that use one-group pretest posttest design:

1. Administering a pretest with a purpose of measuring vocabulary mastery of eight graders students at SMPN 1 DAWARBLANDONG
2. Applying the experimental treatment teaching vocabulary by using comic strip and NHT strategy to the subject eight graders at SMPN 1 dawarblandong
3. Administering a posttest with a purpose of measuring vocabulary mastery eight year students at SMPN 1 dawarblandong.

Different distribution to application of the experimental treatment was determined by comparing the pretest and posttest score. In this study, the researcher used experimental research with quantitative method. The researcher wanted to know the effect of using comic strip and NHT strategy in teaching vocabulary to the students by conducting the experimental research. The impact was assessed by providing a specific treatment. The effect will be known after knowing the significant differences between the students who were taught before using comic strip and NHT strategy and those were taught after using comic strip and NHT strategy

3.2 Subject of the study

3.2.1 Population

In this research the population is all second year students at SMPN 1 Dawarblandong which the total of VIII class are 297 students. Population is the whole subject of the research. (Arikunto 2010:173) In the other book is explained that population is totality of whole object or individual which have a certain characteristics, clear and complete which will be observed. (Hasan 2003:84)

3.2.2 Sample

The sample in this research was taken from one class from the second year of SMPN 1 DAWARBLANDONG, in VIII 2 class, there were 32 students consist of 18 boys and 14

girls. Because the headmaster of this school only allowed the VIII2 class to be subject of this study. But in this research there are only 30 students who attended in the class because the two of students of VIII 2 got sick in the first meeting, so they are absent for the class. In the second meeting the researcher only input data for students who attended in the first meeting, although the students who got absent in the first meeting attended in the class. (seen in appendix)

Sample is the part of population which is observed by the researcher(Tanzeh 2009:94). The researcher used one class to be observed which was VIII 2 class because this class is the one of good class than other but they still any knowledge about english material.

Sampling method is the way of data collecting which only take the part of population element or the characteristic which is any in the population.(Arikunto 2010:85) In this research, the technique which is used is purposive sampling. This technique is done by taking the selected people by a researcher, based on their specific characteristics. Purposive sampling is the sample which is selected accurately, so it is relevant with the researcg design. (Nasution 2003:98). By using the technique which has done, in order that the data which is gotten can represent the population.

3.3 Research Variable

Variable is a phenomenon, so there is no phenomenon that is experienced which can not be defined as variable,it depends on how the quality of its variable,that is how the variation of those phenomenon (Bungin 2003:59) The variables in this research are two, they are :

3.3.1 Independent Variable (x),is variable which is manipulated by a researcher deliberately. In this research, the independent variable are :

X = teaching vocabulary in reading lesson by using comic strip and NHT strategy

3.3.2 Dependent Variable (y), is variable which is measured as the effect of independent variable manipulation. In this research,its dependent variable is :

Y = eight graders students at SMPN 1 Dawarblandong.

3.4 Research Instrument

3.4.1 Try out

Try out had been held before conducting pre-test and post-test. It was given first to the group outside sample and in the same level in order to measure the content of validity and raeliability of the test that would be given also the try out instruction was similar with the pre test and post test which the pre test instruction about to fill in empty text and the students find

up the answer with multiple choice. in this research, try out was organized to the class which are VIII3 and the number of class was 32 takers (see appendix).

3.4.2 Pre test

Before the subject got the treatment, a pre test should administer for assessing on some quality of the test takers (creswell, 2012:297). Based on the concept, so the pre test was being tasted of the groups. It held on Tuesday, 24 July 2018 and started at 09.00 to 09.30. the testing used in their classroom

3.4.3 Treatment

After giving pre test, the researcher gave the treatment in the subject by using comic strip and NHT. It held on Tuesday, 24 July 2018 in second part of the time of english lesson. It started 09.40 to 10.20. and the second treatment was held in Saturday , 28 July 2018 in first time of english lesson.

3.4.4 Post test

In this research, posttest was given after conducting posttest have done to know and find out the students significance different score between before and after applying comic strip and NHT. According to creswell (2012: 297) a posttest is used to measure the students ability in an experiment after they receive a treatment. The instrument can be seen in appendix

3.4.5 Questionnaire

after completely the data, the researcher gave the questionnaire to the subject. Questionnaire is an instrument that has some question which related with using comic strip and NHT to build up vocabulary mastery in reading lesson. the questionnaire consisted of seven question that related to the students responses about the material, media and the strategy of learning. The purpose of questionnaire is to know the students response after the researcher give the treatment.

3.4.6 Lesoon Plan

in this research the teacher must teach based on RPP (lesoon plan). lesoon plan also must be valid. Then lesoon plan is validated by validator 1 and validator 2. The lecturer who expert as validator 1 and the english teacher in SMPN 1 dawarblandong as validator 2

3.4.7 Observation checklist

The researcher used observation checklist. There are two observation checklist which are for teacher and students. Teacher observation is to know the teacher in teaching very well and based on lesoon plan. Whereas, students observation are to know the students active in

learning process. both of observation who observe by the researcher friends because the teacher give his credibility to the researcher

3.5 DATA COLLECTING TECHNIQUE

Data in this research is score. Data is the facts note or information will be produced in the research activity (Tanzeh 2009:54). Data source is the subject where the data is gotten.(Arikunto 2010:172). In this research the researcher use primary data.Primary Data is data collected directly by the researcher from the first subject(Sugiono 2006:225), that is the students' test score of SMPN 1 DAWARBLANDONG, especially students of VIII 2 class.

3.5.1 Procedure of Collecting Data

After the researcher has got permission from headmaster, the researcher was conducted on 18 July 2018 at SMPN1 DAWARBLANDONG

The procedure were:

- a. The researcher applied tryout test in VIII 3 class to know that the question of pre test and post test validity and reliability to give in the subject of research
- b. The researcher gave the pre – test to the students in VIII 2 class. Pretest here is to measure how far the students' understanding about the course and how far they know about English vocabulary
- c. The researcher gave treatment to the students in vocabulary by using comic strip and NHT strategy
- d. The researcher gave post- test to students to find out vocabulary achievement for students after using comic strip and NHT strategy in teaching vocabulary
- e. The researcher gave questionnaire to know the students responses after giving the treatment

3.5.2 Research procedure

Table 3.1 research procedure

Detail of explanation you can see in the lesson plan (appendix lesson plan)

NO	PROCEDURE	TIME
1	To send the letter permission	Monday, 16 July 2018
2	Try out	Wednesday , 18 2018
3	Pre-test	Tuesday, 24 july 2018
4	Treatment Meeting 1	Tuesday, 24 july 2018
5	Treatment Meeting 2	Saturday , 28 July 2018
6	Post-test	Saturday , 28 July 2018
7		

3.6 VALIDITY AND RELIABILITY

Before the pretest and post test is given to students. The researcher must get the validity test and reliability test to know the data is valid or not. So the researcher asks the one of lecturer in university and english teacher in SMPN 1 DAWARBLANDONG

3.6.1 Validity

Validity is the most important to considerate research instrument is valid or not. Dr. Sugiyono (2014;121) views that valid is an instrument that be used to measure object that must be measured. According to brown (2000:388) there are three kind of validity they are content validity, construct validity, and face validity. In this research uses content validity. The test has to be arranged based on the main and basic competency of indonesian curriculum that is used in SMPN 1 DAWARBLANDONG which is curriculum of 2013. The material that is taught in this school. The instrument of validity is taken by eight grade's syllabus.

3.2 Table content validity of the test

Main competency :	<p>KI.1 Menghargai dan menghayati ajaran agama yang dianutnya.</p> <p>KI.2 Menghargai dan menghayati perilaku jujur, disiplin, tanggungjawab, peduli (toleransi, gotong royong), santun, percaya diri, dalam berinteraksi secara efektif dengan lingkungan sosial dan alam dalam jangkauan pergaulan dan keberadaannya</p> <p>KI.3 Memahami dan menerapkan pengetahuan (faktual, konseptual, dan prosedural) berdasarkan rasa ingintahunya tentang ilmu pengetahuan, teknologi, seni, budaya terkait fenomena dan kejadian tampak mata</p> <p>KI.4 Mengolah, menyaji, dan menalar dalam ranah konkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai dengan yang dipelajari di sekolah dan sumber lain yang sama dalam sudut pandang/teori</p>
Basic competency :	4.14 Menangkap makna teks <i>recount</i> lisan dan tulis, pendek dan sederhana, tentang kegiatan, kejadian, peristiwa
Indicators :	<p>Menerapkan struktur teks dan unsur kebahasaan untuk melaksanakan fungsi sosial teks <i>recount</i> dengan menyatakan dan menanyakan tentang kegiatan, kejadian, dan peristiwa, pendek dan sederhana, sesuai dengan konteks penggunaannya</p> <p>Menangkap makna teks <i>recount</i> lisan dan tulis, pendek dan sederhana, tentang kegiatan, kejadian, peristiwa</p> <p>Menyusun teks <i>recount</i> lisan dan tulis, pendek dan sederhana, tentang kegiatan, kejadian, peristiwa, dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan yang benar dan sesuai konteks</p>

Based on the table above, it shows that basic competency of english subject of eight grades of junior high school. So it is can be called valid because basic competency and main competency mathc.

Beside that, the researcher ask the lecturer and english teacher who expert in vocabulary in reading lesson test to measure validity of the test. They are Sulton Dedi W . S.Pd. M.Pd. as the lecturer of Muhammadiyah University of Surabaya and Kentut Mugianto, S.Pd. as the english teacher of SMPN 1 DAWARBLANDONG. (seen appendix)

3.3 Table Validity of the test

no	Name	Validity ofthe test		Date
		Yes	No	
1	Sulton Dedi W . S.Pd. M.Pd	✓		Tuesday, 24 April 2018
2	Kentut Mugianto, S.Pd.	✓		Monday, 30 April 2018

3.6.2 Reliability

A test can be a good instrument not only when it is valid but also reliable. According to brown (2004:20). Dr. M. Soenardi (2008 : 186) states that there are two rater reliability. There are intra-rater reliability and inter-rater reliability.

In this research used inter-rater reliability to know the data reliable or not. Dr. M. Soenardi (2008 : 187) added that inter-rater reliability is the test that be scored by two person or two observer namely is rater 1 and rater 2 based on instrument. It means that the researcher chooses the reliability of the rating by asking the english teacher as the rater 1 and the researcher as the rater 2 to give score. It can be called “inter-rater”. Then the data will calculated using SPSS 17. The result of reliability formula show coefficient of correlation with the criteria (sugiyono: 2014 : 184)

3.4 scale of reliability

Interval coefficient	Level of correlation
0,00-0,199	Very low
0,20- 0,399	low
0,40-0,599	Moderate

0,60-0,799	Strong
0,80-1,00	Very strong

3.5 Rtable of product moment (sugiyono : 2014 :333)

n	Taraf Signifikan		n	Taraf Signifikan		n	Taraf Signifikan	
	5%	1%		5%	1%		5%	1%
3	0,997	0,999	27	0,381	0,487	55	0,266	0,345
4	0,950	0,990	28	0,374	0,478	60	0,254	0,330
5	0,878	0,959	29	0,367	0,470	65	0,244	0,317
6	0,811	0,917	30	0,361	0,463	70	0,235	0,306
7	0,754	0,874	31	0,355	0,456	75	0,227	0,296
8	0,707	0,834	32	0,349	0,449	80	0,220	0,286
9	0,666	0,798	33	0,344	0,442	85	0,213	0,278
10	0,632	0,765	34	0,339	0,436	90	0,207	0,270
11	0,602	0,735	35	0,334	0,430	95	0,202	0,263
12	0,576	0,708	36	0,329	0,424	10	0,195	0,256
13	0,553	0,684	37	0,325	0,418	12	0,176	0,230
14	0,532	0,661	38	0,320	0,413	15	0,159	0,210
15	0,514	0,641	39	0,316	0,408	17	0,148	0,194
16	0,497	0,623	40	0,312	0,403	20	0,138	0,181
17	0,482	0,606	41	0,308	0,398	30	0,113	0,148
18	0,468	0,590	42	0,304	0,393	40	0,098	0,128
19	0,456	0,575	43	0,301	0,389	50	0,088	0,115
20	0,444	0,561	44	0,297	0,384	60	0,080	0,105
21	0,433	0,549	45	0,294	0,380	700	0,074	0,097
22	0,423	0,537	46	0,291	0,376	800	0,070	0,091
23	0,413	0,526	47	0,288	0,372	900	0,065	0,086
24	0,404	0,515	48	0,284	0,368	1000	0,062	0,081
25	0,396	0,505	49	0,281	0,364			
26	0,388	0,496	50	0,279	0,361			

3.7 Data analysis technique

the purpose of the data analysis is to know the effectiveness of using comic strip and NHT (numbered heads together) to increase vocabulary mastery in reading lesson at eight grade of SMPN 1 DAWARBLANDONG. After collect the data, the researcher analyze

and discuss the result of the pretest posttest using SPSS 17.0 software. To analyze the data from the test, researcher conducts some steps.

3.7.1 Normality test

Normality test is being used to find out the data distribution are normal or not. In this case, the researcher will use SPSS 17.0 software based on formula of one sample kolmogrov-smirnov to measure the normality of the test. The calculation of the data is using the formula that appropriate with criteria of testing normality is if $Pvalue < \alpha$, so that H_1 is refused

3.7.2. T-test calculation

After testing normality, there is T-test. The purposed of this test is to analyze the differences of the students vocabulary mastery before and after using comic strip and NHT as the media and strategy. The researcher will be used a paired sample t-test for comparing the variance pre test and post test results of the subject.

3.7.3 the persentage students score improvement of passing grade

in this research, the researcher will be compare the value of pretest and posttest and using standard minimum score (KKM). For the passing grade in this school is 70. So the researcher will be analyze score from both of the test. If there is improvement of the students after give the treatment, total of students who pass the passing grade will be increase to. So this analysis can be used as evidence that comic strip and NHT strategy are effective to build students vocabulary