

CHAPTER III

RESEARCH METHOD

This chapter is purposed to find out whether or not the students who are taught analytical exposition text using VOA Special English Audio Podcast have better writing achievement than those who are not taught analytical exposition text using VOA special English audio podcast. In addition, it is purposed to explore whether or not the students can be motivated in learning writing analytical exposition text through VOA Special English Audio Podcast. This chapter is discussed the method that was used in this research. They are research design, research variables, population and sample, research procedure, data and source of data, data collection technique, instrument of the study, validity and reliability, data analysis procedure and hypothesis.

A. Research Design

The research design for this research defined into two parts. The first research is Quasi- Experimental research design which is aimed for answering the research question. This is the major research design for research design. Because of the second research question is about qualitative research, the secondary research design is descriptive qualitative research design.

1. Quasi- Experimental Research Design

This research is purposed to find out the better achievement on writing analytical exposition text between students who are taught using VOA Special

English audio podcast and students who are taught using conventional teaching. Because it studied the different teaching technique in using authentic materials, the appropriate research design was quasi- experimental research. According to Ary et al, quasi- experimental is experimental research design that has lack randomization of group¹. It is appropriate to be applied with the education system which did not allow to takes the random sample for doing research in the school.

Quasi- experimental needed two similar groups as the sample of the research. As Latief states that quasi- experimental research is the research which takes sample from two different classes in the same grades which has similarity². The classes are experimental group and control group³. The experimental group was the group who taught writing analytical exposition text using VOA Special English audio podcast. In the other hand, the control group was the group who are not taught writing analytical exposition text using VOA Special English audio podcast.

b. Qualitative research design.

This qualitative research designed to answer the students' motivation in the experimental group of this research. As Ary stated that qualitative research design was aimed to interpret the behaviour and intention of the sample⁴. It means that it

¹ Donald Ary, Jacobs, LC, and Razavieh, *An Introduction to Research in Education: Third Edition* (New York: CBS College Publihing, 1985) 302

² M. Adnan Latief, *Tanya Jawab Metode Penelitian Pembelajaran Bahasa* (Malang: UM Press,2010) 120

³ Ibid 171-121

⁴ Donald Ary, Jacobs, LC, and Razavieh... p.424

focused on how the human interpret or understand their experience. Therefore, the interview was used to know the students' experience in the experimental group after getting treatment using VOA Special English audio podcast. The appropriate sampling for doing interview in this research is purposive sampling⁵. It is purposed to know the opinion or the students' sense of experimental group after getting treatment. The sample for this research is 15 students as the representative for experimental group's students. As Ary stated that the sample for purposive sampling is the representative from the population.⁶

B. Research Variables

a. Independent variable

Independent variable is also known as *stimulus variable predictor variable* and *antecedent variable*⁷. Independent variable is variable that give effect to the dependent variable⁸. Based on the theories, independent variable is treatments which are given to the sample of the research. So, *VOA special English* audio podcast was the independent variable in this research.

b. Dependent variable

Dependent variable is also known as output variable, criteria variable, and *consequent variable*⁹. Dependent variable is variable that is the effect of the

⁵ Donald Ary, Jacobs, LC, and Razavieh... p.423

⁶ Donald Ary, Jacobs, LC, and Razavieh...p. 156

⁷ Sugiyono, *Statistika Untuk Pendidikan*, (Bandung: Alfabeta, 2011)4

⁸ Ibid

⁹ Ibid

independent variable¹⁰. It means that dependent variable is the products which are produce by the students. So, writing skill on analytical exposition text of the eleventh graders became dependent variable in this research.

C. Population and Sample

Identifying the target population is needed to be done firstly in sampling of the research. According to Ary, the first step in sampling is identifying the target population which hopes to generalize the results of the study.¹¹ The target population for this research was the senior high school which has some problems in English writing skill. Yet, it was difficult to select all of the target population. It would be expensive and need much to finish the research. So, defining the accessible population is needed because this research need the population of subjects which accessible to the researcher for choosing sample.¹² The accessible population of this research was SMAN 1 Waru. SMAN 1 was selected as the accessible population because it was one of the schools which has very good quality in education in Sidoarjo. Besides proved by its A very good criteria in accreditation of state senior high school in Sidoarjo, the good quality of the school was proved by the students' participation in English competition. They often win in speaking competitions, such as speech contest held by university in Surabaya, speech contest held around senior high school in Sidoarjo, speech contest, and so on. One of them got the 2nd winner of the speech contest in

¹⁰ Ibid

¹¹ Donald Ary, Jacobs, LC, and Razavieh..... 149

¹² ibid

Sidoarjo area. The other students have passes other prestige English competencies. Yet, most of them are mastered in speaking skill. The students' participation indicated that the students were interested in learning English.

After identifying the population, selecting the sample is needed to be considered. The classes which were used as the experimental and control group were selected based on the sampling technique. The sampling technique for this research was cluster sampling. According to Ary states that cluster sampling is taking sample from groups not an individual from the one place.¹³ So, the cluster is taken from the groups which have similarity in writing skill. XI- S2 was selected as experimental group and XI-S3 was selected as the control group based on the English teacher's recommendation at SMAN 1 Waru. There were 30 students of XI- S2 and 30 students XI- S3.

The sample of this research was the eleventh graders. They were not the newcomers in the school. In addition, they also have problems in writing skill. Because of they were not in preparation of National Examination, they have a lot of time to reduce their problem in writing skill. This research expected to help them in improving their English writing skill.

D. Research procedure

The research procedure was administered into four steps: conducting pretest, giving treatments, administering post test and interview. For answering the first research question, the researcher collected data from pretest and post test. The

¹³ Ibid, p.154

pretest and post test were collected from the experimental group and the control group. In addition, for answering the second research question, the data were collected from interview to the students in the experimental group. The interview was conducted after the post test in the experimental group. The research schedule can be seen in the following table:

Table 3.1
Research Schedule

NO.	EXPERIMENTAL GROUP		CONTROL GROUP	
	DATE	ACTIVITY	DATE	ACTIVITY
1	July 19 th 2013	Conducting Pretest	July 17 th 2013	Conducting Pretest
2	July 23 rd 2013	Giving 1 st treatment: Explanation of analytical exposition text and teaching using VOA Special English audio podcast with topic “doing exercise”	July 20 th 2013	Giving 1 st treatment: Explanation of Analytical exposition text and teaching using conventional teaching with the topic “doing exercise”
3	July 24 th 2013	Giving 2 nd treatment: Explanation of analytical exposition text and teaching using VOA Special English audio podcast with topic “smoking”	July 23 rd 2013	Giving 2 nd treatment: Explanation of Analytical exposition text and teaching using conventional teaching with the topic “smoking”
4	July 26 th 2013	Administering Post test	July 27 th 2013	Administering Post test
5	July 26 th 2013	Interview	-	-

1. The Experimental Group

The students of experimental group were the students of XI- IPS 2. In experimental group, the research was conducted in some steps. The steps are conducting pre-test, giving treatments, administering post test and interview. The treatments for students in experimental group was taught writing using VOA Special English audio podcast

a. Conducting Pretest

The pretest was conducted on July 19th 2013. It was conducted to know the students' capability in writing analytical exposition text before getting treatments. The pretest was conducted in 45 minutes. In pretest, the students composed an analytical exposition text based on the topic "BlackBerry Mobile Phone". Before the students did the pretest, the researcher has explained briefly about analytical exposition text. A brief explanation was to ensure that they wrote the text in the right organization of analytical exposition text. To help the students in doing the pre-test, the researcher elicited them about the advantages and the disadvantages about the use of BlackBerry mobile phone. So, they have many ideas to be written in their task.

b. Treatments

The treatments in experimental group were administered in two meetings. Each treatment was done in 60 minutes. The treatments were conducted using authentic material from the news in VOA Special English audio podcast (*see*

appendix 2). The script of VOA Special English audio podcast can be seen in the *appendix 7*. The first treatments were conducted on July 23rd 2013 using topic “Doing Exercise”. In the first activity, the researcher explained first about analytical exposition text. Afterwards, the researcher let the students to listen to the podcast. While listening, they arranged the scramble paragraphs of VOA script to be good order with their seatmate. After they got their good order paragraphs, they discussed together. After they understand the content of the VOA script, they and gave two arguments about it with their seatmate. After they have two arguments, they have to elaborate two opinions into analytical exposition text. To ease them in writing analytical exposition text, they did the task with their seatmate. The second treatment on July 24th was conducted using topic “Smoking”. The whole activities were same with first treatment. The difference was on the topic in each treatment.

c. Post Test

The post test and interview were administered on July 26th 2013. The pre-test was administered to know the result of the students on writing analytical exposition text after getting treatments using VOA Special English audio podcast. In the post test, the students wrote analytical exposition text. The students chose the topic for writing analytical exposition text by their own. Most of the students prefer wrote about “Smoking”. The post-test was conducted in 30 minutes.

d. Interview

The interview was conducted after the post test finished. It was done using the interview guidelines (*see appendix 5*). The interview was aimed to explore whether or not the students can be motivated after getting treatments using VOA Special English Audio Podcast. The sample of the interview was taken randomly. The sample for interview was 15 students as the representative of students in the experimental group. The interview was conducted in 30 minutes.

2. The Control Group

In the control groups, the steps of research were conducting pretest, giving treatments, and administering post test. The treatments did using conventional teaching. The members of control group were the students of XI-IPS class. The following activities were:

a. Conducting Pretest

The pretest was conducted on July 17th 2013. The pretest was conducted to know the students' writing capability before getting treatments. The pretest did in 45 minutes. In pretest, the task was same with the task in experimental group. The students wrote an analytical exposition text based on the topic "BlackBerry Mobile Phone". Before the students started doing the pretest, the researcher has explained briefly about analytical exposition text. A brief explanation was to ensure that they wrote the text in the right organization of analytical exposition

text. In addition, the researcher elicited them about BlackBerry mobile phone to ease them doing the pre-test.

b. Giving Treatments

The treatments on control group were same conventional teaching way which is usually used by the English teacher there (*see appendix 2*). The treatments in control group were done twice. Each treatment was given in 60 minutes. The first treatment was done on July 20th 2013. The first activity was explaining analytical exposition. Afterwards, the students were let to read an analytical exposition text which is the topic is Exercise. To ease them understand the text, the researcher let them to ask some difficult vocabularies of the text. To ensure that they already understand the content of the text, some questions were asked to the students. In the next activity, they were let to mention their arguments about the content of the text in the white board. After the teacher checked their arguments, the researcher let them to choose two arguments in the board and elaborate the arguments into analytical exposition text. They allowed to write analytical exposition text with their seatmate. The second treatments did on July 23rd 2013. The activities in the treatment were same with the first treatment. The difference was on the topic in each treatment. The topic in second treatment was “Smoking” (*see appendix 2*).

c. Administering Post Test

The post test was done on July 27th 2013. The post test was administering in 30 minutes. It was aimed to know the students achievements in writing analytical

exposition text after getting treatments using conventional teaching. The post test was same with the post test in experimental group. The students wrote the analytical exposition text. They chose the topic by their selves.

E. Data Collection Technique

The first data collection technique was collected by try-out test. It was for measuring the reliability and validity of the test. The other major data were collected from pre-test, post test and interview.

a. Pre Test

The pre-test was conducted for both of groups, experimental group and control group. Pre-test in experimental group was done on July 19th 2013 and in control group on July 17th 2013. Pretest was aimed to measure students' achievement before getting treatment. In scoring the result of pretest, the researcher used writing scoring profile adapted from Jacob et, al (*see appendix I*).¹⁴ Students' pretest was scored in five criteria in writing text. The criteria were content, organization, vocabulary, language use and mechanic.

b. Post Test

The post test was conducted for both of groups, experimental group on July 26th 2013 and control group on July 27th 2013. The post test was conducted to find out the students' achievements after getting treatments. In scoring the result of post test, the researcher used writing scoring profile

¹⁴ Arthur Hughes, *Testing For Language Teacher* (United Kingdom: Cambridge University Press, 2003) 100

adapted from Jacob et, al (*see appendix 1*).¹⁵ Each student's post test scored in five criteria in writing text. The criteria were content, organization, vocabulary, language use and mechanic.

c. Interview

The interview was conducted to explore students' motivation after getting treatment on writing analytical exposition text using VOA Special English audio podcast. According to Irving, the aim of interview is for interest understanding of people's experience and the meaning of their experience for themselves.¹⁶ The interview was done for 15 students as the representative of experimental group. The questions in interview guidelines were based on motivation indicator by Sardiman (*See Appendix 5*).¹⁷

d. Documentation

The data were documented to support the instrument of the test. The documentation collected from lesson plans (*See Appendix 2*), students' score (*see appendix 3 and appendix 4*) and students' writing.

F. Instrument of The Study

The instruments for the research were test, interview guidelines, and documentation.

¹⁵ Ibid

¹⁶ Irving Seidman, *Interviewing as Qualitative Research: A Guide for Researchers in Education and Social Science* (USA: Teachers College Press, 2006) 9

¹⁷ Sardiman A. M, *Interaksi dan motivasi belajar mengajar* (Jakarta: CV Rajawali, 1990) 88

a. Test

The tests were pre-test and post test. The tests were conducted on experimental group and control group.

b. Interview guidelines

The interview guidelines were some questions for interview that related to the research. It is delivered to the students of experimental group during the interview. The interview guidelines were some questions related to the indicators of students' motivation by Sardiman (*see appendix 5*).

c. Document

The documents for the research were lesson plans for treatments in the experimental group and the control group, students' pretest and post test. In addition, students' score and students' composition were attached as the document for this research (*see appendix*).

G. Validity and Reliability

a. Validity

According to Ary, et al, validity is *“the extent to which an instrument measured what it claimed to measure. The focus of recent views of validity is not on the instrument itself but on the interpretation and meaning of the scores derived from the instrument”*¹⁸. So, the validity is related to the instrument of the research. For this research, the researcher chooses content validity. The standard of content validity is the degree to which the sample of items, tasks, or questions

¹⁸ Ary, et. al, p. 225

on a test are representative of some defined universe or domain of content ¹⁹. Content validity is related to the content of the test. It means that content validity is related to the content of items in the test that is available in the curriculum. To strengthen the validity of the instrument, the validity also took from the English teacher at SMAN 1 Waru and the expert of writing skill, the lecturer of English Education Department (*see appendix*).

b. Reliability

Reliability referred to the consistency of test score from one measurement to another. In measuring the reliability, test-retest was used. As Sugiyono stated that test re-test is the way in measuring the instruments which done twice²⁰. The test-retest was done in the same subject and the same task but in the different time.

The data for testing the reliability of the test came from score of try-out test. Try-out test was conducted on July 15th 2013 and July 16th 2013. The members of try-out test were the students that were not from the experimental group nor control group. The members of try-out test were thirty students of XI-IPS 1.

The data was calculated by using manual calculation. The first step, the researcher needed to calculate the mean of try-out test with the following step:

Table 3.2
Calculation of Try-out 1 and Try-out 2 of The Test

Subject	X	Y	X ²	Y ²	X.Y
1	76	76	5776	5776	5776
2	73	76	5329	5776	5548

¹⁹ Ibid

²⁰ Sugiyono, *Statistik Untuk Penelitian* (Bandung: AlfaBeta, 2011) 354

3	78	78	6084	6084	6084
4	76	77	5776	5929	5852
5	78	78	6084	6084	6084
6	77	77	5929	5929	5929
7	75	77	5625	5929	5775
8	80	81	6400	6561	6480
9	72	78	5184	6084	5616
10	75	75	5625	5625	5625
11	76	79	5776	6241	6004
12	77	77	5929	5929	5929
13	76	77	5776	5929	5852
14	76	76	5776	5776	5776
15	73	73	5329	5329	5329
16	75	75	5625	5625	5625
17	77	77	5929	5929	5929
18	78	79	6084	6241	6162
19	75	76	5625	5776	5700
20	80	80	6400	6400	6400
21	78	78	6084	6084	6084
22	75	77	5625	5929	5775
23	80	80	6400	6400	6400
24	77	77	5929	5929	5929
25	75	75	5625	5625	5625
26	76	77	5776	5929	5852
27	79	79	6241	6241	6241
28	75	77	5625	5929	5775
29	75	79	5625	6241	5925
30	75	76	5625	5776	5700
TOTAL	2288	2317	174616	179035	176781

The next step was calculating the reliability with the product moment

formula:²¹

²¹ Ibid 356

$$r_i = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N\Sigma X^2 - (\Sigma X)^2\}\{N\Sigma Y^2 - (\Sigma Y)^2\}}}$$

Explanation:

r_i : The coefficient of correlation between variable X and Y.

X : Test score of first try out.

Y : Test score of second try out.

N : The number of the students.

$$r_i = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N\Sigma X^2 - (\Sigma X)^2\}\{N\Sigma Y^2 - (\Sigma Y)^2\}}}$$

$$r_i = \frac{30(176781) - (2288)(2317)}{\sqrt{\{30(174616) - (2288)^2\}\{30(179035) - (2317)^2\}}}$$

$$r_i = \frac{5303430 - 5301296}{\sqrt{\{5238480 - 5234944\}\{5371050 - 5368489\}}}$$

$$r_i = \frac{2134}{\sqrt{\{3536\}\{2561\}}}$$

$$r_i = 0,71$$

Comparing the result with the table of reliability was the last step. It was aimed to know the level of reliability of the test. Based on Brown, cited from Sugiarti, the criteria to interpret the result of reliability are:²²

Table 3.3
Reliability Scale of the Test

Scale	Level of Reliability
0.00-0.20	Not reliable
0.20-0.40	Less Reliable
0.40-0.60	Reliable enough
0.60-0.80	Reliable
0.80-1.00	Very Reliable

Based on calculation above, the result was 0,71. It means that the result is in scale 0.60-0.80. It means that the test is reliable. So, this instrument is suitable to be used as the instrument of this research.

H. Data Analysis Procedure

In this research, the data were collected from the test and interview. The procedure are scoring, comparing mean and t-test.

a. Scoring

The score of pretest and post test were scored using writing' scoring profile adapted from Jacob et, al (*see appendix 1*). The components were divided into five criteria. The criteria are content, organization, vocabulary, language use and mechanic.

²² Dwi Wahyu Sugiarti, *The Effectiveness of Clustering Technique in Teaching Writing at MTs Raudlatul Ulum*, (Surabaya, State Institute for Islamic Studies Sunan Ampel Surabaya, 2012). 26

In scoring of content, the scoring started ranging from excellent criteria until poor criteria. The excellent to very good score have 30 until 27 level which the criteria relevant to assigned topic, the main sentences are clear, and supporting sentences are related to the topic in terms content the composition. Good to average score have 26 until 22 level which the criteria are the content of composition is relevant enough to assigned topic but it lack detail. It means the main sentences are clear, most of supporting sentences are related to the main topic, there are a few supporting sentences that are not appropriate. In fair to poor score the level are 21-17 with the criteria inadequate development of the topic at the content of the composition, clear enough of main sentences, several supporting sentences which are not related to the main sentence. The last score in very poor score have level 16-13 with criteria. The content of the composition is not relevant to the topic and unclear main sentences and supporting sentences.

In scoring of organization, the scoring started ranging from excellent criteria until poor criteria. The excellent to very good score have level 20-18. The criteria are the clearly stated ideas. The composition is cohesive and well organized by on the generic structure. In good to average score, the levels are 17 until 14. The criteria are the structure of the composition is logical but it is in incomplete sequence. In fair to poor score, the levels are 13 until 10. The criteria are the structure is lack logical sequencing and development. The last score is very poor

level which has level 9-7. It means that the ideas are not clearly stated and the organization of the composition is poor

The third score was vocabulary. The scoring started from excellent until very poor score. In excellent to very good score, the levels are 20 until 18. The criteria are effective and appropriate in usage of the chosen vocabularies. In good to average score, the level is 17 until 14 with good enough and meaningful the chosen vocabularies but there are still occasional errors of words/idioms. In Fair to poor score, the level is 13 until 10. The criteria are chosen vocabulary has confusing meaning and there are frequent errors of words/idiom in usage. In very poor, the level is 9-7. The criteria are chosen vocabulary is not related and there a little knowledge of English vocabulary.

The fourth score was language use. In excellent to very good, the level is 25-22 with a few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions. In good to average, the level is 21-18 which have criteria in several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions. In fair to poor, the levels are 17 until 11. The criteria are frequent errors of agreement, tense, number, word order/function, articles, pronouns, prepositions. In very poor, the level is 10-5. The criteria are dominated by errors and the language use does not communicate.

The last score is mechanic. The excellent to very good criteria, the level are 5. The criteria are a few errors of spelling, punctuation, capitalization, paragraphing.

In good to average, the level is 4. The criteria are occasional errors of spelling, punctuation, capitalization, paragraphing. In fair to poor, the level is 3. The criteria are frequent errors of spelling, punctuation, capitalization, paragraphing. In very poor, the level is 2. The criteria are dominated by errors of spelling, punctuation, capitalization, paragraphing.

So, the whole score is 100. It is taken from maximum score in each level at content 30, organization 20, vocabulary 20, language use 25, and mechanic 5.

b. Comparing Mean

For answering the first research question of the study, it needed to compare the mean result both experimental and control group. Mean was calculated by dividing the total of the score with the amount of students in each group of this research. Using Microsoft Excel was needed to calculate the mean of the test in experimental group and control group. Afterward, comparing the mean of both test were conducted to know the higher score between those groups.

c. T-test

T-test was aimed to compare whether the result score of test in both groups were significantly different. It was utilized to test that the result is not obtain by chance. The students' score posttest in the experimental group and the control group was calculated by using *t*-test formula²³. The terms in using *t*-test should

²³ Anas Sudijono, *Pengantar Statistik Pendidikan*, (Jakarta: PT Raja Grafindo Persada, 2006) p.314

be in normal distribution and homogeneous variants.²⁴ So, before analyzed the test using t-test, the data needed to be checked whether or not the data is in normal distribution and in homogenous variants. The way in checking the normal distribution was through normality test. In addition, to know the homogenous variant, the homogenous test was needed to be calculated. The following procedure of normality test and homogenous test are:

1. Normality test

The normality test is used to check whether the posttest score of experimental group and control group were normally distribution or not. The steps are:²⁵

- 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 Baku Normal Curve.
- b) Determine the limitation of interval class, the formula is:

$$\begin{aligned} \text{The long interval class} &= \frac{\text{biggest data} - \text{smallest data}}{6 (\text{the number of interval})} \\ &= \frac{90 - 70}{6} \\ &= 3,33 \approx 3 \end{aligned}$$

²⁴ Muh. Ali Rumansyah. & Lamijan Hadi susarno. *Penerapan Model Pembelajaran Kooperatif Tipe Group Investigation untulk 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 Mei 24, 2013)

²⁵ Sugiyono. *Statistika untuk*p.75

Based on the calculation above, the smallest data both of group was 70 and the biggest data was 9. The long interval class in each interval was 3 with the number of interval was 6.

c) Arrange the data into a frequency distribution table. The steps are:

1. Calculating f_h (the frequency of the expected) based on the percentage area of each field in normal curve multiplied by 60 (the number of individuals in the sample). Number of individuals in the sample).

- The first line : $2,7 \% \times 60 = 1,62$ is rounded to 2
- The second line : $13,53 \% \times 60 = 8,118$ is rounded to 8
- The third line : $34,13 \% \times 60 = 20,478$ is rounded to 20
- The fourth line : $34,13 \% \times 60 = 20,478$ is rounded to 20
- The fifth line: $13,53 \% \times 60 = 8,118$ is rounded to 8
- The sixth line: $2,7 \% \times 60 = 1,62$ is rounded to 2

2. Taking the value of f_0 to the table columns f_h , and then calculating

the value of $(f_0 - f_h)^2$ and $\frac{(f_0 - f_h)^2}{f_h}$

Explanation:

f_0 = Frequency of data from the result of final test

f_h = Frequency of the expected (percentage area of each field multiplied by n)

$f_0 - f_h$ = The differences between f_0 dan f_h

3. The last step is arranging the data into a frequency distribution table

Table 3.4
Frequency Distribution Table

INTERVAL	f_0	f_h	$f_0 - f_h$	$(f_0 - f_h)^2$	$\frac{(f_0 - f_h)^2}{f_h}$
70-73	2	2	0	0	0
74- 77	11	8	3	9	1,125
78-81	22	20	2	4	0,2
82-85	22	20	2	4	0,2
86-89	1	8	-7	49	6,125
90-93	2	2	0	0	0
	60	60	0		7,65

Explanation:

f_0 = Frequency / the number of data from the result of post-test

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

$f_0 - f_h$ = The differences between f_0 dan f_h

4. Conclusion

Based on calculation above, the Chi square quantification was 7,65. Then, defining the df which was calculated from the amount of interval - 1 or $6-1=5$. The alpha that used in this research was 5% because that percentage was the appropriate percentage in education research. After that, based on df 5 and alpha 5%, the value of Chi square table can be known. The value of Chi square table was 11.070.²⁶ Afterwards, it needs

²⁶ Sugiyono, *Statistika Untuk Penelitian* (Alfabeta: Bandung: 2011), p 376

for comparing the Chi square quantification and the value of Chi square table. It found that the Chi square quantification (7,65) was smaller than the value of Chi square table (11.070). It indicates that the data from the final test of experimental and control group were normally distributed.

2. Homogeneity test

The homogeneity test was used to check whether or not the posttest score of experimental and control group have same variance. The following steps of homogeneity test are:

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

$$\begin{aligned}
 F_{value} &= \frac{S_1^2}{S_2^2} \\
 &= \frac{13,26897}{10,24023} \\
 &= 1,296
 \end{aligned}$$

Explanation:

$$S_1^2 = \text{the larger of variance}$$

$$S_2^2 = \text{the smaller of variance}$$

- b. Find the F table

$$dk \text{ numerator} : 30-1 = 29$$

$$dk \text{ denominator} : 30-1 = 29$$

$$F = (0,05 ; 29,29) = 1,99$$

3. Conclusion

From the calculation above, F value is smaller than the F table. So, it can be concluded that the score of test both group was in normal distribution and homogeneous variant. Afterwards, the next step was analyzing the data by t-test. T-test was utilized to test that the result is not obtain by chance.

d. Interview

Data from interview were collected from the interview to 15 students as the representative of experimental group. The result of the interview analyzed descriptively. The result of interview is described in words rather than numerical.

I. Research Hypothesis

1. If $t_o > t_t$, it means that Null Hypothesis (H_o) is rejected and Alternative Hypothesis (H_1) is accepted. Thus, Students who are taught analytical exposition text using VOA Special English audio podcast have better writing achievement than those who are not taught using VOA Special English audio podcast.
2. If $t_o < t_t$, it means that Null Hypothesis (H_o) is accepted and Alternative Hypothesis (H_1) is rejected. Students who are not taught analytical exposition text using VOA Special English audio podcast have better writing achievement than those who are taught using VOA Special English audio podcast.