CHAPTER III

RESEARCH METHODOLOGY

A. The Research Design

The design of this research is quasi-experiment design , which uses nonequivalent control design group. According to Creswell, quasi-experiments design are experimental situations in which the researcher assigns, but not randomly, participants to groups because the experimenter cannot artificially create groups for the experiment.[1]Furthermore, Gay and Peter Airasian stated that quasi-experimental design is used when the researcher keeps the students in existing classroom intact and the entire classrooms are assigned to treatments.[2] There were two classes in this research,experimental class and control class. The experimental class was treated by Taped Feedback strategy while the control class was treated as usual without Taped Feedback Strategy.

There were a pre-test and post-test for both classes. The end of pre-test, the condition of students could be identified. After that , the treatments were given to the experimental class only. Then classes were given post-test.Then classes were given post-test. Cohen *et.al* say that to account

[1]John W Creswell, *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research.*(New Jersey: Pearson Education Ltd., 2008). P.645.

[2]L. R. Gay and Peter Airasian, *Educational Research Competencies for Analysis and Application.Sixth Ed. (*New Jersey: Prentice- Hall 2000), p. 394

thedifferences between pre-test and post-test scores is using reference to the effect of X (treatment).[3]

Creswell explained that the design of the quasi-experiment, the writer assigns intact class of the experimental and control classes, and administers a pre-test to both classes by giving treatment to experimental class only, and then the writer administers a post-test to assess the difference between the two groups."[4]

Table III.1
Research Design

Group	Pre-Test	Treatment	Post-Test
X 1	T1	X	T2
X 3	T2		T2

Where:

X1 : Control Class

X3 : Experimental Class

T1 : Pre-Test for experimental and control class

√ : Receiving particular treatment

X : without particular treatment

T2 : Post-test for experimental and control class

In this research, the researcher found out the effect of using Taped Feedback strategy on students' comprehension in listening at the tenth grade of Darul Hikmah Islamic Senior High School Pekanbaru. The variables of this research were the effect of Taped Feedback strategy as X variable and students' listening comprehension as Y variable.

[3] Cohenn, Louis, et al. *Research Methods in Education*, (New York: Routledge, 2007), p.282

[4] John W. Creswell, Op.Cit, p.313-314

B. The Time and Location of the Research

This research was conducted at the tenth grade students of Pondok Pesantren Darul Hikmah Islamic Senior High School Pekanbaru. The collecting data was done in two months, starting from April to May 2014.

C. Subject and Object of the Research

Subject of the research was the tenth grade students of Pondok Pesantren Darul Hikmah Islamic Senior High School Pekanbaru. The object of this research was the effect of Taped Feedback strategy on listening comprehension.

D. Population and Sample of the Research

1. Population

The population of this research was the tenth grade students of Darul Hikmah Islamic Senior High School Pekanbaru. The total of the tenth grade students was 171 students.

The number of students includes the following table:

Table III.2
Population of the research

No	Class	Students
1	X 1	31
2	X 2	36
3	X 3	31
4	X 4	22
5	X 5	27
6	X 6	24
Total		**171**

(source : Document of Darul Hikmah Islamic Senior High School Pekanbaru academic year 2013/2014)

Based on the table above, the total population was 171 students that included class X 1, X 2, X 3, X 4, X 5, X 6.

2. Sample

There were 6 classes as the total population in this research. Because the total population was big, the researcher took the sample by using cluster sampling. According to Gay, Cluster sampling randomly select the groups, not individuals. All the member of selected groups have similar characteristics.[5] Therefore, the researcher took two classes to represent the population having similar characteristics.

The similar characteristics intended for the both of classes were: the students were taught by the same teacher of English, the students had the same level, and the students had the same material about learning of listening. The first class was X1 that consisted of 31 students used as control class and the second class was X3 that consisted of 31 students used as an experimental class.So, total of this sample was 62 students.

Table III.3
Sample of the Research

X 1	Experimental class	31
X 3	Control class	31
Total		**62**

E. The Technique of Collecting Data

In this research, the data wereobtained by using test as instrument to collect the data. A test is a method of measuring a person's ability,

[5]L. R. Gay and Peter Airasian,Op.cit, p.129

knowledge, or performance in a given domain.[6] To obtain the students' listening comprehension by using Taped Feedback Strategy, the students were given the test. The test was given twice to each group, after and before giving the treatment. The test was used to find out the students' listening comprehension. The test was divided into two stages. The first was pre-test and it was given before the treatment. The second was post-test, it was given after the treatment. The test was multiple choice questions. There were twenty questions for respondents. The questions were based on indicators of some expression. The indicators consisted of five indicators and each of which had four questions. It can be seen from the blue print test below:

Table III.4
Blue Print of The Test

No	Indicators	Number of Items	Item Number
1	Identifying the the meaning of utterance of some expressions	4	4, 12, 16, 20
2	Identifying the words that had been heard	4	11, 13, 17, 18
3	Identifying the implied information	4	2, 5, 9, 19
4	Identifying the relationship between speakers	4	6, 7, 10, 14
5	Identifying the context of situation	4	1, 3, 8, 15

The data of this research were the score of students' listening comprehension in both of classes. Then, the researcher established categories to classify the result of the test as main instruments of this

[6] H. Doughlas Brown. Language Assessment: Principles and Classroom Practices. (San Francisco: Longman, 2003). P.3.

research. Sudijono categorized levels of listening comprehension achievement into five categories level.[7].They are as follows:

Table III.5
The Categorizing Level of Scoring Listening Comprehension

SCORE	CATEGORY
80 – 100	Very Good
66 – 79	Good
56 – 65	Enough
46 – 55	Less
0 – 45	Fail

(Sudijono:2007)

F. The Procedures of the Research

The research procedures are as follows:

1. Conducting Pre-test

The pre-test was carried out to know the primary knowledge of students' listening comprehension to both experimental and control class.

2. Conducting Treatment

The treatment was teaching listening by using taped feedback strategy based on the taped feedback strategy procedures. It was conducted for the experimental class only for six meetings.

3. Conducting Post-test

The researcher gave Post-test to both experimental and control class. The post-test was conducted in order to know the result of the students' listening comprehension after practicing taped feedback strategy.

---

[7]Anas Sudijono. *Pengantar Evaluasi Pendidikan*.(Jakarta:PT.Raja Gravindo Persada, 2007). P.35.

G. The Validity and the Reliability of the Instrument

1. Validity

In this research, the researcher used multiple choice as the instrument of test. In giving the test to respondents, the test should be as valid as the test that constructor could make it. The test had to aim at providing a true measure of the particular skill in which it has intended to measure. The research instrument should be qualified. The Instrument can be valid if the test measures what it is supposed to measure[8].

The test given to students was considered not too difficult or too easy. Item difficulty was determined as the proportion of correct responses. This was held pertinent to the index difficulty; it was generally expressed as the percentage of the students who answered the questions correctly. The formula[9] for item difficulty is as follows:

$$P = \frac{\sum B}{N}$$

P : proportion of correct answer= index difficulties

∑B : the number of correct answer

N : the number of students taking the test

The formula above was used to find out easy or difficult test items that researcher gave to the respondents. The items did not reach the standard

[8]Cyrill j. Weir , *Language Testing and Validation*, New York: Palgrave MacMillan,2005, p.12

[9] Hartono. *Analisis Item Instrumen*, (Bandung: Zanafa Publishing, 2010), p.38.

value of difficulty were modified. the standard value of the proportion of correct can be seen in the table below:[10]

Table III.6
Index Difficulty Level of Instruments

Proportion correct (p)	Item category
P > 0.70	Easy
0.30 ≤ P ≤ 0.70	Average
P < 0.30	Difficult

The facility value under 0.30 is considered difficult and above 0.70 is considered easy. The items categorised in the level of easy or difficult (p < 0.30 or p > 0.70) should be modified. Therefore, the standard value of the proportion of correct is between 0.30 and 0.70.

The try out was conducted in order to know the validity of instrument. Instrument for this research was test. The test items of try out consisted of 20 items. There were four questions for each indicator. The result of validity showed that all items were accepted. It can be seen in appendix. Therefore there were 20 items for Pre and Post-tests.

The calculation of item difficulty can be seen from the following table:

[10] *Ibid.*

Table III.7
Indicator 1:
Students are Able to Identify the Meaning of some Expressions

Indicator	Students are able to identify the meaning of some expression				**N**
Item no.	4	7	12	16	34
Correct	18	20	20	19	
P	0.53	0.59	0.59	0.56	
Q	0.47	0.41	041	0.44	

Based on the table above, the proportion of the correct answer for listening comprehension test in item number 4 obtained the proportion correct 0.53, item number 7 obtained the proportion correct 0.59, item number 12 obtained the proportion correct 0.59, and item number 16 obtained the proportion correct 0.56. Based on the standard level of difficulty “p” 0.30 and >0.70, it indicates that every item is in average, so the items for identifying and responding utterance of Complimenting are accepted.

Table III.8
Indicator 2:
Students are Able to Identify the words that had been heard

Indicator	Students are able to identify the words that had been heard				**N**
Item no.	3	6	11	20	34
Correct	19	17	18	17	
P	0.56	0.50	0.53	0.50	
Q	0.44	0.50	0.47	0.50	

In identifying the words that had been heard in the conversation, the question number 3 obtained the proportion correct 0.56, the question number that 6 obtained the proportion correct 0.50, the question number 11 obtained the proportion correct 0.53, and the last is the question number 20 obtained the proportion correct 0.50. The interpretation of standard difficulty must be

in the middle of 0.30 to 0.70. Every item is in average, so the items of the test are accepted.

Table I11.9
Indicator 3:
Students are Able to Identify the Implied Information

Indicator	Students Able to Identify Implied Information				**N**
Item no.	2	9	13	19	34
Correct	19	17	19	20	
P	0.56	0.50	0.56	0.59	
Q	0.44	0.50	0.44	0.41	

Based on the interpretation of the indicator 3 above, every score in the middle of 0.30 to 0.70.for the question 2, the proportion correct obtained 0.56,. The proportion correct of question number 9 obtained 0.56. The question number 13 obtained the proportion correct that is 0.56. The last is question number 19 obtained 0.59. every item is in average, so the items for indicator 3 are accepted.

Table III.10
Indicator 4:
Students are Able to Identify the Relationship between Speakers

Indicator	Students Able to Identify the relationship between speakers in the conversation				**N**
Item no.	8	10	14	17	34
Correct	21	20	23	19	
P	0.62	0.59	0.68	0.56	
Q	0.38	0.41	0.32	0.44	

The description of the table above is that indicators 4 consists of four items. Item number 8 obtained the proportion correct 0.62, item number 10 obtained proportion correct 0.59, item number 14 obtained proportion correct 0.68 and the item number 17 obtained proportion correct 0.56. Every item is in average, so the items of indicator 4 are accepted.

Table III.11
Indicator 5:
Students are Able to Identify the context of situation

Indicator	Students Able to Identify the context of situation				**N**
Item no.	1	5	15	18	34
Correct	22	19	17	18	
P	0.65	0.56	0.50	0.53	
Q	0.35	0.44	0.50	0.47	

Based on the table above, item number 1 obtained the proportion correct 0.65, item number 5 obtained the proportion correct 0.56 item number 15 obtained the proportion correct 0.50 and item number 18 obtained the proportion correct 0.53. The interpretation of standard difficulty must be in the middle of 0.30 to 0.70. Every item is in average, so the items are accepted.

2. Reliability

A test must be reliable as measuring instrument. Reliability is a necessary characteristic of any good test. Heaton explains that reliability is of primary importance in the use of public achievement,proficiency and classroom tests.[11]The mean and standard deviation ofthe test must be known for obtaining the reliability of the test. To know the reliability of the test, the writer used the formula KR-20[12]

$$rii = \frac{k}{k-1} \quad \frac{s^2 - \sum pq}{s^2}$$

Where:

[11]J.B Heaton. *Writing English Language Test*. (New York: Longman Group UK Limited, 1988), p. 159

[12]SuharsimiArikunto, *ProsedurPenelitian*: *SuatuPendekatanPraktek*, (Jakarta: PT RinekaCipta, 2006),p.187

rii : Instrument reliability

k : Number of items

s : Deviation standard

p : The proportion of the students making correct answers was divided by the total number of the students

q : The proportion of the students making incorrect answers was divided by the total number of the students.

1. The Mean Score of the Try Out

$$M = \frac{x}{N}$$

$$= \frac{389}{34} = 11{,}44$$

$$\boldsymbol{M = 11{,}44}$$

2. The Standard Deviation

$$St^2 = \frac{xt^2}{n}$$

$$\boldsymbol{xt^2} = x^2 - \frac{(\sum x)^2}{\boldsymbol{n}}$$

$$= 114.175 - \frac{(1945)^2}{34}$$

$$= 114.175 - \frac{3.783.025}{34}$$

$$= 114.175 - 111.265$$

$$= 2910$$

$$St^2 = \frac{xt^2}{n} = \frac{2910}{34} = 85.59$$

3. The reliability

$$rii = \frac{k}{k-1} \quad \frac{s^2 - \sum pq}{s^2}$$

$$rii = \frac{34}{34-1} \quad \frac{85.59 - 4.87}{85.59}$$

$$= \frac{34}{33} \quad \frac{80.72}{85.59}$$

$$= 1.05 \quad 0.94$$

$$\boldsymbol{rii = 0.987}$$

The score obtained (0.987) comparing to the r Product moment at the degree of freedom was 23. r product moment at the level 5% is 0.349 and at 1% is 0.449. The score obtained was higher than r-table. It can be read 0.369<0.987>0.505. It means that the test was reliable.

H. The Technique of Data Analysis

1. Normality Test

Before analyzing the data by using t-test formula, the researcher had to find out the normality test of the data. It was used to know whether the data were normal or not. If the data have normal distribution is a parametric test should be used and if the data distribution is not normal a nonparametric test should be used.[13] The normality test of the data was analyzed by using Kolmogorov-Smirnove technique with SPSS 17 version.

Analysis:

H_o : population with normal distribution

H_a : population with not normal distribution

[13]L.R. Gay and Peter Airasian,*Op.cit* ,p.367

If the probability > 0.05 H_o was accepted

If the probability < 0.05 H_o was rejected

1. Post Test of Experimental Class

Table III.12
Descriptive Statistics

	N	Minimum	Maximum	Mean	Standard Deviation
Post Experiment Valid (listwise)	31	45	85	71.13	12.296

Based on the table above, the mean was 71.13, the minimum was 45, the maximum was 85 and the standard deviation was 12.296

Table III.13
One Sample Kolmogorov-Smirnov Test

Post-Test of Experimental Class		
N		31
Normal Parameters[a,,b]	Mean	71.13
	Standard Deviation	12.296
Most Extreme Differences	Absolute	.204
	Positive	.130
	Negative	-204
Kolmogorov-Smirnov Z		1.137
Asymp. Sig. (2-tailed)		.151

Based on the output SPSS above, the test of normality shows:

Sig or p was 0.151 > 0.05. It means H_o was accepted or the data were normal.

2. Post-Test of Control Class

Table III.14
Descriptive Statictics

	N	Minimum	Maximum	Mean	Standard Deviation
Post Experiment Valid (listwise)	31	35	80	64.19	11.118

Based on the table above, the mean was 64.19, the minimum was 35, the maximum was 80 and the standard deviation was 11.118

Table III.15

One Sample Kolmogorov-Smirnov Test

Post Control		
N		31
Normal Parameters[a,,b]	Mean	60.33
	Standard Deviation	11.188
Most Extreme Differences	Absolute	.174
	Positive	.166
	Negative	-174
Kolmogorov-Smirnov Z		968
Asymp. Sig. (2-tailed)		.306

Based on the output SPSS above, the test of normality shows:

Sig or p was 0.306 > 0.05. It means H_o was accepted or the data were normal.

Based on the output SPSS, the test of normality shows:

Sig or p was 0.151 > 0.05

Sig or p was 0.306 > 0.05

It means H_o was accepted or the data were normal. Therefore, the researcher used T-test formula as a parametric test for analyzing the data.

2. Analysis Data t-test

The technique of data analysis used in this research were T-test formula by using SPSS (Statistical Package for the Social Sciences) 16 Version. For analyzing the data, the researcher used the scores of post-test of experimental as well as control group.

The t-test was obtained by considering the degree of freedom (df) = (N1+N2)-2. Statistically the hypotheses are:

H_o: to<t-probability

H_a: to>t-probability

H_o is accepted if $t_o <$ t probability or there is no significant effect on students' comprehension in listening taught by using and without using Taped Feedback strategy.

H_a is accepted if $t_o >$ t probability or there is a significant effect on students' comprehension in listening taught by using and without using Taped Feedback strategy.