CHAPTER III

RESEARCH METHOD

A. Research Design

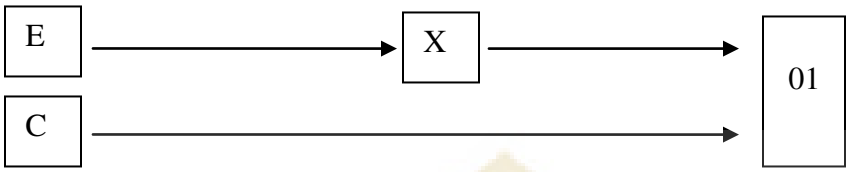
The design of this research was experimental research. Gay and Airasian (2000:367) state that experimental research is type of research that the writer can prove the hypothesis to know the relationship of cause and the effect. Basically, experiment research has three kinds of design: one short time case study, pre test-post test and post test only. In this research, researcher used post test design.

There were two groups involve the one is experimental group and the other one is control group. Before given the treatment the researcher gave the pretest. This research would give pre test in experiment class and control class. After that the researcher gave the treatments, One group was functioned as experimental group provided some treatments Pow Tree Strategy in teaching writing and control group provided some treatments by teaching strategy used in the target school and target grade exactly.

This research was done in six meetings, in which started from the first meeting to the sixth meeting, the researcher gave material and introduce Pow Tree strategy to experimental class. Finally, in sixth meeting, researcher conduct post-test for both classes. The design of this research is post test.

Table 3.1

Design of the Research



E: Experimental Group

C: Control Group

X: Using Pow Tree Strategy

01: Pos-test

B. Population and Sample

1. Population

Gay (1987:102) says that population is a group to which the researcher would like the results of the study to be generalize able sampling is the processes of selecting a number of individuals for a study in such a way that the individuals represent the large group from which they were selected. In research's population is class XI Senior High School 1 VII Koto Sungai Sarik.

Table 3.2

The Total Students Population of the Research

Class	Students' Sum
XI IPA 1	**26**
XI IPA 2	**24**
XI IPA 3	**25**
XI IPA 4	**24**

TOTAL	99

Source: Curriculum staff of SMAN 1 VII Koto Sungai Sarik

Those four classes used SPSS (Statistical Product And Service Solution) to know the normality and homogeneous data to show the sample was representative. The table below shows the result of normality and homogeneity test.

Table 3.3

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	nilai	Statistic	Df	Sig.	Statistic	df	Sig.
kelas	XI IPA.1	.106	26	.200*	.979	26	.874
	XI IPA.2	139	24	.200*	.949	24	.224
	XI IPA.3	.114	25	.200*	.942	25	.162
	XI IPA.4	.126	24	.200*	.963	24	.496

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

There are 99 students classified into four classes are assumed to have the similar ability in writing. The fact was supported by the students` score in writing.

2. Sample

Gay and Airasian (2000:121) state that sampling is a process of selecting number of individuals for a study in such away from that they represent the larger group from which they are selected. In this research, the larger group was called population. Then, for individual group selected was a sample.

The sample is taken by cluster sampling. Gay (1987:110) says that cluster sampling is sampling in which group, not individuals. The researcher uses this sampling technique because it was hard for her to regroup the existed group.

The researcher took class XI IPA.1 and XI IPA.2 as the sample, beside that the students in both of class they were taught by the same teacher and material.

To get the representative sample of this research the researcher did these steps:

a. Collected the test score data from all students at XI class in Mid score.

b. Test of Normality

Normality test has an objective to know the population normal or not. In this research, to do the normality test the researcher used Kolmogrov Smirnov and Significant or more than 0, 05 the class is normal.

c. Test of Homogeneous Variances

After doing the normality test and get the normal data. Then, the researcher did the homogeneous variation test. This test has an objective to know whether the sample homogeny or not.

d. After getting the class that has no significant differences. The sample of this research consisted of two groups; an experimental group and control group. In determining experimental and control group the researcher

used flapping a coin. The researcher got the result that class XI IPA.1 as experimental group with 26 students and class XI IPA.2 as control group with 24 students.

Table. 3.4
Sample of Research

No	Grade	Total of Students
1	XI IPA.1 (Experimental Class)	26
2	XI IPA.2 (Control Class)	24
Total		50

C. Place and Time of Research

The research was held in the second year students of Senior High School 1 VII Koto Sungai Sarik. The researcher gave treatment for six times, after giving treatment the researcher gave both classes post test in order to know the students' writing ability. And to see whether the use of Pow Tree Strategy give significant effect to students' writing ability, the researcher compared the result of experiment class and control class.

D. Instrument of the Research

According to Gay and Airasian (2000:145) instrument is a tool or something that is used in collecting data. The instrument which used in this research was writing test. According to Gay and Airasian (2000:153) a test is a formal, systematic, usually paper and pencil procedure for gathering information about peoples' cognitive(e.g, achievement, ability, reading) and effective (e.g attitudes, emotions, interests, values) characteristics.

After giving the treatment for six meetings the researcher gave two classes post test in order to know the students' writing skill. And to see whether the use of Pow Tree Strategy give significant effect than conventional strategy, the researcher compared the result of post test of the classes. The instrument of this research was writing test and lesson plan. Writing test used to measure the students' ability in writing. Lesson plan used to treat students' problem in writing. The written test which was given in post test for both of control and experimental class were the same writing test. The blue print of writing test can be seen in the following below:

Table 3.5

Blueprint of Writing Test.

No	Component of Writing Test	Indicator	Topic	Number
	Content Organization Vocabulary Language use Mechanic	The students are able to write down a paragraph in good content, organization,vocabulary , language use, and mechanic.	Describing people 1. Aliando Syarif 2. Al Ghazali 3. Nisa Sabyan 4. Fatin sidqia Lubis	1 1 1 1
Total				4

From the table above, the students asked to write a Descriptive text based on the topics given. They allowed to choosing one of six topics that they like most.

Table 3.6

Indicator and Criteria of Scoring Writing based on Jacob (1981: 101)

	Score Level	**Criteria**
C O N T E N T	30-27	Excellent to Very Good: knowledgeable; substantive; thorough development of thesis; relevant to assigned topic
	26-22	Good to Average: some knowledge of subject; adequate range; limited development of thesis; mostly relevant to topic, but lacks detail
	21-1	Fair to Poor: limited knowledge of subject; little substance; inadequate development of topic
	16-13	Very Poor: does not show knowledge of subject; non-substantive; not pertinent; or not enough to evaluate

	Score Level	**Criteria**
O R G A N I Z A	20-18	Excellent to Very Good: fluent expression; ideas clearly stated/supported; succinct; well organized; logical sequencing; cohesive
	17-14	Good to Average: somewhat choppy; loosely organized but main ideas stand out; limited support; logical but incomplete sequencing

T I O N	13-10	Fair to Poor: non-fluent; ideas confused or disconnected; lacks logical sequencing and development
	9-7	Very Poor: does not communicate; no organization; or not enough to evaluate

	Score Level	**Criteria**
V O C A B U L A R Y	20-18	Excellent to Very Good: sophisticated range; effective word/idiom choice and usage; word form mastery; appropriate register
	17-14	Good to Average: adequate range; occasional errors of word/idiom form; choice; usage but meaning not obscured
	13-10	Fair to Poor: limited range; frequent errors of word/form; choice usage; meaning confused or obscured
	9-7	Very Poor: essentially translation; little knowledge of English vocabulary; idioms, word form, or not enough to evaluate

	Score Level	**Criteria**
L A N G U	25-22	Excellent to Very Good: effective complex construction; few errors of agreement, tense, number, word order/ function, articles, pronouns, prepositions
	21-18	Good to Average: effective but simple construction;

A G E U S E		minor problems in complex constructions; several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions but meaning seldom obscured
	17-11	Fair to Poor: major problems in simple/complex constructions; frequent errors of negations, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions; meaning confused or obscured
	10-5	Very Poor: virtually no mastery of sentence construction rules; dominated by errors; doesn't communicate, or not enough to evaluate

	Score Level	**Criteria**
M E C H A N I C S	5	Excellent to Very Good: demonstrates mastery of conventions; few errors of spelling, punctuations, capitalizations, paragraphing
	4	Good to Average: occasional errors of spelling, punctuation, capitalizations, paragraphing, but meaning not obscured
	3	Fair to Poor: frequent errors of spelling, punctuation, capitalizations, paragraphing, poor handwriting, meaning confused or obscured
	2	Very Poor: no mastery of conventions; dominated by errors of spelling, punctuation, capitalizations, paragraphing, handwriting illegible; or not enough to evaluate

E. Procedures of the Research

This research was done in Senior High School 1 VII Koto Sungai Sarik. This research was equipped by Pow Tree Strategy in teaching. The research was conducted in two classes. They were experimental class and control class. As mentioned before the experimental group was the class taught by using Pow Tree Strategy, while control class is the class was taught without Pow Tree Strategy. The topics of the lesson were based on the recent curriculum. The chosen topic was based on the consideration that in teaching the topic, the teacher could use Descriptive text.

To obtain the achievement in this research, the researcher would divide the procedure of this research into three points:

1. Preparation steps

   The researcher collected the data that relate with preparation steps:

   a. Planning learning in experimental class
   b. Determining learning material
   c. Determining population and sample
   d. Preparing learning design
   e. Preparing research instrument

2. Application steps

   In addition, the research procedures is experimental class can be seen in the following table:

Table 3.7
Treatment Procedure of Learning and Teaching Writing in the Experimental Class and Control Class

ACTIVITY			
NO	**Experiment Class**	**Control Class**	**Time/Minute**
1	**Pre Teaching Activity** **Apperception** a. Greeting b. Praying c. Checking students attendance d. Asking the students about the previous material e. Motivate students	**Pre Teaching Activity** **Apperception** a. Greeting b. Praying c. Checking students attendance d. Asking the students about the previous material **Motivation** a. Encouraging students to speak English by asking question b. Students respond teacher question based on experience. c. Teacher introduce learning objective and write the topic in whiteboard.	10 Minutes
2	**Main Activity** **Exploration** a. Pick your topic or idea **Elaboration** a. Organize your thoughts and make notes b. Write to find more ideas c. Topic sentence-state	**Main Activity** **Exploration** a. The students read the text b. Students asked to give their ideas about the topic c. Teacher writes students opinion on the whiteboard. **Elaboration**	60 Minutes

	your opinion d. Give at least three reasons to support that belief e. Explain your reasons in more details **Confirmation** a. End with good concluding statement	a. Students listen to teacher's explanation about description text. b. The teacher gives some topic of descriptive text in the whiteboard. c. Teacher asks students to write paragraph of descriptive text based on the topic. d. Teacher control students' activities teacher collect student work. e. Students collect their work. f. Teacher correcting students' work . **Confirmation** a. Teacher and students conclude the lesson. b. Teacher gives advice to the students.	
3	**Post Teaching Activity Reflection** a. Review and conclude the lesson together with the students. b. Give enrichment homework. c. Close the class	**Post Teaching Activity Reflection** a. Review and conclude the lesson together with the students b. Give enrichment homework. c. Close the class.	10 Minutes

3. Final Phase

   a. Giving test (post test) to experimental class and control class

   b. Processing data

   c. Taking conclusion from technique of data collection

F. Technique of Data Collection

The research data collected by giving writing test. The data of this research was students' scores in post-test of experimental class and control class. The class conducted for several meetings. In experimental class, the researcher taught Descriptive text by implementing Pow Tree Strategy. In this section the researcher prepared an instructional design for each meeting. After giving the treatment, the researcher gave the post-test to the students. After the post test was done, the researcher collected the data based on students' writing. The researcher gave scores of the test. The score of test used as the data of this research.

G. Technique of Data Analysis

The data of this research analyzed by using statistical procedure T-test. The formula that used is a T-test. T-test means a statistical procedure used to determine whether there is any significant different score between the means of two classes of scores' post-test between experimental class and control class. The purpose is to see significant different score of writing ability between experimental class and control class.

Furthermore, the data analyzed by using T-test formula as suggested by Sudjana (2005:239). T-test formulas develop which was presented as follow: in analyzing the students' test score, some steps were done before analyzing the different mean by using t-test formula as follows:

1. This formula was applied to decide mean of students' test score in experimental and control groups;

$$\overline{X_1} = \frac{\sum F_1 X_1}{\sum F_1} \text{ (Experimental group)}$$

$$\overline{X_2} = \frac{\sum F_2 X_2}{\sum F_2} \text{ (Control group)}$$

2. This formula was used to decide standard deviation of experimental group;

$$S_1^2 = \frac{n_1 x \sum F_1 x_1^2 (\sum F_1 X_1)^2}{n_1 (n_1 - 1)}$$

3. This formula was used to decide standard deviation of control group;

$$S_2^2 = \frac{n_2 x \sum F_2 x_2^2 (\sum F_2 X_2)^2}{n_2 (n_2 - 1)}$$

The formula of t-test was as follows (Sudjana,2005)

$$t = \frac{\overline{X_1} - \overline{X_2}}{S\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

$$S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 2)S_2^2}{n_1 + n_2 - 2}$$

Where:

t : The value of t calculated / observer / obtained

$\overline{X_1}$: Mean score of experiment sample

$\overline{X_2}$: Mean score of control sample

n_1 : The number of subject of experimental group

n_2 : The number of subject of control group

$_S S_1^2$: Standard deviation of experimental group

S_2^2 : Standard deviation of control group.

The t-table employed to see whether there is significant difference between the mean score of experimental class and control class. The value of obtained consulted with the value of t table at the degree of freedom (n1- 1)+(n2-n2) and the level of confidence of 95% = 0.05.