CHAPTER III

RESEARCH METHOD

A. The Research Design

This research is an experimental research. According to Cresswell (2008:295) states that experiment is we test an idea (or practice or procedure) to determine whether it influences an outcome or dependent variable. The design of this resrach is quasi-experimental design. Gay and Airasian (2008: 645) stated thst the quasi experimental design is used when the researcher keeps the students in existing classroom intect and the entire classrooms are assigned to treatments.

This research was conducted by using pre-test and post-test non equivalent group design. There were two variables in this research, firstly was PQRS strategy as independent variable (x variable), secondly was reading comprehension as dependent variable (y variable). This research used experimental and control classes. The experimental class provided pre-test, treatment, and post-test. Mean while the control class was treated without using PQRS strategy. The design can be seen in the following table:

Table III.1
Table of Research Design

Group	Pre-test	Treatment	Post-test
Experimental	X1	T	Y1
Control	X2	-	Y2

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Where: X1   : Pre-test in experimental group
           X2   : Pre-test in control group
           Y1   : Post-test in experimental group
           Y2   : Post-test in control group
           T   : Treatment

B. Location and Time of the Research

This research was conducted at Junior High school of Islamic Boarding Salafiah Syekh Burhanuddin Boarding School of Kuntu Kampar Regency starting April until May 2016.

C. Subject and Object of the Research

Subject of the research was the second year students at Junior High school of Islamic Boading School Salafiah Syekh Burhanuddin Boarding School of Kuntu Kampar Regency. The object of the research was the effect of using strategy PQRS on students' reading comprehension in narrative text.

D. The Population and Sample of the Research

According to Gay (2000:122) population is the group of interest to the rsearcher, the group to which wants the result of the study. The population of the research was the second year students of Salafiah syekh burhanuddin kuntu. It had 6 classes, the number of the second year students of Salafiah syekh burhsnuddin kuntu in 2016-2017 was 174 students.

Therefore, the researcher used cluster random sampling technique in determining the sample of the research. The researcher selected two classes as sample which consisted of experimental and control classes. The

experimental class was VIII B and the control class was VIII F. Regarding this, Gay and Airasian (2012:135) stated that cluster sampling is randomly select groups, not individuals.

Table III.2
The Total Population of the Research

No	Class	Population
1	VIII A	32
2	VIII B	28
3	VIII C	28
4	VIII D	30
5	VIII E	28
6	VIII F	28
Total		174

E. Technique of Collecting Data

In order to collect the data, the researcher used test as the technique of collecting data. According to Brown (2007:3) test means that a method of measuring of a person's ability, knowledge or performance in given domain. The researcher used multiple choice questions form. Multiple choice questions require the students to select the best answer out of a number option. The test given twice, first was pre-test and last was post-test. The test consisted of 20 items constructed or adopted from the book and sources that are related. In this research, the test was divided into two ways; pre-test was given before the treatment and post-test was given after doing the treatment. The test was used to collect the data about students' reading comprehension. The test was divided into two phases:

1. Pre-Test

Pre-test was used to collect the data about students' reading comprehension in narrative text PQRS before they were taught by using PQRS strategy. It was given to both experimental and control classes. In this test, the researcher used multiple choice type and the questions were based on the indicators of reading comprehension.

2. Post-Test

Post-test was used to collect the data about students' reading comprehension in narrative text after they were taught by using PQRS strategy. It was given to both exsperimental and control classes. In this test, the researcher used multiple choice type and the questions were based on the indicators of reading comprehension.

The description of the test used in this research can be seen from the blue print below:

Table III.3

The Blue Print of the Test

No	Indicators	Number of items	Total
1	Identifying the generic structures of narrative text	1, 6, 11, 16	4
2	Identifying the factual information in narrative text	3, 8, 13, 17	4
3	Find the meaing of the word in narrative text	4, 7, 12, 18	4
4	Identifying communicative purpose in narrative text.	2, 10, 14, 20	4
5	Comperhend the essence and the message in narrative text.	5, 9, 15, 19	4
	Total		20

After the researcher applied the strategy well, the researcher provided the test for both control and experimental classes. After the students administered the test, the researcher took the total score from the result of the reading comprehension test. According to Arikunto (2013: 281), there are some categories to evaluate the students' comprehension in reading text. The students' score can be seen in the table below:

Table III. 4
The Classification of Students' Score

The Score of Reading Comprehension Level	Categories
80-100	Very Good
66-79	Good
56-65	Enough
40-55	Less
30-39	Fail

F. Validity and Reability of the Test

1. Validity of the test

Cohen (2000:105) explained that a test is used to measure the ability, knowledge, achievement or performance of a person. Validity is an important key to effective research. In this reseach, the researcher used logical validity. According to Gay (2011:65), logical validity is the validity stated based on the result of experience. It means that the instrument has been examined by experience such as tryout. It was determined by finding the difficulty level of each item.

Furthermore, in order to find out whether the items of the test were accepted or not, the researcher gave tryout for the instruments before giving the test to the students. Then the researcher analyzed it based on the index difficulties of the items by using the following formula:

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

P : proportion of correct answer = index difficulties

∑B : the number of correct answer

N : the number of students taking the test

If the proportion of correct is lower than 0.30, it means that the item is so difficult. If the proportion of correct is higher than 0.70, it means that the item is so easy. The items categorised in the level of so easy or so difficult (p < 0.30 or p > 0.70) should be changed. Therefore, the standard value of the proportion of correct is between 0.30 and 0.70. It is related to Hartono's statement that can be seen in the tabel below:

Table III.5

Index Difficulty Level of Instruments

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

Based on the result of try out of the instruments in this research, the researcher found out the proportion of correct of item as follows:

Table III.6
Identifying the Generic Structure

Indicator	Identifying the generic structure of Narrative text				N
Item Numbers	1	6	11	16	
Correct	18	16	15	17	
P	0,6	0,53	0,5	0,57	30
Q	0,4	0,47	0,5	0,43	

Based on the table table III.6, the proportion of correct answer for the indicator of identifying the generic structure of Narrative text in item number 1 shows the proportion of correct 0.6. Item number 6 shows the proportion of correct 0.53. Item number 11 shows the proportion of correct 0.5. Item number 16 shows the proportion of correct 0.57. Based on the standard level of difficulties "P" > 0.30 and <0.70, it indicates that every item is in average. Therefore, all items for the indicator of identifying the generic structure of narrative text are accepted.

Table III. 7
Identifying the Factual Information

Indicator	Identifying the factual information Narrative text				N
Item Numbers	3	8	13	17	
Correct	17	16	14	16	
P	0,57	0,53	0,47	0,53	30
Q	0,43	0,47	0,53	0,47	

The interpretation of the indicator 2 above is every score in the middle is 0.30 to 0.70. For question number 3, the item difficulty is in 0.57. Question number 8, the proportion correct is 0.53. The proportion correct of number 13 is 0.47. The item difficulty of question number 17 is 0.53. So, all the items for the indicator 2 were accepted.

Table III. 8
Identifying communicative purpose

Indicator	recognizing the character trait of Narrative text				N
Item Numbers	2	10	15	20	
Correct	12	16	14	13	
P	0,4	0,53	0,47	0,43	30
Q	0,6	0,47	0,53	0,57	

Based on the table III.8, the proportion of correct answer for the indicator of identifying communicative purpose in Narrative text in item number 2 shows the proportion of correct 0.4. Item number 10 shows the proportion of correct 0.53. Item number 15 shows the proportion of correct 0.47. Item number 20 shows the proportion of correct 0.43. Based on the standard level of difficulties "P" > 0.30 and < 0.70. It indicates that every item is in average level. It means that all items for the indicator of identifying the details of setting in narrative text are accepted.

Table III. 9
Identifying the Meaning of the Word

Indicator	find the meaning of the word in Narrative text				N
Item Numbers	4	7	12	18	
Correct	14	18	15	18	
P	0,47	0,6	0,5	0,6	30
Q	0,53	0,4	0,5	0,4	

The result of standard of difficulty of items in indicator 4 shows high for each item. The question number 4 shows that the proportion correct is 0.47. The question number 7 is 0.6. The question number 12 is 0.5. The question number 18 is 0.63. The question number 17 is 0.6. It means that all the items were accepted.

Table III. 10
Comprehend the Essence and the Message

Indicator	comperhend the essence and the message Narrative text				N
Item Numbers	5	9	14	19	
Correct	16	15	16	17	
P	0,53	0,5	0,53	0,57	30
Q	0,47	0,5	0,47	0,43	

Indicator five consists 4 items, the proportion of correct answer for item number 5 shows the proportion of correct 0.53, item number 9 shows the proportion of correct 0.5, item number 15 shows the proportion of correct 0.53, item number 19 shows the proportion of correct 0.57. Based on the standard level of difficulty is in the middle of 0.30 to 0.70, it is pointed out that item difficulties in average of each

item number for comperhend the essence and the message of the text are accepted.

2. Reliability of the Test

Reability is also a crucial component in a test. Cohen (2007:146) reviewed that reability in quantitative research is essentially a synonym for dependability, consistency and replicability over time, over instruments and over groups of respondent. As a result, a test will not be valuable if it is not consistent and produced different results every time.

According Brown (2003: 19), reliability has to do with accuracy of measurement. This kind of accuracy was reflected in the obtaining of similar results when measurement was repeated on different occasions or with different instruments or by different persons. The characteristic of reliability was sometimes termed consistency. It means that, we can say the test is reliable when an examinee's results are consistent on repeated measurement. To obtain the reliability of the test, the researcher used SPSS 16.00 to find out whether the test is reliable or not.

Table III. 11
The of Reability

Cronbach's Alpha[a]	N of Items
-.297	20

From the table above, it can be seen that the value of Cronbach's Alpha is 0.297. The standard reliability was considered as follows (Heaton, 1980: 159):

0.00 – 0.20 =Reliability is low

0.21 – 0.40 = Reliability is sufficient

0.41 - 0.70 = Reliabilityis high

0.71 – 1   = Reliabilityis very high

The reliability of the test as calculated above (0.297) was categorized into sufficiet level.

3. The Normality Test

In order to know whether the data had normal distribution or not, the researcher used Kolmogorof-Smirnov method as the formula to analyze the data. In this research, the researcher analyzed the data by using SPSS (Statistical Product and Service Solutions) 16 version program.

The result of normality of pre and post test score in experimental and control class was computed by using SPSS version 16. It was presented in the following table:

Table III. 12
The Normality Test

One-Sample Kolmogorov-Smirnov Test		posttest experiment	posttest control
N		28	28
Normal Parameter[a]	Mean	72.32	60.89
	std. deviation	5.850	7.335
Most Extreme Differences	Absolute	.203	.177
	Positive	.190	.111
	Negative	-.203	-.177
Kolmogorov-Smirnov Z		1.074	.934
Asymp. Sig. (2-tailed)		.199	.347

a. Test distribution is Normal.

Testing criteria:

Ho = Kolmogrove-SmirnovZ < asymp.sig. (2-tailed)

Ha = Kolmogrove-SmirnovZ > asymp.sig. (2-tailed)

Significance level of post-test experimental class was 0.199, and the Kolmogrov-SminovZ is 1.074. it means that 1074 > 0.199, and significance level of post-test control class was 0.347 Kolmogrov-SminovZ is 0.934. It means that 0.934 > 0.347. In conclusion, the data were in normal distribution.

Table III. 13
The Normality Test

One-Sample Kolmogorov-Smirnov Test		pretest experiment	pretest control
N		28	28
Normal Parameter[a]	Mean	60.36	60.00
	std. Deviation	8.491	7.454
Most Extreme Differences	Absolute	.177	.129
	Positive	.177	.129
	Negative	-.142	-.122
Kolmogorov-Smirnov Z		.939	.782
Asymp. Sig. (2-tailed)		.342	.742

b. Test distribution is Normal.

Testing criteria:

Ho = Kolmogrove-SmirnovZ < asymp.sig. (2-tailed)

Ha = Kolmogrove-SmirnovZ > asymp.sig. (2-tailed)

Significance level of pre-test experimental class was 0.939, and the Kolmogrov-SminovZ is 0.342. it means that 0.939 > 0.342, and significance level of pre-test control class was 0.782 Kolmogrov-SminovZ is 0.742. It means that 0.782 > 0.742. In conclusion, the data were in normal distribution.

4. The Homogeneity Test

In addition, SPSS.16 version to find out the homogeneity of the test, it used to know the score homogeneity or not. According to Pallant (2005: 218) stated that significance value (Sig.) for Levene's test if the number is *greater* than .05 (e.g. .08, .12, .28),it is *not* violated the assumption of

homogeneity of variance. Then the result of the homogeneity of the test can be seen as follow

Table III. 14
Homogenity of the Test

Levene Statistic	df1	df2	Sig.
1.699	1	54	.198

Based on the table III.14 above, the researcher found that the sig. of homogeneity test $>\alpha = 1.699 > 0.198$. It means that the data is homogenity.

Table III. 15
Homogenity of the Test

Levene Statistic	df1	df2	Sig.
.531	1	54	.514

Based on the table III.15, the researcher found that the sig. of homogeneity test $>\alpha = 0.531 > 0.514$. It means that the data is homogenity.

G. Technique of Data Analysis

In analyzing the data, the researcher used t-test formula. According to Gay and Airasian (2000: 512), t-test is one of the statistics tests used to determine whether two means are significantly different at a selected probability level. Therefore, cohen (2007:543) stated that t-test is used to discover whether there are statistically significant differences between the means of two groups, using parametric data drawn from random samples with a normal data distribution. It used to compare two groups randomly

assigned, for example on a pre-test and post-test in experiment. The data was analyzed by using SPSS 16 Version to find out the result of the research.

1. Independent sample t-test

    In analyzing the data, the researcher used the score of experimental and control classes. In order to find out whether there is or nor a significant difference of using PQRS strategy on students' reading comprehension. The data were analyzed by using Independent sample t-test. In taking the conclussion, the writer concluded by comparing t-observe with t-table.

2. Paired Sample T-Test

    According to Cohen (2007:549) the test for a paired (related) sample, i.e where the same group votes on two variables, or the same sample group is measured, or the same variable is mesured at two points in time. Hence, in this research the paired sample t-test was to analyze the difference between pre-test and post-test mean score in experimental group.

3. The Effect Size

    To find out the level of significant effect of using PQRS strategy, the researcher showed the effect of using PQRS strategy from the post test in experimental and control group. The data were calculated as follows (pallant 2001:180-181):

$$Eta\ Square = \frac{t^2}{t^2 + (N1 + N2) - 2}$$

Description:

t: The value (calculated by SPSS)

n: The number in the sample of group one

Table.III.16
Power Analysize

No	Magnitude	Description
1	.01	small effect
2	.06	moderate effect
3	.14	large effect

Pallant, (2005:210)