CHAPTER III

METHOD OF THE RESEARCH

A. The Research Design

This research was a kind of experimental research. According to Gay and Airasian, experimental research is "the only type of the research that can test hypotheses to establish cause-and-effect relationship".[1] The research design used in this research was a quasi-experimental research. This research used non equivalent control group design with two classes (control and treatment class), pre-test, post-test.[2]

Table III.1
The Research Design

Experimental Class	X1	O	X2
Control Class	X1	-	X2

Where:

X1 : Pre-test to experimental and control class

X2 : Post-test to experimental and control class

O : Receiving treatment, that is using BKWLQ

- : No treatment

B. The Location andTime of the Research

The research was carried out at MAN KAMPAR of Kampar Regency in 2012-2013 of academic year. There were two English teachers in this school, and English was taught twice a

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[1] L.R. Gay and Peter Airasian.*Educational Research Competencies for Analysis and Application*.Six Ed. New Jersey: Prentice-Hall, Inc. 2000. P. 367
[2] Donald T. Campbell and Julian C Stanley.*Experimental and Quesi- Experimental Design for Research*.London: Houghton Mifflin Company. 1966.p. 7

week with duration 45 minutes per period. Furthermore, it was conducted from September to October 2013.

C.   The Subject and the Object of the Research

The subject of the research was the first year students at MAN KAMPAR at Kampar Regency. The object of the research was the effect of using Build, Know, Want, Learn, Question (BKWLQ) toward students' reading comprehension on narrative text.

D.   The Population and Sample of the Research

The population of the research was the second year students of MAN KAMPAR of Kampar Regency. They consisted of 82 students from four classes, and the writer took two classes as sample. The specification of population can be seen on the table below:

Table III.2
The total population of the first year students of MAN KAMPAR 2012-2013

NO	CLASS	MALE	FEMALE	TOTAL
1	X 1	9	11	20
2	X 2	7	13	20
3	X 3	9	12	21
4	X 4	6	15	21
Total				82

The population above was large enough to be taken as sample of the research. Based on the design of the research, the writer took only two classes as the sample of this research. The writer took a sample by using cluster random sampling. Gay says that cluster sampling randomly selects group not individuals. All the members of selected group have similar characteristics.[3] In this case, the writer took class X 1 and X 2 as a sample. The class X 1 was for experimental class and the class X 2 was for control class. The sample of this research was two classes of X

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[3]L.R. Gay and Peter Airasian, Op. Cit., P. 129

students. The sample consisted of 40 students. So in this research, the writer took 40 students as a sample in order to accurate the data because the number of subject was large.

Table III.3
The sample of the first year students of MAN KAMPAR

NO	CLASS	MALE	FEMALE	TOTAL
1	X 1	9	11	20
2	X 2	7	13	20
Total				40

E.   The Technique Of Data Collection

Technique of data collection is an important role in conducting a research for the result validity. The writer collected the data by using the reading test, the blue print of the test can be seen on appendix. The type of the test was multiple choices. Questions of the test consisted of 30 items. Before questions were given to the students, it was tested about validity and reliability. The test was used to find out the students' reading comprehension on narrative text. The test was done twice, the first was pre- test given before treatment and the second waspost-test given after treatment. Pre-test and post-test to experimental and control classes were used to know the effect of using Build, Know, Want, Learn, Question (BKWLQ) strategy toward students' reading comprehension on narrative text.

Table III.4
The classification of students' score[4]

SCORE	CATEGORIES
80-100	Very good
66-79	Good
56-65	Enough
40-55	Less
30-39	Fail

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[4]SuharsimiArikunto. *Dasar-DasarEvaluasiPendidikan*. Jakarta: BumiAksara. 2009. Pp.245

Moreover, Multiple-choices could assess the students' ability in comprehension. In order to get the data related to the problem of the research, the writer collected the data by giving pre-test and it was given before the treatment. Pre-test was given in order to determine two classes as the sample, because the population consisted of three classes. And the second was post- test given after treatment. The writer used pre-test and post-test to experimental and control classes in order to know the difference between control class and experimental class, and also the effect of using Build, Know, Want, Learn, Question (BKWLQ) strategy toward students' reading comprehension on narrative text.

F. The Validity and Reliability of Instrument

Before the test was conducted, the writer gave the students reliability and validity test.

1. Validity

A test is valid if it measures what it purposes to measure. According to Suharsimi Arikunto, the form of validity and reliability is:

$$FV: \frac{R}{N}$$

Where =

FV : Index of difficulty

R : the number of the correct answer

N : the number of students taking test

The standard level of the difficulty used is >0.30 and <0.70, it means that the level of difficulty is between 0.30 and 0.70.

Table III.5

The students are able to identify pronominal references on narrative text

Variable	Pronominal References					N
Item no	1	7	13	19	25	
Total of correct item	7	7	7	7	8	**20**
P	0.35	0.35	0.35	0.35	0.4	
Q	0.65	0.65	0.65	0.65	0.6	

Based on the table III.5 the item numbers for stating the topic are 1, 7, 13, 19, and 25. It shows that the proportion of correct answer of number 1 is 0.35, the proportion of correct answer of number 7 is 0.35, and the proportion of the correct answer of number 13 is 0.35, and the proportion of correct answer of number 19 is 0.35, and the proportion of correct answer of number 25 is 0.4. Based on the standard difficulty "P" is > 0.30 and < 0.70. So, the items of difficulties for stating the topic are accepted.

Table III.6
The students are able to identify main idea on narrative text

Variable	Main Idea					N
Item no	2	8	14	20	26	
Total of correct item	7	8	8	7	9	**20**
P	0.35	0.4	0.4	0.35	0.45	
Q	0.65	0.6	0.6	0.65	0.55	

Based on the table III.6 the item number for identifying generic structure are 2, 8, 14, 20, and 26. It shows that the proportion of correct answer of number 2 is 0.35, the proportion of correct answer of number 8 is 0.4, and the proportion of the correct answer of number 14 is 0.4, and the proportion of correct answer of number 20 is 0.35, and the proportion of correct answer

of number 26 is 0.45, based on the standard difficulty "P" is > 0.30 and < 0.70. So, the items of difficulties for identifying generic structure are accepted.

Table III.7

The students are able to identify generic structure on narrative text

Variable	Generic Structure					N
Item no	3	9	15	21	27	
Total of correct item	9	9	9	9	7	**20**
P	0.45	0.45	0.45	0.45	0.35	
Q	0.55	0.55	0.55	0.55	0.65	

Based on the table III.7 the item numbers for making inference are 3, 9, 15, 21, and 27. It shows that the proportion of correct answer of number 3 is 0.45, the proportion of correct answer of number 9 is 0.45, and the proportion of the correct answer of number 15 is 0.45, and the proportion of correct answer of number 21 is 0.45, and the proportion of correct answer of number 27 is 0.35, based on the standard difficulty "P" is > 0.30 and < 0.70. So, the items of difficulties for making inference are accepted.

Table III.8
The students are able to identify language features on narrative text

Variable	Language Features					N
Item no	4	10	16	22	28	
Total of correct item	8	7	7	10	9	**20**
P	0.4	0.35	0.35	0.5	0.45	
Q	0.6\	0.65	0.65	0.5	0.55	

Based on the table III.8 the item numbers for identifying the facts are 4, 10, 16, 22, and 28. It shows that the proportion of correct answer of number 4 is 0.6, the proportion of correct answer of number 10 is 0.35, and the proportion of the correct answer of number 16 is 0.65, and the proportion of correct answer of number 22 is 0.5, and the proportion of correct answer of number 28 is 0.45. Based on the standard difficulty "P" is > 0.30 and < 0.70. So, the items of difficulties for identifying facts are accepted.

Table III.9
The students are able to analyze make inferences on narrative text

Variable	Make Inference					N
Item no	5	11	17	23	29	
Total of correct item	7	8	7	7	10	**20**
P	0.35	0.4	0.35	0.35	0.5	
Q	0.65	0.6	0.65	0.65	0.5	

Based on the table III.9 the item numbers for analyzing the meaning of certain word are 5, 11, 17, 23, and 29. It shows that the proportion of correct answer of number 5 is 0.35, the proportion of correct answer of number 11 is 0.4, and the proportion of the correct answer of number 17 is 0.35, and the proportion of correct answer of number 23 is 0.35, and the proportion of correct answer of number 29 is 0.5. Based on the standard difficulty "P" is > 0.30 and < 0.70. So, the items of difficulties for analyzing the meaning of certain words are accepted.

Table III.10
The students are able to identify the purpose on narrative text

Variable	Purpose					N
Item no	6	12	18	24	30	
Total of correct item	7	8	7	7	10	**20**
P	0.35	0.4	0.35	0.35	0.5	
Q	0.65	0.6	0.65	0.65	0.5	

Based on the table III.9 the item numbers for analyzing the meaning of certain word are 5, 11, 17, 23, and 29. It shows that the proportion of correct answer of number 5 is 0.35, the proportion of correct answer of number 11 is 0.4, and the proportion of the correct answer of number 17 is 0.35, and the proportion of correct answer of number 23 is 0.35, and the proportion of correct answer of number 29 is 0.5. Based on the standard difficulty "P" is > 0.30 and < 0.70. So, the items of difficulties for analyzing the meaning of certain words are accepted.

2. Reliability

A reliability measures one that provides consistent and stable indication of the characteristic being investigated.[5] Calculation of reliability uses various kinds of formula. They are Spearman-Brown formula, Flanagan formula, Rulon formula, Hoyt formula, Alfa formula, Kuder Richardson 20 formula and Kuder Richardson 21 formula. From all of these formula, the writer used the Kuder Richardson 20 (K-R 20) formula to calculate the reliability of the test. The formula is as follows:

$$r_{ii} = \left(\frac{n}{n-1}\right)\left(\frac{S^2 - \sum pq}{S^2}\right)$$

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[5]SuharsimiArikunto. *Dasar-DasarEvaluasiPendidikan*. Jakarta: BumiAksara. 2009.p. 87

Where:

     n : total items

     P : proportion of the correct scores

     q: 1-P

     S^2 : total Variances

Based on Suharsimi Arikunto, there is the interpretation of reliability as follows:[6]

Table III.11
Reliability Classification

SCORE	CATEGORIES
0.800 – 1.00	Very High
0.600 – 0.800	High
0.400 – 0.600	Enough
0.200 – 0.400	Low
0.00 – 0.200	Very Low

Where:

$$S = \overline{\frac{\Sigma x^2}{N}}$$

$$= \overline{\frac{553.16}{20}}$$

$$= \mathbf{5.26}$$

$$n = 30$$
$$S = 5.26$$
$$\Sigma p_q = 7,13$$
$$x^2 = 553.16$$
$$N = 20$$

So,

[6]SuharsimiArikunto. *Dasar-DasarEvaluasiPendidikan (EdisiRevisi).* Jakarta: BumiAksara, 2008. P. 75

$$r_{ii} = \left(\frac{n}{n-1}\right)\left(\frac{S^2 - \sum pq}{S^2}\right)$$

$$= \left(\frac{30}{30-1}\right)\left(\frac{5{,}26^2 - 7.1}{5{,}26^2}\right)$$

$$= \left(\frac{30}{29}\right)\left(\frac{27.67 - 7.1}{27.67}\right)$$

$$= (1.03)(0.74)$$

$$= 0.762$$

$$r_{ii} > r_t .$$

The statistical counting above, the score of reliability of the test is **0.762**. To know the reliability of the test must be compared with r product moment. r_{ii} must be higher than r_t. Then r_t at 5% level of significance is 0.444. While in the significance of 1 % is 0.561. So, it can be analyzed that r_{ii} higher than r_t. 5%<r_{ii} > 1%. (0.444 <**0.762**> 0.561). On the other hand, the instrument is reliable It means that the coefficient of reliability was high.

G.   The Technique of Data Analysis

In order to find out whether or not there is a significant effect of using Build, Know, Want, Learn, Question (BKWLQ) strategy toward students' reading comprehension on narrative text, the data were analyzed statistically. In analyzing the data, the writer used scores of post-test of the experimental and control classes. Those scores were analyzed by using statistical analysis. In this research, the writer used T-test formula. In this term, it used independent samples T-test.

Hinton says that the independent sample T-test is undertaken when the samples are unrelated to different participant in each sample. This test is also called the unrelated T-test or the independent measure T-test.[7]Jeremy also says that the independent groups T-test is the most

[7]Perry R. Hinton. *SPSS Explained*. 2004. New York: Routledge. P. 107

powerful and is the test most likely to spot significant difference in the data. The independent

groups T-test can be used for a non-experimental or quasi-experimental design.[8]

In this research, the writer used Independent sample t-testformula.The t-test for

independent sample was used to determine the formulation of the problem, whether or not there

is probably a significant difference between the means of two independent sample.[9]The different

mean in analysis by using T-test formula[10] :

$$ to = \frac{Mx - My}{\sqrt{\left(\frac{SDx}{\sqrt{N-1}}\right)^2 + \left(\frac{SDy}{\sqrt{N-1}}\right)^2}} $$

Where :   to   : The value of t- obtained

Mx   : Mean score of experimental class

My   : Mean score of control class

SDx   : Standard deviation of experiment

SDy   : Standard deviation of control class

N   : Number of students

T-test is obtained by considering the degree of freedom (df) = (N1+N2) – 2. Statistically,

the Hypothesis are:

Ho is accepted if to< t-table or there is no significant effect of using Build, Know, Want,

Learn, Question (BKWLQ) strategy toward students' reading comprehension on narrative text.

Ha is accepted if to > t-table or there is a significant effect of using Build, Know, Want,

Learn, Question (BKWLQ) strategy toward students' reading comprehension on narrative text.

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[8]Jeremy miles and Philip Banyard.*Understanding and Using Statistic in Psychology*. 2007. SAGE Publication: Los Angeles. P. 136-137

[9]L.R. Gay and Peter Airasian.*Op cit*, 484

[10]Hartono. " *statistik pendidikan* " . 2004. Pekanbaru: CV Jaya patama. P.193

Furthermore, in computing the data, the writer used Statistical Product and Service Solutions (SPSS) 16.