

III. RESEARCH METHOD

This chapter discusses the method of research used in this study, namely: research design, population of the research, research procedures, data collecting technique, research instrument, try out instrument (validity, reliability, level of difficulty, discrimination power), scoring system, data analysis, and hypothesis testing.

3.1 Research Design

This research was a quantitative research. The researcher used one group pretest-posttest design (Hatch and Farhady, 1982:20). She used one class as the experimental class and another one class as a try out class. This research was intended to see whether there is an increase of students' reading comprehension in folktale after being taught using SQ3R technique.

The pretest was conducted to measure students' reading comprehension achievement before treatments, and the posttest was conducted to find the students' reading comprehension achievement after being taught using SQ3R technique. Then, the means of both pretest and posttest was compared to find out the progress before and after the treatment.

This research conducted pretest, treatments, and posttest. The research design was represented as follow:

T1 X T2

T1 : Pre-Test

T2 : Treatments

T3 : Post-Test

(Hatch and Farhady in Setiyadi 2006:131)

Firstly, a pre-test was administered to the students. Then, the students were given three treatments by using SQ3R technique. After that, a post-test was administered to identify students' reading comprehension achievement after they are taught through SQ3R technique. If the average score of the pre-test (mean) is higher than the average score (mean) of the post-test, it indicates that SQ3R technique can not be used to increase students' reading comprehension achievement of folktale. However, if the average score (mean) of the post-test is higher than the average score of the pre-test (mean), it shows that SQ3R technique can be used to increase students' reading comprehension achievement of folktale.

3.2 Population of the Research

Population of the research was the second year of SMPN 9 Bandar Lampung. The researcher used two classes, one class as an experimental class, and another one class as a try out class. Those classes were chosen by lottery.

3.3 Research Procedure

The procedure of this research could be seen as follows:

1. Planning

There were some steps that were planned in order to make the research run well. The procedure of making planning of this research could be seen as follows:

- a. Preparing the Try-out

A kind of test (called Try-out test) that was given to the students was prepared. It used an objective test in form of 40 multiple choice items in 60 minutes time. It was done in order to know the level of difficulty, discrimination power and also to find out the reliability. Split-half method was used to measure the reliability in which requires the researcher to provide the items into two same groups, first half and second half.

b. Preparing the Pre-Test

A kind of test (called Pre-Test) that was given to the students was prepared. It used an objective test in form of 25 multiple choice items in 40 minutes time. It was done to know the students' reading comprehension before treatments.

c. Determining the material to be taught

The material that should be taught to the students was determined. The material was about folktale. Each treatment was held for 80 minutes.

d. Preparing the Post-Test

A kind of test (called Post -Test) that was given to the students was prepared. It was done to know the result of students' reading comprehension after applying folktale and to measure the increase of students' reading achievement after taught through folktale. The researcher used an objective test in form of 25 multiple choice items in 40 minutes time. It was done to find out whether there is any significant increase of students' reading comprehension achievement after the treatments.

2. Application

After making the planning, the research procedure which had been planed was applied. There were some steps that had been applied:

a. In the first meeting, try-out was given.

The test papers were administered to the students and the students were asked to do the test and the last, they were asked to hand in their test. This test was in the form of multiple choices that consist of 40 items.

- b. In the second meeting, pre-test was given.

This test was in the form of multiple choices that consist of 25 items.

- c. After giving the pre-test, the treatments consisting of three meetings were conducted.

- d. In the last meeting, post-test was given.

The test papers were administered to the students and the students were asked to do the test and the last, they were asked to hand in their test. This test was in the form of multiple choices that consists of 25 items.

3.4 Data Collecting Technique

In collecting the data, the researcher used the procedure can be described as follows:

1. Giving Try-Out Test

It was done in order to know the level of difficulty and discrimination power, and also to find out the reliability. Therefore, 40 items were arranged and made before the students were given for pre-test and post-test items. The same items were used for the pre-test and post-test taken from try-out items.

2. Giving Pre-Test

Pre-Test was given before treatments in order to know the basic of students' reading comprehension.

3. Treatments

The treatments were given three times.

4. Giving Post-Test

Post-Test was given after giving treatment. The students were given the post-test in order to know the result of the class in teaching learning process whether they had progressed or not.

3.5 Research Instrument

The research instruments for collecting the data were pre-test and post-test. The researcher used an objective test ; it was a multiple choice (MC) test which items consist of four options (A,B,C,D), since it was easy to correct and to give the score. The material was about folktale, the researcher used 25 items for pre-test and 25 items for post-test.

3.6 Try Out of Instrument

In doing this research, to prove whether the test items were applicable or not, the researcher find out the validity, the reliability, the level of difficulty and discrimination power of the test. It was done in order to know that 40 items before being given for pre-test and post-test items had a good quality or not. There are four criteria of a good test should be met: validity, reliability, reliability, level of difficulty, and discrimination power.

1. Validity of the Test

Validity refers to the extent to which the test measures what it was intended to measure. This means that it relates directly to the purpose of the test (Shohamy, 1985;74). Validity is concerned with the study's success at measuring [what the researchers set out to measure](#). In this research, to measure whether the test had good validity or not, the researcher analyzed its content and construct validity.

Content validity means that the test is good reflection of what has been taught and the knowledge which the teacher wants the students to know (Shohamy 1985:74). It means that the items of the test should present the material being discussed. Then the test is determined according to the materials that have been taught to the students. In other words, the test is based on materials in the English curriculum, so that it can be said that the test has content validity since the test is good representation of material studied in the classroom.

Construct validity examines whether the test is actually in line with the theory of what it means to know certain language skill (Shohamy 1985:74). It means that the test item should really test the students or the test items should really measure the students' ability in listening comprehension. Therefore to know the construct validity of test, then the researcher used table of specification to judge the validity of the test in order to know whether the test represent the materials that were discussed.

Table 1. Specification of the Validity test

No	Skills of Reading	Items Numbers	Percentage of Items
1	Determining main idea	1,7,14,21,24,34	15%
2	Finding specific information	3,4,8,9,13,16,17,23,27,28,29,33,36,37	35%
3	Inference	6,12,18,26,32,38	15%
4	Reference	2,11,19,22,31,39	15%
5	Vocabulary	5,10,15,20,25,30,35,40	20%

2. Reliability of The Test

To find out the reliability of the test, split-half technique was used. It required to split the test in two similar parts, first and second half (Hatch and Farhady, 1982:246). To measure the coefficient of the reliability between first and second half, Pearson Product Moment formula was used.

The formula is:
$$r_1 = \frac{\sum xy}{\sqrt{\sum X^2 \sum Y^2}}$$

Where,

- r_1 = coefficient reliability between 1st half and 2nd half
- X = total number of the 1st group
- Y = total score of 2nd group
- X^2 = square of x
- Y^2 = square of y

Then to know the coefficient of the whole items, the researcher uses Spearman Brown

Formula:

$$r_k = \frac{2r_1}{1+r_1}$$

- r_k = reliability of full test
- r_1 = reliability of half of the test

The criteria of reliability are :

- 0.80 - 1.00 = very high
- 0.60 - 0.79 = high
- 0.40 - 0.59 = average
- 0.20 - 0.39 = low
- 0.00 - 0.19 = very low

(Hatch and Farhady, 1982:246)

3. Level of Difficulty

To know whether the test items were easy or difficulty from the students' perception that take the test, then the researcher found out the level of difficulty.

To see the level difficulty, the researcher used this formula:

$$LD = \frac{R}{N}$$

Where,

- LD = Level of difficulty
- R = Number of the students who answer correctly
- N = Total number of the students

The criteria are :

- LD < 0.30 = Difficult
- LD = 0.30 – 0.70 = Satisfactory
- LD > 0.70 = Easy

(Heaton, 1986:178)

4. Discrimination Power

To see the discrimination power, the researcher used the following formula:

$$DP = \frac{\text{correctUpper} - \text{correctLower}}{\frac{1}{2}N}$$

- DP = Discrimination Power
- Correct U = The number of upper group students who answer correctly
- Correct L = The number of lower group students who answer correctly
- N = The total number of students who take the test

The criteria are :

- DP: 0.00 - 0.20 = Poor items
- DP: 0.21 - 0.40 = Satisfactory items
- DP: 0.41 - 0.70 = Good items
- DP: 0.71 - 1.00 = Excellent items

(Heaton, 1975:180)

3.7 Scoring System

The scoring system that was used in this research is dividing the right answer by total items timed 100. In scoring the students' result of the pre-test and post-test, the formula by Arikunto (1997:212) was employed:

$$S = \frac{R}{N} \times 100$$

Notes:

- S = score of the test
- R = the right answers
- N = the total item

3.8 Data Analysis

In order to know the students' progress in attempt to master the reading comprehension of folktale through SQ3R technique, the researcher computed the students' score by doing three activities:

- a. Scoring the pre-test and the post-test
- b. Tabulating the results of the test and calculating the score of the pre-test and post-test.
- c. Data analysis was done by tabulating the result of the test given, that was by statistically analyzing the data using statistical computerization i.e. repeated measures *T-Test of SPSS (Statistical Package for Social Science) version 16.0 for Windows* to see whether or not the difference between pre-test and the post-test was significant, in which the significance was determined by $p < 0.05$. It was used as the data come from the same sample or known as paired data (Hatch and Farhady, 1982:114). To find out the significant difference of students' reading comprehension, the researcher used T-Test, while to find out the significant increase of students' reading comprehension achievement, it can be seen from the gain score of pre-test and post-test.

3.9 Hypotheses Testing

After getting the mean of the pre-test and the post-test, the data was analyzed by using repeated measures T-Test in order to know the significance of the treatment effect.

Hypothesis of this research:

“There was significant increase of students' reading comprehension achievement of folktale after they are taught through SQ3R technique.”

The hypothesis was statistically analyzed by using Repeated Measures T-test that was used to draw the conclusion at the level of 0.05 ($p < 0.05$)

