

CHAPTER III

RESEARCH METHODOLOGY

The previous chapter has presented the theoretical background of the study. It discusses literature review about reading comprehension, reading comprehension process, reading comprehension factors, teaching reading activities, assessing reading. It also discusses shared reading strategy, its purpose, its benefits, steps to implement it, and its previous studies.

This current chapter provides the information about the methodology of the research. It consists of: research site and participants, research design, subject of study, data collection methods from tests, questionnaire, and interview, and data analysis.

3.1 Research Site and Participants

The study was conducted in one of the junior high schools in Cirebon Regency, West Java province. There were some reasons why the school was chosen. Firstly, it was situated in the same town as the researcher. That way, the researcher could have the convenience in managing time and saving the cost in conducting the study. Secondly, the researcher was one of the teachers in this school. Therefore, the researcher had good and easy access to the site. Thirdly, based on the researchers' previous observation at the site, the English teachers in the school had the necessary skill to help the researcher to implement the teaching procedures. Fourthly, some of its classes were equipped with computers, projectors, screens and sound systems. These could help the researcher to conduct the study since they were needed to display and enlarge the text on the screen in the teaching procedures.

In this study, the researcher involved the participants of seventh grade students in one of junior high schools in Cirebon Regency as the sample. Two

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classes were chosen to be the samples of the study due to the time limitation and the permission from the school. The two classes were class E as the control group with 38 students and class F as the experimental group with 40 students. Both of them were chosen as the samples because: 1) they had the same English teacher 2) they were suggested by some teachers who taught them and 3) they had almost the same scores at the first daily test of English. According to Cohen, et al. (2007) for non-probability samples there are six strategies for survey sampling: 1) Convenience sampling, 2) Quota sampling, 3) Purposive sampling, 4) Dimensional sampling, 5) Snowball sampling, 6) Volunteer sampling, and 7) Theoretical sampling. In this study, the researcher applied purposive sampling because the sample was taken based on the specific needs and consideration. In purposive sampling, they explain that researchers handpick the cases to be included in the sample on the basis of their judgment of their typicality or possession of the particular characteristics being sought. In this way, researchers build up a sample that is satisfactory to their specific needs.

Besides, the participants were chosen based on their historical factors and pre-existing ability (Hatch & Farhady, 1982). Related to the historical factors, the participants had almost the same language learning experience background. They had been studying English at the same class for about half a year with the same teacher and the same materials. They had the same mother tongue, Bahasa Cirebon to speak and communicate with others, Bahasa Indonesia as their national language, and English was a foreign language for them. Considering the facts, the participants were assumed that they had the same prior knowledge (Hatch & Farhady, 1982). Also, they were selected based on the homogeneity of reading comprehension pre-test scores with no significant difference. In conclusion, they had similar pre-existing reading comprehension ability to be assigned as experimental and control groups.

3.2 Research Design

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Based on the research questions and the purpose of the study (see Chapter I), the study was to investigate the hypothesis about the effects of using shared reading strategy to improve the students' reading comprehension achievement. This study used a mixed method design combining both quantitative and qualitative instruments to complete the study. Mixed method design was the combination between two designs: quasi experimental and survey designs (Hatch & Farhady, 1982) involving both collecting and analyzing quantitative and qualitative data (Creswell & Clark, 2007). In this study, the quasi-experimental design was applied to compare the effect of the independent variable: shared reading strategy on the dependent variable: reading comprehension. This type of research design has two groups: experimental and control without random sampling (Cohen, et al., 2007; Creswell, 2008, Nunan & Bailey, 2009). The experimental group was treated with shared reading strategy and the control group did not get any treatments. During the teaching programs, to obtain the additional evidence from this study, observations were conducted. After the teaching and learning processes, the questionnaires and interview were given to the students of experimental group and the teacher to know their responses towards the implementation of using shared reading strategy to elicit the better understanding of the findings (Creswell, 2008) and to obtain the students' opinion about the effect of the teaching and learning process on their reading comprehension.

It can be explained here that a quasi-experimental research design has five basic characteristics: 1) there are two groups: experimental and control groups; 2) both of the groups compared with respect to measurement on the dependent variable; 3) both of the groups were measured twice; the first measurement is pre-test and the second one is post-test; 4) for both of the groups, the dependent variable measurement are conducted with the same test and at the same time; and 5) the experimental group is employed with specific treatment (Hatch and Lazaraton, 1991).

There were two groups of seventh grade students of a junior high school in this study. Both groups had six reading sessions with six reading texts taken from the National Examination files, from the internet and from some English textbooks for junior high school. Each session lasted for 80 minutes. The experimental group was treated by using shared reading strategy to comprehend the reading text given to answer the questions related to the text in the form of multiple choices, skimming, and scanning. On the other side, the control group did not get any treatments, in which the students were given some questions related to the text with skimming (before reading activities) or scanning (after reading activities). Post-test was given to both groups, the experimental group and the control group (see Chapter IV section 4.2).

To strengthen the validity of the study, however, this study also used questionnaires to support the understanding of the whole phenomena under the study (see appendices 6 and 7).

3.3 Data Collection

This section discusses the data collection methods. In this study, the researcher used several types of instruments: reading comprehension test (pre-test and post-test), observations, questionnaires and interview to collect the data. The term instrumentation (Tuckman, 1999, in Nunan & Bailey, 2009) refers to the “measurement or observation procedures used during an experiment.” Instrumentation includes tests, questionnaires, observation system, elicitation devices, audio and videotaping—in short, any means of collecting data.

3.3.1 Reading Comprehension Test.

The reading comprehension test was developed to answer the first research question. It was conducted in the form of pretest and posttest to capture the initial differences between the groups (Hatch and Farhady, 1982). The pre-test was given at the beginning of the meeting. It was intended to find out the starting point and

the background knowledge of the students' reading comprehension before giving them the treatments. Meanwhile, the post-test was given at the end of the meeting. It was conducted to see the effect of the teaching programs on the students' comprehension (Brown, 2005). Besides, it was intended to find out the significant difference between the mean scores of the experimental and control groups (Hatch and Farhady, 1982) compared with the pre-test scores and it is used to find out the effect of the use of shared reading strategy to improve the students' reading comprehension. Some exercises were also given to the students at the end of every treatment to assess the students' comprehension of the text given.

Both of the pre-test and post-test were arranged in the form of reading texts with multiple-choice which contain 40 items. Multiple choice test is a form of assessment in which respondents are asked to select the best possible answer (or answers) out of the choices from a list. As suggested by Heaton (1988 in Syafri, 2011), the multiple choice test offers a useful way of testing reading comprehension. There are some reasons: 1) the scoring in a multiple choice test is easier, quicker, and more objective comparing to other types of tests, 2) when it is used in large population and in limited time, multiple choice is very efficient and effective, 3) the reliability of multiple choice is higher than essay test (Brown, 2001; Surapranata, 2004 in Syafri, 2011).

The reading tests materials for pre-test and post-test were selected from the national examination (Ujian Nasional 2013) files and taken from the internet (<http://www.englishforeveryone.org/Topics/Reading-Comprehension.htm>). Each the test consisted of two genres simple reading comprehension texts: descriptive and procedure. The descriptive report is a text which focuses on describing particular things, items or individuals and it specifies some of their characteristics (Emilia & Christie, 2013). Meanwhile, the procedure is a text that gives us instructions for doing something. It shows us how to carry out actions in a particular order (Emilia & Christie, 2013) as mentioned in the English syllables for SMP (2006) for the seventh grade of junior high school. The result of the tests

was used to find out and measure the effectiveness of shared reading strategy to improve the students' ability in reading comprehension achievement.

Related to the validity, some efforts were taken to uphold the content and face validity. The validity of a test is the extent to which it measures what it is supposed to measure and nothing else (Heaton, 1990). The test must aim to provide a true measure of the particular skill which it is intended to measure. There are three types of validity as he stated: face validity, content validity, and construct validity. To maintain the content validity (Hatch & Farhady, 1982) the arrangement of the test items was accorded to the reading comprehension levels and basic competence of the content standard (Depdiknas, 2006). The test can be said to have face validity (Hughes, 2003) if its performance, its contents organization, and its items composition make it look valid. The test not only has a quick and reasonable guide but also to a great concern with statistical analysis. The form of pre-test and post-test in this study was a multiple choice test. It has the characteristics as mentioned above. It fulfilled face validity because it has the same number of indicators, a similar organization, more or less similar length of answer options, and use the same numbering (A, B, C, and D). It also gives a quick and reasonable guide and facilitates to conduct the statistical analyses as done in this study.

The test was also adjusted with the curriculum level for seventh grade students of junior high school in reading (Depdiknas, 2006): descriptive and procedure texts to measure the students' reading comprehension. So, the test materials have the content validity. Besides, the test materials had been consulted and validated by the advisors of this study at school of Post Graduate Studies of Indonesia University. Related to the questionnaires, they had been consulted to the advisors to have validation. They were intended to have logical validity and could be categorized to be valid.

To determine the reliability, the test items were tried out and modified subsequently. According to Creswell (2008), reliability means that individual

scores from an instrument should be nearly the same or stable on repeated administrations of the instrument and that they should be free from sources of measurement error and consistent. In line with Creswell, Hatch and Farhady (1982) define that reliability is the extent to which a test produces consistent results when administered under similar conditions. As suggested by Arikunto (2002), the reliability of the test can be categorized as follows: 0.00 – 0.20 (low), 0.21 – 0.40 (moderate), 0.41 – 0.70 (high), and above 0.70 (very high).

The data on the reliability of the test which was calculated by ANATES Version 4.0.9 presented the total of odd score and even score of the items from the pre-test and post-test of the experimental and control groups. With reference to the Appendix 2, the data showed that the reliability index of the experimental pre-test is 0.89 and control group pre-test is 0.85. Meanwhile, the reliability index of the experimental post-test is 0.87 and control group post-test is 0.91. Following Arikunto, both pre-test and post-test of experimental and control groups reliability indexes were above 0.70 which means they were categorized as high reliability. So, the test could be classified as reliable (see appendix 2).

About the difficulty levels, Karnoto (1996, in Syafri, 2011) states that the calculating of items difficulty indexes should be classified into the criteria as follows: 1) 0% – 15% = very difficult, 2) 16% – 30% = difficult, 3) 31% – 70% = medium, 4) 71% – 85% = easy, and 5) 86% – 100% = very easy. By using ANATES Version 4.0.9 to calculate the item difficulty, it could be seen that there were the items with the following categories: very difficult, difficult, medium, easy, and very easy.

The data from the pre-test and post-test were analyzed to find out the criteria as mentioned above. The data taken from 40 items of the pre-test showed that there were 2 difficult items, 28 medium items, 8 easy items, 2 very easy items, and no one got a very difficult item. So, there were 2 very easy items that would be fixed or eliminated from the test. Meanwhile, the data from the items of the post-test showed that there were 10 medium items, 26 easy items, and 4 very

easy items, no one got very difficult or difficult items (see appendix 3). So, there were only 4 very easy items that would be repaired or eliminated from the test.

The items of the discriminating power index were also calculated by using ANATES Version 4.0.9. The data showed that the classification of the questions could be very good, good, medium, bad, or very bad. As suggested by Gronlund (1982, in Syafri, 2011) that in calculating the index of discrimination power items, they could be classified into the criteria as follows: 1) $D \leq 0$ = very bad, 2) $0,00 < D \leq 0.20$ = bad, 3) $0.20 < D \leq 0.40$ = medium, 4) $0.40 < D \leq 0.70$ = good, and 5) $0.70 < D \leq 1.00$ = very good.

The resulting data of discrimination power analyses items showed that of all the pre-test discrimination power items; 30 items were good, 9 items were medium, 1 item was bad, no item was very good or very bad (see Appendix 3). So, only 1 item was fixed or eliminated. Meanwhile, from the data of the discrimination power items of post-test consisted 25 items were good, 9 items were medium, 6 items were bad, and no item was very good or very bad.

There were two variables in this study: independent variable and dependent variable. Nunan and Bailey (2009) explain “when the researcher is testing the influence of one variable on another, the variable doing the influencing is called the independent variable, while the one being influenced is called dependent variable”. Therefore, in this study could be explained that shared reading strategy was the independent variable and the students’ ability in reading comprehension was the dependent variable. This study has its characteristics as shown in the following table.

Table 3.2
The Characteristics of the Study

Dependent Variable	Reading Comprehension
Measurement	Score (Interval)
Independent Variable	Shared Reading Strategy
Measurement	Treatment for the Experimental Group
Null Hypothesis (H_0)	There is no significant difference between reading

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	post-test scores of experiment and control groups.
Research Hypothesis (H ₁)	There is a significant difference between reading post-test scores of experiment and control groups.
Significant Level	0.05; two –tailed
Design	Pre-test and Post-test
Statistical Procedure	Independent t-test

3.3.2 Questionnaires

The questionnaires were employed after all the teaching and learning processes were finished. They were administered to the students in the experimental group as the population of the study and to the teacher who was involved in the activities. They were selected to explore the reasons and identify any comments from the students' and teacher's responses (Creswell, 2008). In this study, the questionnaires were aimed to survey the students' and teacher's responses towards the implementation of shared reading strategy in the teaching and learning processes.

The questionnaire was developed based on the guideline from Oppenheim (1982) who states that the purpose of the questionnaire is attitude measurement, while the attitude is defined as a state of readiness, a tendency to act or react in a certain manner when confronted with certain stimuli. The questionnaires here were the printed form of data collection, which include questions or statements to which subject is expected to respond (Seliger & Shohamy, 1989). The questionnaire was presented in the form of Likert-Scale Questionnaire since it was simple, versatile and reliable (Dornyei, 2003, p.36). A Likert scale measured the extent to which a person agrees or disagrees with the question. The most common scale was 1 to 5. The scale will be 1 as "strongly disagree", 2 as "disagree", 3 as "not sure", 4 as "agree", and 5 as "strongly agree".

The questionnaires consisted of 14 statements about the implementation of shared reading strategy in the teaching and learning processes related to the

students' interest and activeness, vocabulary, language skills and structure. They were arranged randomly to ensure the students' consistency, real perception, and to prevent guessing (Oppenheim, 1982). In this study, the questionnaires were in the type of close ended question (Creswell, 2008). It was intended to make it easier in processing and scoring the data by calculating the results related to the mean, frequency, percentages. The questionnaires were written in Bahasa Indonesia in order to avoid the misunderstanding of the students in comprehending all the statements given. Clear instructions were also given at the beginning of this session to the students both orally and written to make them easier for the students to complete the statements. The questionnaires can be seen in Appendix 6.

3.3.3 Interview

Interview was done at the end of activities after analyzing the post-test score and questionnaire. It was the interaction between the interviewer and the interviewee (Kvale, 2007 in Liamputtong, 2009) which aim to elicit rich information from the perspective of the participants in their own words, thoughts, perceptions, feelings and experiences (Liamputtong, 2009) in the type of focused group interviews (Creswell, 2008). In this study, it was intended to elicit the teachers' and the students' opinion about the effects of shared reading strategy on their teaching and learning reading strategies. It was done after the post-test and questionnaire were administered.

The interview consisted of open-ended questions (Creswell, 2008) (see Appendices 8a and 8b). The questions were related to the teachers' and the students' opinions and knowledge about shared reading strategy. The number of questions in a one-on-one interview consisted of two parts: opening questions and main questions. The opening questions were related to the students' and teacher's identity and other specific information, and the main questions were related to their opinions, impression, and experience in implementing the instructions, the

facilitation of the strategies to their learning and their reading comprehension. Here, the students and the teachers were given enough time to think and answer the questions. Nine students from experimental group were chosen purposefully (Creswell, 2008) from low, middle, and high achievers taken from the results of the post-test.

Table 3.1
The Research Questions and the Instruments

No.	Research Questions	Instruments
1	Can Shared Reading Strategy improve students' reading comprehension?	Reading Comprehension Test
2	What are the students' responses towards the implementation of the Shared Reading Strategy?	Questionnaire Interview

3.4 Data Analysis

In this section, the data analyses were discussed. The analyses include the data collection techniques employed: tests, questionnaire and interview.

3.4.1 Pre-test and Post-test

To analyze the results of the pre-test and post-test scores, the researcher used ANATES V.4.0.9 and SPSS V.19 software. The first one, ANATES V.4.0.9 was a software which developed by KarnoTo and Wibisono (2004) which could calculate or analyze the data automatically. It presented the reliability of the test, the average, the high and low achievers, discrimination power, the level of difficulty, and distracters' quality of the items. It could help the researcher identify and classify the quality of the test items quickly and correctly. The second

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one, SPSS (Statistical Package for the Social Sciences) was originally developed by Nie, Bent and Hull (1970). It was used to calculate and analyze the quantitative data quickly and easily by clicking the menu on the software. It was to analyze the difference of means among the data from pre-test and post-test through an independent t - test.

All the data taken from the pretest and posttest of reading comprehension tests in the form of interval data were analyzed with an independent t - test by using case 2 t-test formula. It is used to compare the performance of two groups: experimental and control groups with the level significant of 0,05 (Hatch & Lazaraton, 1991). The means of the two groups were compared to find out their significant difference. There might be the difference between the mean score of the two groups if there is any. After the t-value has been obtained, the significant difference can be seen.

After the t_{observed} was found, the next step was to communicate the value against the t-critical value in the t distribution table and to find out the degree of freedom, $df = (n_1 - 1 + n_2 - 1)$. To see whether H_0 (null hypotheses) is accepted or rejected (Hatch and Farhady, 1982), the hypothesis testing was conducted. H_0 will be accepted if 1) there is no significant difference between the pre-test mean scores of the experimental and control groups; 2) there is no significant difference between the post-test mean scores of the experimental and control groups. On the contrary, H_0 will be rejected if 1) there is a significant difference between the pre-test mean scores of the experimental and control groups; and 2) there is a significant difference between the post-test mean scores of the experimental and control groups. The results of the reading comprehension pre-test and post-test will be discussed in Chapter 4.

The procedures of analyzing the data from the pre-test and post-test were as follows.

1. Using ANATES V.4.0.9 software to entry and analyze data.

First, create a new file, choose and fill the number of participants and test items, enter the data related to the coded names of participants, enter the key answers into ANATES V.4.0.9. Enter the students' answers in their columns one by one. The correct answers were scored, one correct answer got one score. To have percentage points, the sum of the correct answer was divided by the number of test items. Lastly, the reliability of the test, the average, the high and low achievers, discrimination power, the level of difficulty, and distracters' quality of the items were analyzed automatically by clicking the menu and the data were saved in ANATES V.4.0.9.

2. Using SPSS V.19 to analyze independent t-test.

The SPSS V.19 software was utilized to calculate and analyze statistically the total scores gained from ANATES V.4.0.9. It was used to analyze the tests, normality test, homogeneity test, and t-independent test. This analysis was intended to identify the effect of the use of shared reading strategy in improving the students' reading comprehension in general in the teaching and learning processes. The independent t-tests were chosen because there were two independent groups, the experimental and control groups (Hatch & Farhady, 1982; Hatch & Lazaraton, 1991). Since the participants consisted of more than 30 students, it was considered appropriate because the data were interval and assumed to have a normal distribution.

3.4.2 Questionnaire

The data obtained from the questionnaire were analyzed quantitatively and qualitatively. The questions or the statements in the questionnaires were classified into the central themes (Creswell, 2008): shared reading strategy and reading

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comprehension. Then, the close-ended questions were analyzed quantitatively by using descriptive statistics in terms of mean, frequency, and percentage know the students' responses to the implementation of using shared reading strategy in their learning processes.

To analyze the result of the questionnaire, the scores were in the form of Likert scale that measured the extent to which a person agrees or disagrees with the question. The score scale was 1 to 5. The scale was 1 as "strongly disagree", 2 as "disagree", 3 as "not sure", 4 as "agree", and 5 as "strongly agree" (Dornyei, 2002; Creswell, 2008). All students' checks were presented in the recapitulation table (see Appendices 6 and 7). The result of the analysis will be discussed in Chapter V.

3.4.3 Interview

The interview was conducted after all the teaching and learning processes were over. It was intended to answer the second research question, namely: what are the students' responses towards the implementation of shared reading strategy. The data taken from the interview were interpreted and described to support the findings for the research question. The recorded data were transcribed wherein the participants, the students' and the teacher's names, were coded or replaced with pseudonyms and symbols in the transcription to protect privacy (Silverman, 1993 in Suarman, 2013) and to guarantee the confidentiality (Kvale, 1996). After being transcribed, the data were categorized into themes which became the main concern of this study. Then, the obtained data were presented in a condensed body of information (Emilia, 2005) (see Appendices 9a and 9b).

3.8 Concluding Remarks

This chapter has discussed the research methodology of the study, including the research site, the participants and the design of the study. It also

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provided the data collection techniques and analyses for the study, including tests (pre-test and post-test), questionnaire and interview. The next chapter will discuss the teaching procedures as the teaching programs for the study, which describe the steps of shared reading strategy in teaching reading comprehension.