

CHAPTER I

INTRODUCTION

This chapter presents an overview of the research that consists of research background, research questions, research purposes, research significances, rationale, hypothesis, research methodology, techniques of data collection and data analysis.

A. Background

The purpose of this research is to figure out what is the effect of activating prior knowledge in reading comprehension. Reading activity has become an activity that supports learning. As Karakas (2002) cited in Alfaki and Siddiek (2013) this activity is a method to encourage readers' interpretation of a text and to disable a failed process in reading.

Strangman and Hill (2005) said, "Prior knowledge is a term for more specific knowledge dimensions such as metacognition, subject matter, strategy, personal, self-knowledge and conceptual knowledge. Prior knowledge is one of factors that guide readers to be successful in reading a text. Thus, it makes the existing prior knowledge important in the process of language learning.

Further, the importance of prior knowledge is to make a connection with wider information. Prior knowledge is more important than reading ability in

determining learning outcomes (Shapiro, 2004). Prior knowledge helps students overcome the obstacle while reading a text.

Reading without comprehension is simply following words on a page from left to right while sounding them out. The words on the page have no meaning. Reading in different contexts also expands the vocabulary and the understanding of its usage (Davis, 2016). Assisting reading by prior knowledge derives reader's understanding, building wider concept and connecting existing knowledge to the new knowledge.

According to Anderson and Pearson (1984) cited in Warsnak (2006), prior knowledge affects comprehension in three ways. First, it helps students make inference about their learning. Second, it directs attention to the information that is important in a knowledge domain. The last, it provides a plan for a recall.

In addition, prior knowledge if it is activated, can support the top-down process in reading. Therefore, prior knowledge activation strategy becomes the way contrasted to the bottom-up strategy. Bottom-up strategy is used in general way of reading a text. Similarly with the bottom-up process, it happens when reader tries to understand language by looking at individual meanings or grammatical characters of the most basic units of the text. Meanwhile in top-down process the experience or the knowledge about life is being connected to the text reader encounters.

A limited experience from Teaching Practical Development in 2016 at SMPN 2 Cileunyi, the base or general knowledge of students was really low so

that they could not comprehend the new material because they did not focus on the text while they are unfamiliar with it. They were busy collecting general information that supported them to comprehend the text. The research figures out the influence of prior knowledge activation in the ability of understanding and collecting information from the text.

The previous study from Abdelaal and Sase (2014), The study shows that students with high prior knowledge showed the high result in reading comprehension. Another previous research by Al-Faki & Siddiek (2013) entitled The Role of Background Knowledge in Enhancing Reading Comprehension. It was found activating prior knowledge by previewing the text is effective to read informational text in order to improve students' reading comprehension. Therefore, the journals do not specify the kind of text and the grade is used. Meanwhile, this research is aimed to find out: **The Use of Prior Knowledge Activation Strategy to Improve Students' Reading Comprehension** (A quasi experimental research at ninth grade of junior high school of SMPN 2 Cileunyi Bandung).

B. Research Questions

In this research, the problems are formulated in following questions:

1. What is students' reading comprehension using bottom-up strategy?
2. What is students' reading comprehension using prior knowledge activation strategy?
3. How significant is the improvement of students' reading comprehension using prior knowledge activation strategy?

C. Research Purposes

Based on the research questions above, the purposes of this research are to find out:

1. The students' reading comprehension with bottom-up strategy.
2. The students' reading comprehension with prior knowledge activation strategy.
3. The significant improvement of students' reading comprehension with prior knowledge activation strategy.

D. The Significances of Research

The research has both theoretical and practical significances:

1. Theoretical Significance

The results of this research are expected to be able to widen the knowledge about the effect of activating prior knowledge that is used in reading comprehension. It also improves the theories about prior knowledge.

2. Practical significance

The results of this research are expected to help teachers to be able to know the effect prior knowledge activation strategy in reading comprehension, to increase the teachers' knowledge about how prior knowledge influences the reading comprehension and to encourage teachers to activate prior knowledge in reading comprehension.

E. Limitation of The Research

In order to focus the topic discussed in this research, the discussion of research is limited to

1. The implementation at the 9th Grade of SMPN 2 Cileunyi.
2. The types of Prior Knowledge that are analyzed in this research are Formal, Content, and Linguistics Schemata.
3. Data analysis is taken from statistical analysis.

F. Rationale

In the areas of teaching and learning, reading is considered as one of the important fields. It conducts the process of teaching and reading. Based on Addison (1996) as cited in Riswanto, Risnawati, & Lismayanti (2014) the reading ability plays a central role in the teaching and learning success at all education stages. The knowledge is obtained mostly from a written text and the way to get it is by reading. Most of teachers and students learn through reading. Reading activity is not a merely read a text but also comprehend it. It was stated by May (2001) cited in Zare & Othman (2013) that what a reader needs to focus on is not every single word in the text but also the semantics of the text. Thus, reading comprehension is the process of understanding text's meaning stated by Wooley (2011, p. 15). Process of understanding need knowledge to make learner connects the existing knowledge and the new knowledge. Therefore prior knowledge is one factor that supports learner to comprehend a text.

In the reading activity, prior knowledge is needed to support the process of understanding the text. The processes of reading are divided into two. They are bottom-up and top-down processes. In these processes, prior knowledge becomes the necessity in comprehension (Li, Wu, & Wang, 2007). Prior knowledge assists reader recognizes the linguistic element in the text. Then, it helps reader

differentiate the organizational form and rhetorical structure in text. The last, it provides reader content information of text to predict, choose information and remove ambiguity. Thus, reading needs enough prior knowledge to conduct a successful comprehension.

Prior knowledge is a combination of learner's preexisting attitudes, experiences, and knowledge by Kujawa and Huske (1995) cited in Sudrajat (2013). Prior knowledge deals with any knowledge that we have collected in learner's lifetime. Knowledge that includes to prior knowledge is usually general information of something. One of the examples is common sense. Prior knowledge is also known as schemata.

Rumelhart (1980) argued in An (2013) "Schema theory is an explanation of how readers use prior knowledge to comprehend and learn from text". Schema theory explains the process how the prior knowledge of learners can help them comprehend what they read. Again, reading is nothing but the interaction between a reader and a text. Prior knowledge builds an image of a text they read, the more information learner obtains the nicer image learner made.

From the explanation above the writer makes this research in two classes as a sample. The first is A class as the experimental group and the second class B as the control group. For more detail, here is the following schema from rationale.

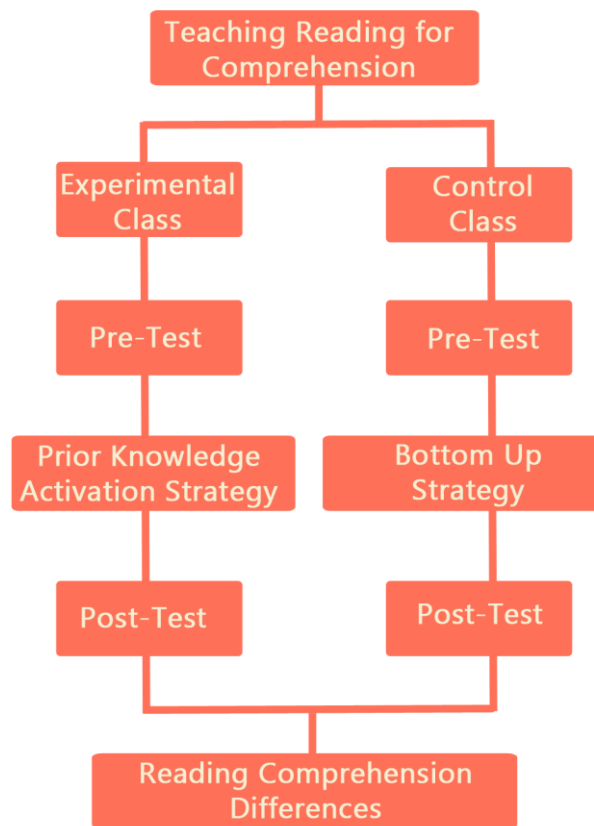


Figure 1.1 Frame of Research

The schema shows the difference in step three. Experimental group is given the activation of prior knowledge so that learners have the prior knowledge before they read the actual text. Whereas, control group is not given the activation of prior knowledge before they read the text. These steps are expected to answer the research questions about the effect of activating prior knowledge in reading comprehension.

G. Hypotheses

Creswell (2012, p.111) argued that hypotheses are statements in quantitative research in which the investigator makes a prediction or a conjecture about the outcome of a relationship among attributes or characteristics. It explained the hypotheses of this research below:

- Null Hypotheses H_0 : There is no significant influence of activating prior knowledge in reading comprehension.
- Alternative Hypotheses H_a : There is a significant influence of activating prior knowledge in reading comprehension.

H. Research Methodology

1. Research Design

The research approach is quantitative approach. This research uses experimental design. In this case, the writer uses Quasi-experiment type. According to Creswell (2012, p. 309), quasi-experiment includes assignment, but not random assignment of participants of groups. In this quasi-experiment, we can decide which one is group control and which one is group experiment.

The variables in this research are activating prior knowledge as variable X and reading comprehension as variable Y. As Creswell (ibid.) argued experiments are best of quantitative design to use to establish probable cause and effect. The cause and effect relationship is applied as the prior knowledge gives an effect in the reading comprehension. The independent variable influences the dependent variable (Creswell, ibid., p. 295) so does the prior knowledge influences reading comprehension.

2. Research Site

This research is conducted in SMPN 2 Cileunyi, Bandung Timur. Based on a limited observation from Teacher Practical Development experience in 2016, many students did not understand the material on the book. Meanwhile, the book is the main source of the instruction and they must read and comprehend the material. They joined course outside the school. However, there might be a factor causes the low score of English Instruction. One key to successful language learning is making a reading assignment about particular culture, discussion and assignment in speaking and writing (Bonyton, 2013). Equally important, students of junior high school need read a lot of English texts. Understanding the English text is needed to comprehend the lesson. The role of prior knowledge in understanding the text influences how students can draw a picture in their mind to help their mind improving the knowledge that students already have and the new knowledge that is gained from the text.

3. Population

The populations of this research are students taken from second grade of SMPN 2 Cileunyi in academic year 2016/2017. The total of the 9th grade students are 419 students and distributed to ten classes, and they are supposed to understand the English lesson. They are divided into two groups. One group is an experimental group and the other group is control group.

4. Sample

The sample is taken from the population of 9th grade of SMPN 2 Cileunyi. There are the two classes of 9th grade; the F and the E class of 9th grade.

According to Arikunto (1998) sample is a subset of the population (some or a part of the population researched). The research sample is a portion of the population that is taken as a data source and can represent the entire population. The samples are taken from two classes, 31 students from F class and 31 students from E class. The total of the classes is 62 people. Hopefully, the sample represents the ten classes of 9th grade of SMPN 2 Cileunyi.

The sample technique is nonprobability sampling method. In nonprobability sampling, not every element of the population has an opportunity to be included in the sample (Grove, Burns, & Gray. 2013, p. 362). In this research, the sample is purposely selected. Those are the Class of A and B in 7th grade.

I. Techniques of Data Collection

These Techniques used for this research described below:

1. Pretest

The pretest answers the first research question. "Pretest is one step in conducting quasi-experimental design" (Creswell, 2012). Creswell (ibid.) stated pretest provides a measure on some attributes or characteristics that you assess for participants in an experiment before they receive a treatment. The pretest is going to be applied to measure the basic knowledge that students have before they receive a treatment of activating prior knowledge.

2. Treatment

Treatment is done in four meeting exclude pretest and posttest. The two classes of 9th grade of junior high school are given the material of reading. However the control group is taught by bottom-up strategy and the experimental group is taught by prior knowledge activation strategy.

3. Posttest

The pair or the pretest is posttest. The Posttest answers the second research question. “A *posttest* is a test given after the experimental treatment.” (Lodico, Spaulding, & Voegtle, 2010, hal. 228) Posttest is used to obtain the result of the treatment of activating prior knowledge. Furthermore, the result of posttest answers the third research question. It shows the significance of activating prior knowledge. Also, the result is going to answer the hypotheses whether it is accepted or rejected.

4. Observation

Observation is a kind of technique which is done by undertaking careful supervision and recording of registration systematically (Arikunto, 2010). The observation is used to gain additional information from around school.

Observation also uses for watch the condition and facilities in the school which might influence the result of the research. Observation is expected to avoid bias that impacts the data collecting process. The observation is done during the treatment. There are 20 students. The students are randomly selected from the two classes from experimental and control class as the writer is being the observer.

J. Data analysis

After obtaining the individual score of the groups, the data score are analyzed statistically through following procedures:

1. Hypothesis test

This research uses t-test for testing the hypothesis with the procedure below:

$$a. t = \frac{X_1 - X_2}{dsg \sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

$$b. dsg = \frac{(n_1 - 1) S_1^2 + (n_2 - 1) S_2^2}{n_1 + n_2 - 2} \quad (\text{Sugiyono, 2013: 138})$$

2. Prerequisite analysis test

Before the data analyzes by formula t-test above, the data are tested by following tests:

a. The normality of data

The normality of data is used to determine the next statistical procedure.

(1) Determining the Chi Square (λ^2)

$$\lambda^2 = \sum \frac{(f_0 - f_h)^2}{f_h} \quad (\text{Sugiyono, 2013: 81})$$

Note:

f0 = frequency/ data cumulative

f_h = expectation frequency

(2) Determining degree of freedom

$$Df = K - 1$$

Note:

Df = degree of freedom

K = total of class interval

(3) Determining the value of table X^2 by significance level 1 % Or ($\alpha = 0,01$)

$$X^2_{\text{table}} = X^2 (1 - \alpha) (dk)$$

(4) Determining the normality of data distribution

If $X^2_{\text{count}} < X^2_{\text{table}}$, the distribution of data is normal.

b. The homogeneity of data

(1) Determining f test

$$F = \frac{s^2_1}{s^2_2} \quad (\text{Sugiyono, 2013: 140})$$

Note:

s^2_1 = variance of data for experimental class

s^2_2 = variance of data for control class

(2) Determining the degree of freedom

a. $Df_1 = n_1 - 1$

b. $Df_2 = n_2 - 1$

(3) Determining the homogeneity of the data

a. If $F_{\text{table}} > F_{\text{count}}$, the data is homogeneous

b. If $F_{\text{table}} < F_{\text{count}}$, the data is inhomogeneous