CHAPTER I

INTRODUCTION

1.1. Background of the Study

In the academic world, it is impossible to neglect the importance of reading comprehension since reading is one of the ways to broaden knowledge and get information from the proper source. However, we often find that students' motivation to read mostly because of several 'constraints' like asignments or other academic goals. Very few students read just to practice their reading or to build up their general knowledge of a language.

The first point to be made about reading process is that reading comprehension is not essensially different from other kinds of comprehension. The mental tasks involved are not peculiar to reading but fundamental human cognitive acts. Comprehension of any kind depends on knowledge comprehension which means relating what we do not know, or new information, to what we already know. Carrel and Eisterhold as cited in Carrel, Devine and Eskey (1988: 22) defined reading as a process of matching information in a text to internally activated information. What we understand from a text depends in part on what we knew previously, as well as on how we allow the text to extend and refine our knowledge of the topic. Therefore, reading is the interaction of the text and the reader.

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Thus, we can say that one of the commonplaces of reading theory today is that reading requires more than contact with information on a printed page. The reader brings his prior knowledge and experience to a text and utilizes that knowledge to make sense of new information. When that appropriate knowledge is missing, the reader is said to lack "schema" to relate to the new information. Therefore, the issue of how a reader builds schema in a new area becomes crucial to understand.

According to Rumelhart (1980:34) schema is a data structure for representing the generic concepts stored in memory. There are schemata representing our knowledge about all concepts: objects, situations, events, sequences of events, actions and sequences of actions.

Related with reading comprehension, Mark.O.James as cited in Devine (1988 :65) stated that to comprehend a text properly needs three kinds of schemata: (1) content schemata, (2) linguistic schemata and (3) formal schemata. Content schemata deals with reader's prior knowledge and experience toward the topic discussed. Linguistic schemata deals with the reader's knowledge about linguistic aspects which are found in a text. Formal schemata is knowledge relative to the formal, rhetorical organizational structures of different types of texts.

Schema has interested many experimenters to use many different techniques to study it and test hypotheses on it. A single study conducted by Steffensen, Joag-dev, and Anderson as cited in Carrel (1987:462) is a good example of the type of cross culture research on content schemata. In short, the study exposes the clear and profound influence of cultural content schemata on reading comprehension.

Another research conducted by Carrel (1987:461-477) attempts to know the simultaneous effects on English as Second Language (ESL) reading comprehension of both culture-specific content schemata and formal schemata, as well as any potential interaction between them. The result shows that content schemata affected reading comprehension to a greater extent than formal schemata.

Being inspired by these researches, I am interested in making a study of the effect of linguistic and content schemata on comprehending a technical and scientific text in EFL reading.

It is interesting for me to do this study since there has been no such study yet done on both kinds of schemata. Although English in our country is assumed to be a foreign language, it is widely used in academic world especially when it deals with textbook materials. It needs more study in reading comprehension to increase students' ability to comprehend a foreign technical and scientific text. Here, I assume that linguistic and content schemata are the most determinant factor to reach a good reading comprehension.

As said by Alderson (1992:1-12) that poorer reading performance is caused especially by poor ability in interpreting words and understanding syntactic structure. According to him, the competence of relevant knowledges is not enough in comprehending a second language technical and scientific scientific text, and readers should also know the rules of syntax of both the foreign and first language. Meanwhile, Ulijn (1987:71) proposed that in reading comprehension , knowledge is the basic element of reading comprehension. Therefore, readers with low

performance of syntactic knowledge may not face any difficulties in comprehending a technical and scientific text of certain knowledge with which they are really familiar.

In short, both of the theories above support Mark.O.James' statement that to comprehend a text properly, readers need several basic knowledge including the knowledge of language and content of the text.

I.2. Statement of the Problem and Hypotheses

Based on the background of the study above, the statement of the problem can be stated as follows:

Which schemata have a greater influence on the ability to comprehend a technical and scientific text in EFL reading, linguistic or content schemata?

Hypotheses:

H_o : Linguistic schemata and content schemata have the same contribution to the ability in comprehending a technical and scientific text in EFL reading.

H_1 : Linguistic schemata have less contribution to the ability in comprehending a technical and scientific text in EFL reading than content schemata.

Statistical Hypotheses:

$H_0 : \mu_1 = \mu_2$

$H_1 : \mu_1 < \mu_2$

μ_1 = linguistic schemata, μ_2 = content schemata

I.3. Objective of The Study

The objectives of the study are, to know the effect of linguistic and content schemata on EFL reading comprehension and to identify which one has a greater effect.

I.4. Significance Of The Study

The result of this study may enrich studies concerning schema theory and provide references for other linguists who are interested in exploring this phenomenon. It may also give input to EFL teachers to develop better EFL reading materials and may be able to determine the suitable reading topic for students from different level. Therefore, the research is also expected to give contribution to other reading researches in the future.

I.5. Scope and Limitation

Although there are three kinds of schemata which are influencing reading comprehension, the writer limited the research only to content and linguistic schemata since the writer aims to know the effect of linguistic and content schemata on comprehending a technical and scientific text in EFL reading.

I..6. Theoretical Framework

In doing this study, the writer needs to apply some theories on psychology and linguistics. The writer tries to combine both the psychology theory, focusing on schema theory and linguistic theory, focusing on reading comprehension theory. In fact, these theories are closely related and it is very crucial to apply both of them since they help the writer to clarify the topic and to gain the objective of the study.

The schema theory provides an explanation about how data are processed and stored in our mind. It also enables the writer to clarify the mediating representation between abstract thought and sensory experience.

Theories of reading comprehension may contribute to the explanation of how reading is assumed to be processed and how a reader may construct a plaussible interpretation of the written message.

I.7. Method of The Study

As this analysis is mostly related to the calculation of numbers and to see the effect of linguistic and content schemata on comprehending a technical and scientific text in EFL reading, here I use the quantitative method.

1.7.1. Definition of Key Terms

In analyzing the effect of linguistic and content schemata in comprehending a technical and scientific text in EFL reading, there are some terms of which their meaning and context need to be clarified as follow :

Schema: A data structure for representing the generic concepts stored in memory.

Linguistic schemata: The reader's knowledge about linguistic aspects which are found in a text.

Content schemata: The reader's prior knowledge and experience of the topic under discussion.

Reading ability: The competence to understand and comprehend the whole idea of a context.

Technical and Scientific text: A text which concerns scientific text and it contains a lot of technical terms which are related to a certain field of study.

I.7.2. Location

This study took place in the Management of Finance Department, Economic faculty and the English Department, Faculty of Letters, Airlangga University in Surabaya where the students speak Indonesian as their mother tongue or first language and speak English as foreign language.

I.7.3 Population and Sample

1.7.3.1. Population

The population of this study is the students of the English Department and the students of the Management of Finance Department of Airlangga University.

I.7.3.2 Sampling

The respondents of this study are the students of the Management of Finance Department and the students of the English Department of Airlangga university. In this study, the writer used purposive sampling to choose the respondents. There are 30 students chosen for the respondents of the present
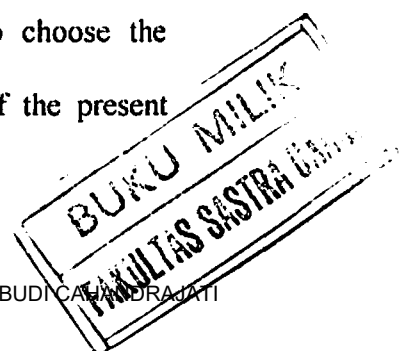
30 students chosen for the respondents of the present study. Since the aim of the writer is to know the effect of linguistic and content schemata on comprehending a technical and scientific text in EFL reading, the respondents are categorized into two groups. The first group is the one who have good linguistic schemata but poor content schemata. Here, students of the English Department of Airlangga University are assumed to belong to this category, and they must fulfill the following qualifications:

1. Students at the late semesters (7th to 10th semester students), since it is assumed that their English language proficiency is better than those who are at the earlier semester.

2. Students with the minimum GPA of 2,75 as the intellegence standard

3. Students with the minimum TOEFL score 500

While students of the Management of Finance Department, Economic Faculty of Airlangga University belong to to the second category who have good content schemata but poor linguistic schemata. The qualifications of the respondents are :

1. Students at the late semesters (7th to 10th semester students)

2. Students with minimum GPA of 2,75 as the intelligence standard and as the measurement of knowledge in their field

3. Students with TOEFL score below 500

I.7.4. Instruments

In doing this study, the writer needs some instruments either to collect the data or to analyze the data. The instruments are described as follows:

Tests. Tests are needed to know respondents' comprehension about the text. There are two kinds of test used in collecting the data. The first is answering the multiple choice questions provided and the second is recalling the content of the text.

Mean Differential Test. Mean Differential Test is a statistical test used for comparing two groups of data in order to decide whether or not the samples come from population with equal means.

I.7.5. Techniques of Data Collection

To collect the data, the writer gave both groups of respondents the same reading test. The writer asked the respondent to read the reading test, answer the questions about the text and then recall the content of the text. The allocation of the time is 25 minutes to do all the exercises. In recall instruction, they were asked to write down as much as they could remember from the text and they were not allowed to refer back to the passage during recall. Dictionary assistance was forbidden in doing the task. In short, the steps of data collection were set up as follows:

1. Giving reading material of reading comprehension to the respondents from different discipline (the English Department and the Management of Finance Department).

2. Asking the respondents to answer the multiple choice questions provided.

3. Asking the respondents to recall the text.

I.7.6. Techniques of Data Analysis

Data in the study consist of the answers to the multiple choice comprehension-inference questions, and the written recall protocols. The data fall into two versions, data of group A which belongs to the respondents from the English Department and the data of group B which belongs to the respondents from the Management of Finance Department. In scoring the data, the writer differentiated between multiple choice comprehension-inferences questions and the written recall protocols. Both of those section are scored 50. Afterwards, the writer used Mean Differential Test to analyze the provided data since it is used to compare two independent groups. Finally, the writer made interpretations about the findings. In short, the procedures of the data analysis are:

1. Classifying the available data into two groups.

2. Scoring the data.

3. Comparing the two groups using Mean Differential Test.

4. Testing the Hypothesis

5. Making interpretation

I.8. Organization of the Thesis

The writer presents this thesis into four chapters. The first is Introduction. It is divided into eight subchapters: background of the study, statement of the problems, objective of the study, significant of the study, theoretical framework, scope and limitation, method of the study and organization of the thesis itself. The second chapter is Literature Review. In this chapter the writer describes the theories in more detail and reviews some previous related studies. The third

chapter is divided into three parts: Presentation of the Data, Analysis of the Data

and Interpretation of the Result. And the last or fourth chapter is Conclusion.

CHAPTER II

LITERATURE REVIEW