

## CHAPTER I

### INTRODUCTION

#### 1.1 The Background of the Study

The role of a language is determined by its communication functions which are influenced by the use of language units. The units structured systematically are used to express meaning by considering to whom the language is delivered or the aim of communication. Thus, form and function are two things that should be taken into consideration in communication.

The use of language for communication, such as in books, journals, letters, etc. are different. The difference is influenced by the characteristics of each medium. The characteristics of media will influence how people use language and how language is structured. The structure of language is relevant to the aim of communication. The different objectives of language use need different units of language. The difference in the use of language is influenced by the values or perspectives that the writer holds. The ideology guides the writer to use the language; and ideology invests language in various ways at various levels (Fairclough, 1992:88).

Text as a unit of functional language is realized by clauses or sentences in context; there is no text without context. Thus, text that is used to express information in certain context will be different to the text in different context. The difference is in the way of expressing information and the characteristics of knowledge or science should be relevant to the basis of ideology or genre. The difference is still related to the elasticity of language which can be easily adjusted

to the grammatical structure, so that language can be used to express information in scientific texts.

Academic journal text as an academic discourse is a medium of getting values and exercise in discipline of science. Writing academic journal based on characteristics of discipline whether natural science or social science and of course use academic language or science language where this language must be logic, systematically, communicative and simple to understand. Halliday (1994:10) has identified three functional components of meaning in language which is called metafunction namely, ideational function where language is used to represent ideas, interpersonal function where language is used to exchange ideas and textual function where language is used to organize ideas.

As explained above, one of the functions of language, as a social phenomenon that has different function as purposed by Halliday is interpersonal function where the language is used to enable us to participate with communicative acts with other people. One of the realizations of interpersonal function is called modality. Modality has been originally understood as the truth value of the proposition logicians. It also might be construed as the relativization of the validity of sentence meaning to a set of possible worlds or way in which people could conceive the world to be different (Kiefer, 1994:2515). This means that, modality allows the language users to express what is, what would be, what may be and what should be. It can be said that, interpersonal function is realized by using a delicate modality system, by which something can be affirmed or denied, doubted or contradicted. Insisted on or accepted with reservation, etc.

what stance a speaker or a writer takes depends largely on the modality system underlying the clauses. Thus from a systemic functional point of view, modality is also considered as an indicator of attitude or a source of negotiation.

Modality plays an important role for the expression of argument and opinion in academic writing. Modality refers to the intermediate choices between *yes* and *no* (Halliday, 1985: 86). Very few ideas in academia can be stated as 'fact' so using modality allows academic writers to express, with various degrees of certainty, ideas that are not fact.

Patients **do** benefit (**Yes**)

Patients **do not** benefit (**No**)

Patients **may** benefit (**Low certainty**)

Patients **always** benefit (**High certainty**)

A moderate '**low modality**' statement of opinion allows for a more **tentative** conclusion to be drawn. It also appears to present a reasoned and objective argument because it allows for the possibility of evidence contrary to your claims. In comparison, a 'high modality' opinion can appeal to the emotions and so can be perceived as persuasive and subjective. However, if there is sample evidence to support the argument being presented then high modality is appropriate. High modality language is also used in specific genres for specific purposes such as to make recommendations on future research or problem solutions.

Modality can be realized by various kinds of linguistics unit, such as modals (can, could, will, would, must, etc.) adverb, the construction of BE ^ V-en,

etc. Modals in academic writing can change a sentence's meaning into a prediction, suggestion, or a question. Modals can also serve a social function to show uncertainty or politeness. They are especially common in discussion sections of research papers.

Therefore, many students or readers face difficulties in understanding modality when they read academic journal. They find difficulties in comprehending many texts. It may modal verbs. In academic English writing especially academic journal, modality with modal verbs are most frequently used to indicate logical possibility and least frequently used to indicate permission.

The difficulties will be clear for the readers when they try to understand the content of text, for example James C. Bird and team said in new Journal of Physics: *Nonetheless, we expect that any additional effects that increase the deformation of the lamella, such as surface roughness or atmospheric pressure, would decrease C.* In this sentence the authors express the willingness to decrease C, because the focus of the model is on the liquid; since they do not consider variation to the solid or surrounding gas, C is a constant much greater than one. Modal verb *would* in this sentence identified as modulation type, where modulation is an expression of asking, directing or expression of our willingness to get somebody to do something. Another example McMurray and friends said in The New England Journal of Medicine: *We estimated that the annual rate of the primary end point would be 14.5 % and rare of death from cardiovascular causes would be 7.0% in the enalapril group.* In this sentence, the authors made statistical analysis based on mortality from cardiovascular causes in enalapril

group. The meaning of *would* indicates a high degree of confidence in the truth of the proposition. That is to say, they are used to express what we believe or guess to be true (modalization type).

This study addresses to the use of modality in academic journal of English text. In this case researcher chooses academic journal of Natural Science. It is often believed that the writing academic text, particularly scientific writing, is factual, simply to convey facts and information. However it is now recognised that an important feature of academic writing is the concept of cautious language, often called "hedging" or "vague language". In other words, it is necessary to make decisions about the stance on a particular subject, or the strength of the claims we are making. Different subjects prefer to do this in different ways.

Researcher here will analyze the language in journal academic of Natural Science, they are journal of Physics, Medicine, and Biology in the use of the types of modality, whether modalization or modulation. By knowing the types of modality, the writers of journal can improve their knowledge about modality.

There are some reasons for selecting the topic as the subject matters. The first, modality is one of important points to be discussed because through studying modality and values one knows a personal judgement on, opinion, 'flavor' or 'seasoning' to an experiential content or a speech function by the addresser, (Saragih, 2005:21). The second, modality is common used in spoken and written texts. But without doing research, no one knows the types of modality and value are used in academic writing texts.

## 1.2 The Problems of the Study

Based on the previous explanation the problems are formulation as the following:

1. What types of modality are used in academic journal of Natural Science English text?
2. What the most dominant type of modality is used in academic journal of Natural Science English text?
3. Why are the modality used the way they are in such context in academic journal of Natural Science English text?

## 1.3 The Objectives of the Study

Based on the previous problems the objectives of this research are formulated as:

1. to describe types of modality used in academic journal of Natural Science English text.
2. to find the most dominant type of modality used in academic journal of Natural Science English text.
3. to investigate why modality used the way they are in academic journal of Natural Science English text.

## 1.4 The Scope of the Study

The study applies the concept of modality proposed by Halliday. Research limitation is needed to give a focus to this research. This study was focused

occurrences of modality in academic journal of Natural Science English text, they are Physics, Medicine and Biology. Thus, there are some realization of modality such as modal verb, modal adverb, adjective, etc. here this research is focused on the use of modal verb as the indicator of it. The approach taken in this study is to look at the roles that the core modal auxiliary verbs (*may, might, can, could, will, would, shall, should, must*) play. The modal auxiliaries are chosen because they are used to perform many important functions in academic text, not least that of qualifying statements (in their epistemic senses), but also in their roles of indicating what is known as potential outcomes, and for forming hypotheses.

### **1.5 The Significances of the Study**

The findings of the study are regarded to be useful and relevant theoretically and practically in some respects. Theoretically, the research findings are expected to be useful for those who are interested about modality in academic English text especially Natural Science English text.

Practically, the findings clarify or highlight understandings about modality. It is hoped lecturers or students use the findings as a reference in teaching modality. It is expected to be useful as one of the references to give more information to the English students to find further research about modality in academic English text, especially in academic journal of Natural Sciences so that the students are motivated to dig up the modality meanings more sharply.