UNIVERSITI TEKNOLOGI MALAYSIA

BORANG PENGESAHAN STATUS TESIS

JUDUL: AN ERROR ANALYSIS ON TECHNICAL REPORTS - A CASE STUDY


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AN ERROR ANALYSIS ON TECHNICAL REPORTS
– A CASE STUDY

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B. Sc. Edu. (TESL)

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Dedicated to

My most beloved father and mother,
brothers and sisters,
and
to all my darling friends
who inspired and helped me a lot.
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ABSTRACT

This research aims to identify the most common types of grammatical errors found in the technical reports written by Mechanical Engineering students in Universiti Teknologi Malaysia, Skudai. It also analyzes the frequency of occurrence for each type of errors. Five technical reports written by 17 Fourth Year Mechanical Engineering students for UHB 2332 subject (English for Professional Communication) were chosen. The written technical reports were analyzed by using a checklist adapted from Elliot (1983). In addition, a set of questionnaires were distributed to 5 language instructors who had taught Mechanical Engineering students in order to gain feedback regarding the errors committed by their students. The findings of this research revealed the types of errors which were commonly made by Fourth Year Mechanical Engineering students in their written technical reports. It is discussed in the findings that the errors made by Mechanical Engineering students were caused by certain factors. The error analysis on the written technical reports in the study is hoped could give insights to the language instructors vis-à-vis ESP teachers and the technical students to be aware of the errors commonly produced in the written technical reports and appropriate actions to be taken in order to overcome this problem.
ABSTRAK

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LIST OF ABBREVIATIONS

1. L2  - Second Language (in this context, English)
2. L1  - First Language
3. SPM - Sijil Pelajaran Malaysia
4. ESL - English as Second Language
5. EA  - Error Analysis
6. ESP - English for Specific Purposes
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CHAPTER 1

INTRODUCTION

1.1 Overview and Background of Study

“An error, a noticeable deviation from the adult grammar of a native speaker, reflects the competence of the learner”.

(Brown, 2000:217)

The statement above indicates that errors are the signs of learners’ incompetence towards the second language. The production of errors in second language learning actually reveals a portion of a learner’s competence in the target language.

Errors are committed by L2 learners when learning and producing the language in both spoken and written communications. People tend to learn from the mistakes that they committed but if produced constantly, learning does not seem to take place because the behaviour keeps on repeated without any progressing changes. Thus, errors in language are the divergence that everyone has to avoid and recover.
This research attempts to conduct an error analysis on technical reports written by Mechanical Engineering students from Universiti Teknologi Malaysia (UTM). Due to the fact that writing must be error-free in order for it to be meaningful and valuable, including technical reports, engineering students are expected to master the English grammar, vocabulary and sentence structure extensively. According to Barnett (1987), consistent application of the following eight basic principles eliminates most communication problems in writing. The eight basic principles proposed by Barnett are;

1. Understand the reader.
2. Know the purpose of each report.
3. Know the subject matter.
4. Organize the material.
5. Write objectively.
6. Use Standard English.
7. Use correct format.
8. Adopt ethical standards.

Referring to the principles stated above, a writer who understands the reader selects only material that belongs in the report, anticipates the best development of that material, and then expresses the ideas in language that cannot be misinterpreted. Technical report writing strictly requires the writers to use standard language as stated in the 6th principle; the standard language of English should be used. The language used is one of the important parts thus students should be aware of the language and make sure it is correct in terms of vocabularies, grammar structures and the style as well.

Technical writing is one of the informative writings as it is intended to deliver information to the readers about the selected topic which is being discussed in the writing. For example, a report written by an engineer which is needed to be submitted to the supervisor who needs to analyze the data. In this research, the
The purpose of a technical or scientific paper is to present facts and ideas in direct and concise language. It is aimed at the readers' understanding, rather than the imagination or emotions. In one sense, of course, all research papers inform their audiences. They offer information to illustrate the writer’s ideas and to show how the various parts of the topic are related to each other. Informative research studies like technical report writing, however, minimize expression of the author’s viewpoint because the main thing presented in the reports is factual. It is factual in terms of the content of the reports which has to be accurate, practical and realistic. For example, automotive technicians document mechanical problems, electronic engineering technicians write maintenance procedures, and biomedical technicians write instructions for user manuals. Sometimes, technical writing does not only document the information, but also for selling purposes, (Gerson, & Gerson, 1993:3).

Technical writing among engineering students is very important as it is a preparatory stage for them to go into the real world. It involves composing, which implies the ability to transform information into texts in the right and correct format by using the accurate language. By putting together concepts and solving problems, the writer engages in "a two-way interaction between continuously developing knowledge and continuously developing text" (Bereiter & Scardamalia, 1987: 12). Technical writers have to master two things at one time, they have to master great knowledge on the field that they are taking and the language to be used in their writings as well.
1.2 Statement of Problem

Universiti Teknologi Malaysia is known as a technology or engineering based university. There are four engineering courses which are offered in UTM namely, Mechanical Engineering, Electrical Engineering, Chemical Engineering and Civil Engineering. In all the four faculties stated, the students are taught all the four basic language skills namely; reading, writing, speaking and listening. Writing skills are important for the engineering students as they involve a lot with the writing processes such as lab report writing, proposal reports, researches, thesis and many more. Those writings needed to be written in English. For technical/engineering students, the exposure to this language is important by looking at the demands of knowing this language and being able to communicate and write using the language.

Writing among engineering students is called technical writing. Engineering students report their projects theoretical and practically via writing where they have lab reports, research projects and proposal reports. However, sometimes the focus is more on the development of the content on the field of study rather than the grammatical rules and correct format and style to write reports with quality. Thus, without sufficient practice and mastery of this language, it would be a problem to the students because references are written in English and some of the academic assignments have to be delivered in the language.

Technical writing is written in both Malay and English languages. As mentioned earlier, UTM is well known for its status as the leading university for engineering courses, by all accounts engineering students should be well-versed in technical writing.
There are several ways to think about errors in writing in light of what we know about second language acquisition and what we know about how texts, context and the writing process interact with one another. According to Johanne Myles (2002), students writing in a second language generally produce texts that contain varying degrees of grammatical and vocabulary errors. In fact, depending on the writer’s proficiency level, the more content-rich and creative the text, the greater the possibility there is for errors to occur. These kinds of errors are especially common among L2 writers who have a lot of ideas, but not enough language abilities to express what they want to say in a comprehensible way.

1.3 Objectives of Study

This research seeks to identify the common types of errors made in five written technical reports by Fourth Year Mechanical Engineering students. It sought to analyze common errors made by these students in their written technical reports. This research also aimed to highlight the language aspects which need to be emphasized and taken into account by language instructors of Mechanical Engineering Faculty when teaching technical report writing especially for UHB 2332 course. Therefore, engineering students could get the benefits by knowing the common errors they made in written technical reports and become aware and conscious about them and put an effort to make improvements on them.
1.4 Research Questions

This study aims to find answers to the following research questions;

i. What are the common types of errors made by Fourth Year Mechanical Engineering students in their written technical reports?

ii. How frequent each type of error appeared in their written technical reports?

iii. What is the implication of the errors identified in this study on teaching writing technical reports?