

UNIVERSITI TEKNOLOGI MARA

**COMPUTATIONAL TEXT ANALYSIS OF
INTERMEDIATE AND HIGH-
INTERMEDIATE READING PASSAGES FOR
ESL LEARNERS**

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Thesis submitted in fulfillment of the requirements
for the degree of
Doctor of Philosophy
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DECLARATION

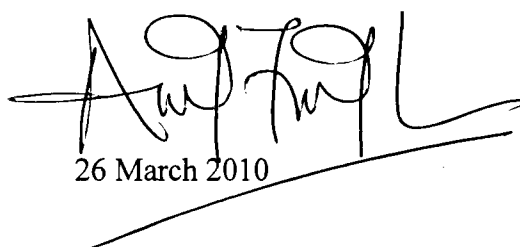
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ABSTRACT

The main concerns of the present study are on issues of matching reading materials to intended learners and standardizing reading materials difficulty level for learners with similar reading ability. This study intends to identify ways to improve the present practice of selecting and adapting reading materials for ESL learners so that the process can be done in a more objective, consistent and comprehensive manner. To do that, the study proceeds to determine text characteristics that can significantly differentiate the difficulty level of intermediate and high-intermediate reading passages (referred as IR and HIR passages respectively), determine additional predictors that can enhance the efficiency of the Flesch Reading Ease formula to estimate passage difficulty at sentence and word level and develop a set of instruments that can estimate the difficulty level of these passages in a more precise manner.

The Descriptive Correlational approach is used as the research design for the study to achieve the above objectives. The samples of the study come from IR and HIR passages. Three computational tools, the Flesch Reading Ease formula, Writer's Workbench 8.18 and Word Smith Tools 4.0, are used to extract information related to passage difficulty at text, sentence and word level respectively. The study also replicates and improves on Vogel and Washburne's (1928) process of developing readability formula. Descriptive statistics namely mean, range and standard deviation, and inferential statistics such as t-test, correlational analysis and multiple regression analysis are used to analyze the data collected.

It is found that all the text characteristics used in the study can significantly differentiate the difficulty level of reading passages between the two levels. However, not all these characteristics have significant relationships with passage difficulty level. Two of the significant ones namely the Flesch Reading Ease score (FRE) and the coverage of high frequency words (HFW), are finally selected as predictors to develop a more refined difficulty level formula. Together with the established recommended difficulty range for IR and HIR passages, a set of instruments to estimate passage difficulty level on the refined Intermediate scale are constructed.

This study is of great significance to language instructors, material writers, language learners, test-setters, publishers, researchers and self-access learners. With a more precise readability formula and its accompanying instruments, selection and adaptation of reading passages can be done in a more objective, consistent and comprehensive manner.

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CHAPTER 1

INTRODUCTION

This first chapter introduces the background and nature of the present study. Essentially, it is an analysis of passage difficulty of intermediate and high-intermediate reading passages for ESL learners at text, sentence and word levels using computational text analysis methods. This chapter provides information that leads to the issues related to the present practice of selecting and adapting reading materials for ESL learners. It also gives the justification and intention to improve these practices. The significance, scope and limitations of the study are also presented. The operational definitions of key terms used in the study are also explained.

1.1 Background of the Study

Matching reading materials to learners is fundamental in the selection of instructional materials to teach reading. Hence, it is the responsibility of ESL instructors to ensure a match between the two in order for learning to take place more effectively. This means that ESL instructors need to ensure the difficulty level of reading materials is within learners' language ability range and should not simply use the "one-shoe-fits-all" approach in selecting reading materials. Often, ESL instructors tend to simply discard reading materials that do not work as expected. It is also the case where they repeatedly use reading materials that work well with one group and extend these to other groups of learners.