UNIVERSITI TEKNOLOGI MARA

AN ASSESSMENT OF PRIMARY 4 PUPILS' COMPREHENSION OF MATHEMATICAL WORD PROBLEMS

FAUZIAH BINTI WAN MOHAMMED

Dissertation submitted in partial fulfillment of the requirements for the degree of Master of Education in TESL

Faculty of Education

June 2010
CANDIDATE’S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any other degree or qualification.

In the event that my thesis be found to violate the conditions mentioned above, I voluntarily waive the right of conferment of my degree and agree to be subjected to the disciplinary rules and regulations of Universiti Teknologi MARA.

Name of Candidate          FAUZIAH BINTI WAN MOHAMMED
Candidate’s ID No.          2007131627
Programme                  ED 720
Faculty                    Education
Thesis Title               An Assessment of Primary 4 Pupils’ Comprehension of Mathematical Word Problems

Signature of Candidate

Date: 30 June 2010
The Supervisor approves this academic exercise of Fauziah Binti Wan Mohammed (2007131627) submitted to the Faculty of Education, 2010.

PM Dr. Parmjit Singh a/l Aperapar Singh

Date: 30 June 2010
ABSTRACT

ETeMS was primarily implemented to steer our developing nation and prepare young assets to meet global challenges by keeping abreast with current knowledge and technical know-how that is predominantly written in English. At the very outset, the policy was introduced to acquire the technical knowledge through English. However, many quarters have disputed the effectiveness of ETeMS as it had purportedly failed to facilitate the teaching and learning of mathematics and science due to the low English language proficiency among the pupils. Therefore, this three-pronged study embarks on determining the validity of such contention through the assessment of Primary 4 urban and rural pupils’ comprehension of mathematical word problems utilizing both the quantitative and qualitative approach. Mathematics achievements among the urban and rural pupils in English Test and English/Bahasa Malaysia Test were established; pupils’ errors in the English Test were further analyzed to identify the difficulties faced by the high, average and low achievers. It involves a semi-structured interview technique with the three categories of achievers using the Newman Error Analysis protocol to determine the errors made in the English mathematical word problems. Errors that transpire from the reading and comprehension process were analyzed using the corresponding conceptual framework. The findings indicate that both the test results were at satisfactory level regardless of the moderation of the test in English or English/Bahasa Malaysia. The English and English/Bahasa Malaysia Tests were at satisfactory level regardless of the moderation of the test items in English or English/Bahasa Malaysia. The urban pupils’ achievements in English Test showed no significant difference from the rural pupils’ scores. The study also indicated that the majority of the errors were content-related for the high and average achievers but the low achievers committed more language-related errors. In the language-related errors, it was found that the pupils have not mastered their linguistic skills especially in mispronunciation of key words and failure to understand the grammatical components in the mathematical texts. As for the pupils’ language selection (either English, Bahasa Malaysia or English/Bahasa Malaysia) it was found that the majority of the pupils (60%) selected English/Bahasa Malaysia to answer their mathematics word problems. As such, there should be concerted effort to improve the content-knowledge of the primary pupils to ensure that they are competent to solve the mathematical problems regardless of the medium of instruction.
ACKNOWLEDGEMENT

My deepest and heartfelt thanks to the lecturers and academic staff at the Faculty of Education, UiTM Shah Alam. There are a number of individuals who had lend a helping hand and in some way had contributed towards this research; I cannot thank them enough.

I am blessed with the guidance of my Supervisor, Associate Professor Dr. Parmjit Singh, an honest and true patient teacher who has on numerous occasions inspired me to complete my dissertation. Thank you Dr. Parmjit, I would not be able to complete this task without your guidance and supervision.

My sincere thanks go to Associate Professor Dr. Gurnam Kaur Sidu for her continuous encouragement and friendship. She inspired me with her dedication and enthusiasm for she practices it constantly.

Last but not least, my deepest appreciation goes to my family for their unconditional love and support in completing my dissertation.