

**UNIVERSITI TEKNOLOGI MARA**

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

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

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## 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.

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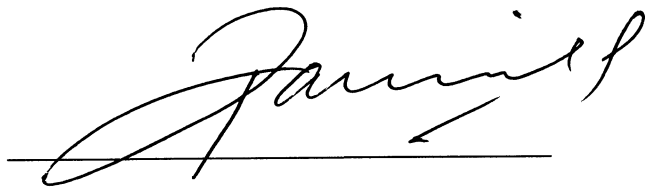
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A handwritten signature in black ink, appearing to read 'Parmjit Singh', is written over a horizontal line. The signature is cursive and stylized.

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.

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