

UNIVERSITI TEKNOLOGI MARA

**LANGUAGES AND MATHEMATICS
ACHIEVEMENTS AMONG RURAL AND URBAN
PRIMARY FOUR PUPILS**

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Dissertation submitted in partial fulfillment of the requirements for the
degree of

Masters in Education

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Candidate's Declaration

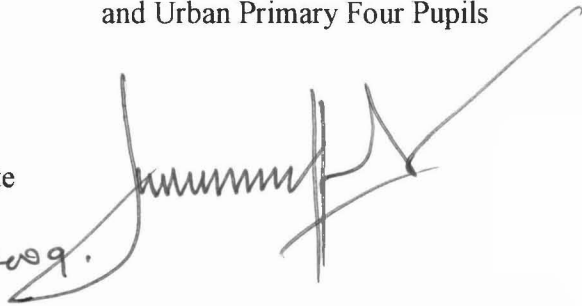
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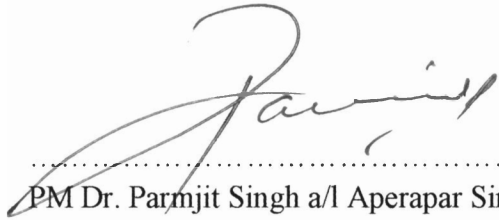
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Abstract

PPSMI witnessed a change in the language of learning and teaching of Mathematics. The change had been opined to have prejudiced learners' achievements due to their weakness in the subject matter as well as in English. This three-phased study was conducted to ascertain the validity of such claims and it sought to (1) analyze 186 urban and rural Primary 4 pupils' Mathematics achievements in tests using English and English/Bahasa Malaysia presentations, (2) determine the composition of error types that occurred in the English Test, and (3) establish the composition of the cognitive elements that caused difficulties in reading and comprehending mathematical tasks in English. Utilizing both the quantitative and qualitative approaches, it employed the use of two instruments, in English and English/Bahasa Malaysia respectively, to measure the pupils' achievements in Mathematics. Semi-structured interviews were conducted using the Newman's Error Analysis protocol with pupils who answered inaccurately in the English Test. Errors of language-origin were examined in reference to the Framework of Cognitive Foundations of Learning to Read. It was found that rural pupils' Mathematics achievements were not influenced by the language used in the tests, while urban pupils' Mathematics achievements were influenced by the language the tests were presented in. It was also identified that urban pupils' Mathematics achievements in both tests surpassed those of their rural counterparts'. Furthermore, in both groups, their mean scores for the English Test were consistently lower than their mean scores for the English/Bahasa Malaysia Test. However, the t-tests indicate that these scores were not significantly different. In the English Test, both rural and urban pupils committed language and content-knowledge related errors, however, they exhibited higher percentages in the latter's occurrences. The pupils' language-related difficulties were brought about by high incidences of language comprehension and decoding errors. This study concluded that while urban pupils outperformed rural pupils in both tests, both groups were actually facing content-knowledge deficit. Languages influenced their respective Mathematics achievements differently and the use of Bahasa Malaysia moderation had assisted them to perform better in the English/Bahasa Malaysia tests. In order to obtain better results in tackling Mathematics tasks in English, the pupils must improve their English language reading skill as well as their mathematical acumen.