

Influence of Mathematical English on Performance of Standard Eight Learners in Public Primary Schools in Miriga Mieru, Meru County, Kenya.

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Abstract

Mathematical English is a unique language based on ordinary English, with highly stylized formal symbol systems. Owing to the fact that it has its own lexicon, syntax, semantics and literature; this makes it more difficult to understand than ordinary English. Understanding abstract mathematics concepts is challenging to students at different levels in Kenya. This study sought to investigate the influence of mathematical English on the performance of class 8 learners in Miriga Mieru West Division, Imenti North Sub – County Meru County. The study objectives were: to investigate the influence of vocabulary, syntactical features and lexical ambiguities on learners' mathematics performance. The study was guided by Meaney's model of mathematics register acquisition. It used correlational research design. The target population for this study was class 8 learners in public primary schools. The study comprised of 30 public primary schools, 1080 class 8 learners and 36 class 8 mathematics teachers. The study used random sampling to select the schools and learners while purposive sampling was used to select teachers from the sampled schools. Data was obtained using Learners' Mathematics Test Questionnaire (LMTQ) and Trained Mathematics Teacher's Questionnaire (TMTQ). The study established that the three independent variables statistically significantly influenced mathematics performance for class 8 learners. Syntactical features had the greatest influence on performance ($\beta = 4.549$; $t = 3.506$, $p < 0.05$). This was closely followed by lexical ambiguity ($\beta = 4.173$; $t = 5.103$, $p < 0.05$). Vocabulary had the least influence ($\beta = 3.383$; $t = 2.928$, $p < 0.05$). The study therefore concluded that vocabulary, lexical ambiguity and syntactical features are critical components in primary school mathematics that a learner should understand in order to perform well. The study recommended that teachers should among other things guide learners on how to interpret mathematical vocabulary and comprehend mathematical language in teaching and learning process.

Keywords: Mathematical English, Syntactical Features, Lexical Ambiguities, School English Performance

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