

Title: **Relationship between mathematical language and students' performance in mathematics in public secondary schools in Nairobi province, Kenya**

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The purpose of this study was to establish the relationship between mathematical language and students' performance in mathematics. In addition to the main purpose, the study sought to find the problems experienced by teachers and students in teaching and learning mathematical language and their perceived solutions respectively. The study was a cross-sectional descriptive survey employing correlation methods to investigate the relationship between mathematical language and students' performance in mathematics. The study comprised 10 stratified selected public secondary schools in Nairobi Province. A total of 384 students responded to a 20-item, Students' Mathematics Language Test (SMLT) questionnaire comprising terminology and mathematics tests. The teachers filled the Mathematics Teachers' Questionnaire (MTQ) on problems they encounter in teaching mathematical language and their possible solutions. Quantitative data obtained from the SMLT were analysed using

Abstract: Statistical Package for Social Sciences (SPSS). The statistics derived included percentages, mean, Pearson r, standard deviation, student 't'-test scores and Analysis of Variance (ANOVA) values. Pearson product-moment correlation coefficient was used to determine the relationship between mathematical language i.e. scores in terminologies test and scores in mathematics test. The study found that there was a relationship between mathematical language and students' performance in mathematics ($r=0.3608$, $p>0.001$). It also found that girls (overall mean score = 11.617) performed better than boys (overall mean score = 9.3284) in the SMLT. Based on the research findings of the study, it is recommended that a simplified mathematical language in communicating mathematical ideas is fundamental and hence a pre-requisite to the successful pursuit of learning mathematics in secondary schools. The study further recommends a course in mathematics language be designed to demystify mathematical language in order to improve students' mathematics performance