DETERMINANTS OF STUDENTS' MATHEMATICS PERFORMANCE IN SECONDARY SCHOOLS IN NYAMIRA NORTH DISTRICT, NYAMIRA COUNTY, KENYA

BY
GETEREGETECHI JOASH MOCHOGI
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DECLARATION
This thesis is my original work and has not been presented for a degree in any other university or any other award.

JOASH MOCHOGI G. Date 11/04/2013

This thesis has been submitted with our approval as university supervisors:

Dr. RUKANGU M. SIMON Date 22/04/2013
Department of Educational Communication and Technology
Kenyatta University

Dr. MIHESO-CONNOR K. MARGUERITE Date 11/04/2013
Department of Educational Communication and Technology
Kenyatta University
ABSTRACT

The purpose of this study was to establish the determinants of student performance in mathematics. The study was prompted by persistent poor performance amongst secondary school students in Kenya and particularly in Nyamira North District of Nyamira County. The independent variables of the study included students’ attitude towards mathematics, study habits, competence in mathematical notations, teacher training & qualification, textbook availability, teachers’ work load, and teaching experience. The dependent variable was student performance in mathematics. The researcher adopted a survey method to collect and analyse data in order to meet the objectives of the study. Data was collected from 340 students, and 23 teachers of mathematics using performance tests for students, questionnaire for mathematics teachers, and questionnaire for students. The reliability of the performance test was tested using the Kuder Richardson (formula 20) which gave a reliability of 0.91. The reliability of the questionnaires was estimated using test-retest strategy and gave coefficients of 0.89 for the Students Questionnaire (SQ) and 0.89 for Mathematics Teachers Questionnaire (MTQ). The data collected were analysed mainly by use of descriptive statistics such as means, percentages, frequencies and charts. The first research question which sought to compare student attitude towards mathematics and performance in mathematics was answered by use of frequencies and percentages. The second research question sought to establish the relationship between student competence in mathematical notation and performance in mathematics. To answer the third research question, the study obtained quantitative data from the SQ and MTQ and analysed it using percentages and frequency distributions. The fourth research question sought to establish whether there was a significant difference in mathematics performance between County and District Schools. This was done using one way Analysis of Variance (ANOVA-F). The study found out that most students in the District had negative attitude towards mathematics and this was reflected in their performance. It was also discovered that competence in mathematical notations was positively related to performance in mathematics ($r = 0.887$) at $\alpha = 0.05$. The study also established that majority of teachers in the District were trained in mathematics education and were highly experienced. Students in County schools were found to perform better than those in district schools and the difference was significant. Teachers had heavy workloads of up to 60 hours per which affected their efficiency.