

Effectiveness of Teaching Preparations on Mathematics Achievement: The Case of Kenya

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Abstract

Despite playing a central role in peoples' daily life, the average Kenyan secondary school students' mathematics score in national examinations has consistently averaged below 40%. The contribution of teachers' lesson preparations and subsequent delivery leading to this poor result has not been investigated sufficiently in Kenyan secondary schools. This is especially so for topics deemed to be difficult. The present study investigated the effect of teacher preparations when teaching the topic "Vectors" to form three secondary school students. The instructional plans impact on achievement as well as on skills performance in Mathematics formed the objectives of the study. The Solomon- four experimental design was adopted. Professionally drawn Instructional Plans provided the treatment. Students' achievement was determined using a Mathematics Achievement Test, MAT. The study determined that the use of the instructional plans improved students' achievement and skill performance compared to the control group. Consequently use of instructional plans when teaching mathematics was recommended for improved students' achievement. Emphasis on students' stepwise skill performance rather than insistence on acquisition of correct answers during problem solution in mathematics was recommended.

Keywords: mathematics achievement, mathematics lesson preparations, skill performance, vector operations.

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