

Rethinking Primary School Mathematics Teaching: A Formative Assessment Approach

Paul Kiplagat

Abstract

The performance of mathematics at national examinations at the end of primary is worrying all over the globe and researchers and scholars continue to examine how student's achievement in the subject can be raised. Formative assessment classroom teaching strategy, 'FACTS' is an interactive teaching strategy which involves observing and gathering valuable information during instruction process about a student's thinking as they solve mathematics tasks. The strategy is grounded in the instructional cycle of engaging students in interesting learning activities, assessing, analyzing and providing corrective instruction. The main purpose of the study was to determine the effect of 'FACTS' on mathematics academic achievement among primary schools pupils. The sample of the study consisted of 140 students in class 6 from public primary school in Kenya. Data was collected by administering a pretest and a posttest of a standardized achievement exam to the experimental and control groups. The reliability of the exam was tested through experts' judgment who established that the instrument had strong content and internal validity. The data was analyzed using Analysis of covariance (ANCOVA) and the significant level of 0.05 was used in order to determine the effect of the strategy on mathematics academic achievement. Research findings revealed that there is a significant effect of 'FACTS' on pupil's mathematics academic achievement as shown by statistical results of $F=131.14$, $p=0.00 < 0.05$.

Keywords: Experimental research, Formative assessment, Mathematics, Achievement

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