EFFECTS OF CONSTRUCTIVIST TEACHING APPROACH ON ACHIEVEMENT, SELF-CONCEPT AND DISPOSITION IN MATHEMATICS AMONG SECONDARY SCHOOL STUDENTS IN NAKURU COUNTY, KENYA

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ABSTRACT

Mathematics is a universal utilitarian tool for Social, Cultural and Personal goals that every member of society aspires to achieve. In Kenya mathematics is a compulsory subject in Primary and Secondary schools and is examinable by Kenya National Examinations Council. Worldwide and particularly in Kenya students' mathematics performance has been dismal. Most studies attribute the students' dismal mathematics performance to the teacher centered teaching methods, practiced by mathematics teachers, in mathematics classrooms. The study investigated the effects of Constructivist Teaching Approach (CTA) on students' achievement, self-concept and disposition in mathematics, among secondary school students. It was carried out in Rongai Sub-county of Nakuru County, where there has been persistent low learners' achievement in the subject. The Solomon Four Non-equivalent Control Group Research Design was used in the study. Four co-educational schools were purposively selected from the sub-county and randomly assigned to serve as Experimental groups (E $_1$ & E $_2$) and Control groups (C $_1$ & C $_2$). Each school provided one Form Two class for study giving a sample population of 165 students. The Instruments, Students' Mathematics Achievement Test (SMAT), Students' Mathematics Self-concept Questionnaire (SMSQ) and Students' Mathematical Disposition Questionnaire (SMDQ) were used for data collection. The data collected was analyzed by use of t-Test and Analysis of Variance (ANOVA). Results indicated that students in the experimental groups E $_1$ and E $_2$ had better performance than the students in the control groups C $_1$ and C $_2$ in the SMAT. This showed that CTA enhanced student learning better than the conventional methods. In addition experimental group E $_1$ had a rise in Students' Mathematics Self-concept and relatively increased Students' Mathematical Disposition, compared to Control group C $_1$ which had been taught using conventional method. The curriculum developers and mathematics teachers are encouraged to use CTA, in improving students' mathematics achievement, mathematics self- concept and mathematical disposition among secondary school students.

Key Word: *Constructivist Teaching Approach, Mathematics Achievement, Mathematics Self-Concept , Mathematical Disposition*

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