

**INFLUENCE OF COOPERATIVE LEARNING APPROACH ON
STUDENTS' ACHIEVEMENT IN MATHEMATICS IN SECONDARY
SCHOOLS OF KWALE COUNTY, KENYA.**

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DECLARATION

I declare that this thesis is my original work and has not been presented in any other university or institution for consideration. This thesis has been complemented by referenced sources duly acknowledged. Where text, data, or tables have been borrowed from other sources including the internet, these are specifically accredited and references cited in accordance in line with anti-plagiarism regulations.



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This thesis has been submitted for review with our approval as University supervisors.

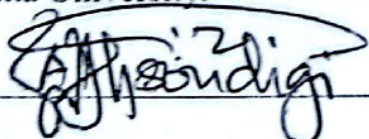


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ABSTRACT

Although the teaching techniques employed in classroom teaching of Mathematics have been given attention by Mathematics educators, to a larger extent the recommended techniques have not been embraced in Kenya. This could be partly because of the limited local literature on the recommended teaching techniques. With the conventional methods of teaching, the students' achievement in mathematics has continued to be low. It is on this regard that this study focused on experimentation of cooperative learning in mathematics and its effects in Kwale County, Kenya. Three objectives were formulated for the study. They were: (i) To determine the difference in performance in mathematics between students exposed to cooperative learning technique and those exposed to conventional learning techniques (ii) To examine the effect of cooperative learning in attitudinal change towards mathematics between students exposed to cooperative learning technique and those exposed to conventional learning techniques (iii) To determine difference in achievement between gender when students are exposed to cooperative learning. The study was carried out in public secondary schools of Kinango Sub-county. The study treated each school as a single unit forming the population of the study. There were seventeen public secondary schools in total out of which six formed the sample size for the study. Stratified sampling was used to obtain sample schools from each category, that is boys only, girls only and mixed schools. Simple random sampling was used to obtain three schools from boys and three from co-educational and the three girls schools. Further, purposeful sampling was used to obtain two sample schools from each category of schools making a total of six schools. The study used experimental design in collecting data. Mathematics achievement tests and attitudinal questionnaire were used to collect data. The SPSS program was used in data analysis. Analysis of variance was used to determine the significance level at alpha level of 0.05. The difference in the mean scores in post test between experimental groups and control groups was found to be statistically significant ($P=0.009$ for boys school; $P = 0.003$ for girls school and $P=0.031$ for co-educational) hence Cooperative Learning proved to benefit many learners. Cooperative learning was also found to contribute to a significant change in attitude of students towards mathematics. It is hoped that the findings from this study will benefit the mathematics teachers, mathematics curriculum developers, teacher training institutions and the Ministry of Education in their reorganization to improve student performance in Mathematics.