

**Effects of Experiential Learning Approach on Students' Mathematical Creativity among
Secondary School Students of Kericho East Sub-County, Kenya
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Abstract

Mathematics is a subject which seeks to understand patterns that permeate both the world around us and the mind within us. There are many ways of thinking and the kind of thinking one learns in mathematics is an ability to handle abstraction and solve problems that require knowledge of mathematics. Mathematical creativity is essential for scientists. Creativity is one of the goals of teaching mathematics in schools. This study investigated the Effects of Experiential Learning Approach on students' mathematical creativity in Kericho East Sub-County. The topic Statistics I was taught to Form Two since it is one of the topics that is poorly performed according to KNEC reports on KCSE. Solomon Four Non Equivalent Control Group Design under the quasi-experimental research was used. A random sample of four co-educational district secondary schools was drawn from schools in Kericho East Sub-County. Each school provided one Form Two class. This translated to a total of 168 students. In the experimental groups Experiential Learning Approach (ELA) was used while Conventional Teaching Methods (CTM) was used in the control groups. One experimental and one control group was pre tested. At the end of the treatment all the four groups were post tested using Mathematical Creativity Test (MCT). The instruments were validated with the help of experts in the Department of Curriculum Instruction and Education Management of Egerton University and mathematics teachers from selected secondary schools. MCT was pilot tested to estimate its reliability coefficient using Cronbach alpha which was found to be 0.778. Descriptive as well as inferential statistics were used in data analysis. These included mean score and ANOVA. All statistical tests were subjected to test of significance at alpha (α) level of 0.05. The results revealed that ELA had a significant effect on students' mathematical creativity. The findings of the study are expected to assist mathematics teachers to adjust their instructional strategies and also teacher trainers may use the information from the study to sensitise in-service and pre-service mathematics teachers on the importance of Experiential Learning strategies in enhancing Mathematical Creativity. The findings may also be used as a basis for future research in Mathematics Education.

Keywords: Mathematical Creativity; Experiential Learning

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