

# **EFFECTS OF CO-OPERATIVE E-LEARNING TEACHING STRATEGY ON STUDENTS' SELF-CONCEPT IN BIOLOGY: A STUDY OF SELECTED SECONDARY SCHOOLS IN NAKURU COUNTY, KENYA**

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## **ABSTRACT**

This study investigated the effects of Cooperative E-Learning (CEL) teaching strategy on students' self-concept in Biology. The study was quasi-experimental and the Solomon's Four Non-Equivalent Control Group Design was used. The study was carried out in secondary schools in Nakuru County and focused on Form Two students. Convenience sampling was used to select four schools for the study. One Form Two stream was selected in each school using simple random sampling where they were more than one. The study involved county schools to ensure that the students participating were of comparable academic abilities. A total of 200 students from four schools participated in the study. The instruments that were used in this study are the Self-Description Questionnaire (SDQ) and the Biology Achievement Test (BAT) with a reliability coefficient of 0.72 and 0.97 respectively. They were piloted and validated before the start of the study. Data analysis was done using Analysis of Variance (ANOVA), Analysis of Covariance (ANCOVA), t-test and Spearman's Product Moment Correlation Coefficient (SPMCC) with the aid of the Statistical Package for Social Sciences (SPSS) version 17.5 for windows. Statistically significant values were accepted at  $\alpha = 0.05$ . The results showed that the students exposed to CEL teaching strategy had higher self-concept than those exposed to conventional methods. The findings further showed that there was a statistically significant relationship between Biology self-concept and student achievement. The researchers concluded that CEL is more effective in enhancing learners' self concept than conventional methods. It is recommended that teachers be empowered to use CEL by incorporating it in both pre-service and in-service teacher education programmes.

**Key Words:** Self-concept, achievement, cooperative e-learning