

Effect of Science Process Skills Teaching Strategy on Boys and Girls' Achievement in Chemistry in Nyando District, Kenya

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Abstract

Science process skills are central to the acquisition of scientific knowledge which is useful in solving problems in our society. This study was intended to compare the effect of science process skills teaching strategy (SPSTS) on boys and girls' achievement in chemistry. The study employed quasi-experimental design. The target population consisted of students in the secondary schools in Nyando District. Purposive sampling was used to obtain two district secondary schools to ensure that the number of boys and girls in each school was about the same. The samples consisted of 90 Form Three students drawn from two district secondary schools. The study covered two topics selected from the KCSE Chemistry syllabus, that is, Volumetric analysis (Titration) and Qualitative analysis. Chemistry Achievement Test (CAT) consisting of simple calculations, True and False items, and Fill in blanks were used as a pre-test. After the administration of treatment, which lasted five weeks, the same test was administered to the two groups as a post-test. The CAT was adapted from the KCSE Chemistry practical past papers. The reliability coefficient of 0.88 was estimated for the CAT using Kuder-Richardson (K-R21). The data generated were analyzed using descriptive statistics, t-test, ANOVA, ANCOVA at $\alpha = 0.05$ level of significance. The results revealed that SPSTS made significant difference on achievement in chemistry between boys and girls.

Keywords: Science process skills, Achievement, Chemistry, Gender

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