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Effect of Co-operative and Individualized Teaching Methods on Senior Secondary School Students' Achievement in Organic Chemistry.

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ABSTRACT

This study investigated the main and interaction effects of co-operative and individualized teaching methods on senior secondary school students' achievement in organic chemistry using gender and self-concept as moderating variables. This study employed 3x2x2 randomized pre-test, post-test quasi-experimental factorial design. The experimental groups were exposed to co-operative and individualized teaching methods and control group was exposed to traditional teaching methods. One hundred fifty-six (156) students were selected for the study.

Results revealed that there is significant main effect of treatment on students' achievement in chemistry ($F_{2, 143} = 299.781, P < 0.05$). This shows that the treatment is effective in enhancing student achievement in organic chemistry. However, the interaction effect of treatment, gender and self-concept on students' achievement in organic chemistry is not significant ($F_{1, 143} = 0.095, p > 0.05$).

Both co-operative and individualized methods significantly improved students' achievement in organic chemistry. However, co-operative method is significantly better than individualized method. Also, the efficacy of the both teaching strategies has nothing to do with student gender and self-concept. The strategies will work for both male and female students alike, regardless of their self-concept level. Teachers of chemistry should expose the students to cooperative learning method to encourage social interaction, active engagement and self-motivation among learners.

(Keywords: cooperative teaching method, individualized teaching method, organic chemistry instruction, hydrocarbon, self-concept, gender)