

Enhancing Students' Achievement, Interest and Retention in Chemistry through an Integrated Teaching/Learning Approach

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Abstract : This study concerns the effects of concept mapping-guided discovery integrated teaching approach on the learning style and achievement of chemistry students. The sample comprised 162 senior secondary school (SS 2) students drawn from two science schools in Nasarawa State which have equivalent mean scores of 9.68 and 9.49 in their pre-test. Five instruments were developed and validated while the sixth was purely adopted by the investigator for the study, Four null hypotheses were tested at $\alpha = 0.05$ level of significance. Chi square analysis showed that there is a significant shift in students' learning style from accommodating and diverging to converging and assimilating when exposed to concept mapping- guided discovery approach. Also t-test and ANOVA that those in experimental group achieve and retain content learnt better. Results of the Scheffe's test for multiple comparisons showed that boys in the experimental group performed better than girls. It is therefore concluded that the concept mapping-guided discovery integrated approach should be used in secondary schools to successfully teach electrochemistry. It is strongly recommended that chemistry teachers should be encouraged to adopt this method for teaching difficult concepts.

Keywords : integrated teaching approach, concept mapping-guided discovery, achievement, retention, learning styles and interest

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