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EFFICACY OF PROBLEM BASED LEARNING IN PROMOTING HIGH ACHIEVEMENT OF STUDENTS IN CHEMISTRY

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Abstract

The study investigated the efficacy of Problem Based Learning (PBL) on students' academic achievement in electrochemistry in Enugu Education Zone in Enugu State. To achieve the purpose of the study three research questions were posed and three hypotheses were formulated. The study adopted quasi experimental design specifically pretest post-test non-equivalent control group design. The population of the study comprised of 2042 SSII Chemistry students. Purposive sampling technique was used to select the sample. The sample size was 215 comprising of 124 males and 91 female SSII students. Electrochemistry Achievement Test (EAT) was used to collect data for the study. The instrument was validated by three experts in the Department of Science Education, University of Nigeria, Nsukka. The reliability index of EAT was 0.96, which was determined using Kendall' Coefficient of Concordance. The data obtained were analyzed using mean and standard deviation to answer the research questions and Analysis of Covariance (ANCOVA) to test the hypothesis at 0.05 level of significance. The result of the study showed that PBL instructional approach enhanced students' achievement in electrochemistry better than traditional lecture method. Gender had a significant influence on students' achievement in favor of the male. It was recommended that teachers should teach electrochemistry using PBL instructional approach among others.

Author Keywords

Electrochemistry, Problem Based Learning, Gender, Achievement

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