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Instructional Methods, Gender and Secondary School Students' Performance in Quantitative Chemistry in Akwa Ibom State

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Abstract

This study focused on three instructional methods, gender and students' performance in quantitative chemistry in Akwa Ibom State. Three intact classes were used: experimented group 1 in which subjects were taught using Selvaratnam/Frazer problem solving approach; experimented group 2 in which subjects were taught using guided inquiry approach and the control group where subjects were taught using expository method. Students were first pretested with Achievement Test on Electrochemistry (ATOE) with a reliability index of 0.78 before treatment, and later posttested with same ATOE (reshuffled) after four weeks of treatment to determine the level of performance by both male and female subjects in the various groups. The data collected were analyzed using means and ANCOVA. Results revealed that female students benefited more from problem-solving and guided-inquiry approaches though not significantly from their male counterparts. Recommendations included placement of emphasis on the use of Selvaratnam/Frazer problem solving approach by both teachers and students in solving chemistry quantitative problems.

In recent times, attention has been drawn more to how best to teach science for meaningful results that would lead our country to being one of the leading sustainable