

Engaging Girls in 'Learn Science by Doing' as Strategy for Enhanced Learning Outcome at the Junior High School Level in Nigeria

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Abstract : In an attempt to impact on girls' interest in science, an instructional package on 'Learn Science by Doing (LSD)' was developed to support science teachers in teaching integrated science at the junior secondary level in Nigeria. LSD provides an instructional framework aimed at actively engaging girls in beginners' science through activities that are discovery-oriented and allow for experiential learning. The goal of this study was to show the impact of application of LSD on girls' performance and interest in science. The major hypothesis that was tested in the study was that students would exhibit higher learning outcomes (achievement and attitude) in science as effect of exposure to LSD instructional package. A quasi-experimental design was adopted, incorporating four all-girls schools. Three of the schools (comprising six classes) were randomly designated as experimental and one as the control. The sample comprised 357 girls (275 experimental and 82 control) and nine science teachers drawn from the experimental schools. The questionnaire was designed to gather data on students' background characteristics and their attitude toward science while the cognitive outcomes were measured using tests, both within a group and between groups, the girls who had exposure to LSD exhibited improved cognitive outcomes and more positive attitude towards science compared with those who had conventional teaching. The data are consistent with previous studies indicating that interactive learning activities increase student performance and interest.

Keywords : active learning, school science, teaching and learning, Nigeria

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