

Graphic Calculator Effectiveness in Biology Teaching and Learning

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Abstract : The purpose of the study is to find out the effectiveness of using Graphic calculators (GC) with Calculator Based Laboratory 2 (CBL2) in teaching and learning of form four biology for these topics: Nutrition, Respiration and Dynamic Ecosystem. Sixty form four science stream students were the participants of this study. The participants were divided equally into the treatment and control groups. The treatment group used GC with CBL2 during experiments while the control group used the ordinary conventional laboratory apparatus without using GC with CBL2. Instruments in this study were a set of pre-test and post-test and a questionnaire. T-Test was used to compare the student's biology achievement while a descriptive statistic was used to analyze the outcome of the questionnaire. The findings of this study indicated the use of GC with CBL2 in biology had significant positive effect. The highest mean was 4.43 for item stating the use of GC with CBL2 had saved collecting experiment result's time. The second highest mean was 4.10 for item stating GC with CBL2 had saved drawing and labelling graphs. The outcome from the questionnaire also showed that GC with CBL2 were easy to use and save time. Thus, teachers should use GC with CBL2 in support of efforts by Malaysia Ministry of Education in encouraging technology-enhanced lessons.

Keywords : biology experiments, Calculator-Based Laboratory 2 (CBL2), graphic calculators, Malaysia Secondary School, teaching/learning

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