

An Investigation into the Effectiveness of Inquiry-based Learning on Teaching Chemistry at the High School Level

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Abstract

The main purpose of this study is to investigate the effectiveness of inquiry-based learning in teaching chemistry at the high school level. The research design was one of the quasi-experimental designs, the nonequivalent control group design. The participants were selected from Grade Ten students in BEHS Yekyi in Patheingyi District, and BEHS Alamyone in Maubin District in Ayeyarwady Region by using a simple random sampling method. There were totally (147) participants to conduct the experiment for this research study. From each school, two intact classes were randomly selected as an experimental group which received inquiry-based learning and as a control group which received formal instruction. The instruments were pre-test and post-test. The data were analyzed by using a one-way analysis of covariance (One-Way ANCOVA). According to the results, there were significant differences in students' chemistry achievement between the experimental group and control group in both schools. The research findings proved that inquiry-based learning had significant effects on teaching chemistry at the high school level.

Key words: Inquiry, Inquiry-based Learning, Effectiveness, Achievement, Chemistry

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