

A Study of Students' Higher-order Thinking Skills through Guided Inquiry Learning in Teaching Chemistry

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Abstract

The main purpose of this study is to investigate students' higher-order thinking skills through guided inquiry 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 (5) Hinthada, and BEHS Neikban in Hinthada District by using simple random sampling method. There were a total of 187 participants to conduct the experiment for this research study. From each school, two intact classes were randomly selected as experimental group who received guided inquiry learning and control group who received formal instruction. The instruments were pretest and posttest. The data were analyzed by using one-way analysis of covariance (One-Way ANCOVA). According to the results, there were significant differences in higher-order thinking skills between the experimental groups and control groups in both schools. Research findings proved that guided inquiry learning had significant effects on chemistry teaching at the high school level.

Key words: Inquiry, Inquiry learning, Guided inquiry learning, Higher-order thinking skills, Chemistry

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