

Development of Higher-Order Thinking Skills through Inquiry Learning in Teaching High School Biology

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Abstract

The main purpose of this study is to investigate the applicability of inquiry learning that can enhance students' higher-order thinking skills in teaching and learning high school biology in Myanmar. Inquiry learning was implemented by means of Biological Science Inquiry Model. The research design was nonequivalent control group design. Simple random sampling method was used. This study was conducted in two basic education high schools from Yangon Region. The instruments were pretest, posttest, lesson plans and materials. The research findings include two main parts. Firstly, there was a significant difference in biology achievement between students who received inquiry learning and those who did not. The experimental groups who received inquiry learning were significantly higher than the control groups who did not. Secondly, as regards lower-order thinking skills, there was a significant difference between the experimental group and the control group except school 2. But, there were significant differences between the experimental groups and the control groups in all schools concerning higher-order thinking skills. The application of inquiry learning developed students' higher-order thinking skills in all schools. Therefore, it is suggested that inquiry learning should be applied to develop students' higher-order thinking skills in biology. Inquiry learning contributed a positive impact on teaching high school biology. The research findings suggested that inquiry learning should be used in teaching and learning high school biology in Myanmar.

Key words: Inquiry, Inquiry Learning, Higher-order Thinking Skills, Teaching, Biology.

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