

Effect of Inquiry-Based Teaching on Problem-Solving Skill at the Secondary Level

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Abstract

Students' problem-solving skill can be significantly developed at the secondary level when Inquiry-Based Teaching (IBT) was used in combination with the Advance Organizers (AO). Given the dynamic nature of scientific concepts and their modern applications of such approaches are increasingly relevant now. In today's rapidly evolving world, where students must be prepared to meet the diverse challenges of the 21st century, the objective of this study is to contribute to the educational improvement by mainly focusing on how to better equip the students with the ability to think critically and solve the problems effectively. The main objective was to strengthen students' problem-solving skill. To achieve this, a quasi-experimental design using pre and post-tests with intact groups was adopted. Over six weeks, the experimental group received daily 40-minute session from Monday to Friday, where lessons were delivered through inquiry-based teaching supported by advance organizers specifically designed by the researchers. A test to measure problem-solving skill was developed by researchers and was used as pre and post assessment. Analyzed data revealed that IBT using advance organizers has a positive effect in the areas of problem-solving skill of learners. It was concluded that in general IBT with the inclusion of Advance Organizers had a significant effect.

Keywords: Inquiry-Based Teaching, Advance Organizers, problem-solving skill, quasi-experimental and Secondary Level