

IMPLEMENTATION OF VIRTUAL LABS-BASED MATHEMATICAL LEARNING SYSTEM (VLBMLS)

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ABSTRACT

This study focused on using virtual labs in mathematics learning for the undergraduate and technical or applied training students' programs at Kuwait state. The effectiveness of such virtual labs in increasing understanding of scientific material and simplifying math concepts is assessed using some appropriate measures like statistical tests of hypotheses stated in this study. The study used a questionnaire tool to assess the effects of using math virtual labs on students and lecturers, and all hypotheses are tested using SPSS package. It was found that math virtual labs are good tool for increasing the understanding for students in math concepts and redesign of their math thinking, also it can simplify the math problems in a way to improve their method in math problem solving and reorder their thinking during solving such problems. Also, math V. Ls can improve students' skills in math thinking and repeat the math problems via simulation tools offered by such labs. In addition, V. Ls increases the active learning and partnership leaning modules and finally, math V. Ls is a good assessment tool of the educational outcomes of the learning processes. Implementation index of all VLBMLS variables is calculated and it seems to be in a "very good" status with a value of 72.148% as an average which means that math V.Ls can be considered as a good tool in improving math learning system in the studied colleges in Kuwait state.

KEYWORDS: *Virtual Labs, Mathematics, Learning, Implementation Index, Education, Kuwait.*

Original Article

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