The Effectiveness of a Proposed Instructional Model Based on a Context-Based Learning Approach in Teaching Science to Develop Levels of Scientific Knowledge Depth among Second-Grade Intermediate School Students

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Abstract

The current research aimed to reveal the effectiveness of using a suggested teaching model based on a context-based learning approach in science education for developing depth levels of scientific knowledge among second-grade intermediate students. To achieve this aim, the study employed the experimental approach based on the two-group design (experimental and control) with pre-test and post-test measurements. The research sample consisted of (60) second-grade intermediate school students, randomly divided into two equivalent groups. The experimental group consisted of (30) students, who studied the "Matter and Energy" unit using the proposed instructional model based on the context-based learning approach. The control group also consisted of (30) students who studied the same unit using the traditional method. The results revealed statistically significant differences at the (0.05) level between the mean scores of the experimental and control groups in the post-test of the scientific knowledge depth levels, in favor of the experimental group. There were also statistically significant differences at the (0.05) level between the mean scores of the experimental group in the pre-test and post-test of the scientific knowledge depth levels test, in favor of the post-test. This indicates the effectiveness of using the proposed instructional model in developing levels of scientific knowledge depth among second-grade intermediate school students. In light of the research findings, a set of recommendations and suggestions was presented, including training intermediate school science teachers on implementing the proposed instructional model based on the context-based learning approach to enhance levels of scientific knowledge depth among intermediate school students.

Keywords

Context-Based Learning Approach, Levels of Scientific Knowledge Depth, Science Teaching.