

عنوان مقاله:

Designing the Educational Model in Chemistry Education

محل انتشار:

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نویسندگان:

Javad Hatami - *Professor in Educational Technology, Faculty of Humanities, Tarbiat Modares University, Tehran, Iran*

Fariba Ansarimoghadam - *Ph.D. Candidate in Education Technology, Faculty of Humanities, Tarbiat Modares University, Tehran, Iran*

Atiye Seidi - *MA. of Physical Chemistry, Faculty of Basic Sciences, University of Science and Technology, Tehran, Iran*

Mehrnaz Gohari - *Ph.D. Candidate in Education Technology, Faculty of Humanities, Tarbiat Modares University, Tehran, Iran*

خلاصه مقاله:

Purpose: This study aims to design a Zn-Air Battery Educational Model and assess its impact on Student Learning. **Method:** This research employs a quantitative approach and a Quasi-Experimental Methodology. According to the new Modeling Methods in Chemistry Education and based on the background investigation and Content Analysis of previous Research, a simple educational model of the battery was designed using readily available and inexpensive materials. This study first examined the characteristics of Zn-Air battery construction, besides the special materials and required conditions before describing the training model for this battery. Then, students were divided randomly into experimental and control groups using Solomon's Four-Group Research Design including four groups of sixty individuals. In the experimental group, the ΔE Method was used to create a structured modeling environment in which students could create their desired models, and its validity was confirmed by the researcher. Cronbach's alpha was used to determine its reliability. The Research hypotheses were examined and analyzed using the analysis of variance test and the two-sided independent t-test in the section on inferential statistics. For Data Analysis and Statistical Error Reduction, SPSS was utilized. **Findings:** The Findings revealed that the experimental group learned significantly more than the control group students and performed better. **Conclusion:** learning with the model makes learning more durable because the learner organizes his own learning and knows when and how to obtain it. The inductive nature of the model aids students in gaining a deeper understanding of the key concepts through the examination of natural phenomena and events used in the research.

کلمات کلیدی:

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