

عنوان مقاله:

Application of Context-Based Educational Approaches to Correct Students' Misconceptions on Acid-Base Chemistry

محل انتشار:

ششمین کنگره ملی تحقیقات راهبردی در شیمی و مهندسی شیمی با تاکید بر فناوری های بومی ایران (سال: 1398)

تعداد صفحات اصل مقاله: 19

نویسنده:

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خلاصه مقاله:

This research was to investigate the application of context-Based educational approaches to correct students' Misconceptions on Acid-Base chemistry. Research is applied in terms of purpose and is a Quasi-experimental design research. Research design was double-group with pre-test, post-test and delayed test for both test and control groups. The statistical population of research was consisting of all female and male senior high school students of experimental sciences in West Azerbaijan province, in the academic year 2016-2017. At the time of conducting this research, the total number of these students was reported 9188 which using the Cochran formula, 264 students was selected as statistical sample of research. To data collection, we used Acid-Base Chemistry Misconception Test (ACMT), CLASS-Chemistry questionnaire and researcher-made learning questionnaire. The data analyses of this research were performed using spss software and applying various descriptive and inferential statistics methods. The results obtained from evaluation of research hypotheses using Levin test, independent t-test, and covariance analysis test showed that context-based educational approach based on virtual laboratory and exploration had positive and meaningful effect on improving learning and motivation and changing the attitude of the students regarding Acid- Base concepts. The findings of this research also showed that the application of this educational method decreased students' Misconceptions on Acid-Base chemistry and even corrected them, compared to traditional and common methods.

کلمات کلیدی:

Context-based approaches, Students' misconceptions, Chemistry education, Acid-Base chemistry

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