

Learning equilibrium concepts by computer – based instruction

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Abstract Often the teachers say their students make mistakes and confusion in operating with chemical concepts. Now, using the power of computers, as support for instruction, it is possible to help students in the learning process and the teachers in theirs work for preparing the curriculum contents. This article provides some results of an experimental research made by application of the new technologies in learning process of conceptual system of chemical equilibrium. The experimental research was conducted in the natural conditions of the chemistry class by using educational soft-ware and analysis of pupils products. By using computer - based instruction in chemistry concepts learning, it was observed the relevant benefits for learners to build relevant representations about equilibrium processes, to draw graphs, prepare tables, to make predictions about the evolution of systems, to transform the conceptual system in the high level knowledge structures.

Keywords: learning environments, computers -based instruction, cognitive structures: representations, reasoning, set of equilibrium concept: properties, equilibrium constant, Le Chatelier's principle.
