

The Influence of Computer Assisted Instruction (CAI) in Chemistry on the Students Achievement at Higher Secondary Level

By

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Abstract

Instructing chemistry requires Teachers to relate chemical equations and other symbolic notations both to molecular or atomic events and to laboratory observation and data. Traditionally, text books of Chemistry have symbolic notations with minimal pictures leaving the teacher and students to invoke these pictures from words. This paper was designed to find out the influence of computer assisted instruction on the student's achievement in chemistry and to compare the effectiveness of CAI with conventional instruction at higher secondary school level. Null hypotheses were formulated on the basis of objectives and to test the hypotheses, two experiments of one month duration were conducted in both government and private sectors of Bahawalpur City. The pre-test, post-test control group design was developed for the current study. The achievements of forty (40) students were recorded through pre-test and then students were divided randomly into two groups of twenty (20) in each group. Groups were assigned as control group and experimental group randomly. Ten topics out of the prescribed textbooks of chemistry for class XI were taught, keeping in view that the students had never studied these topics before. The control group was instructed by the lecture while the experimental group was instructed through CAI, under the same conditions. The data obtained through experimentation, was analyzed using statistical methods of mean score and t-test for independent sample. The findings indicated that there was significant influence of CAI on the student's achievement in both, government and private sectors. However, CAI influence was found to be more significant in private school than government school. Computer-assisted instruction in teaching chemistry proved better than the conventional instruction.

Keywords: Computer Assisted Instruction; Conventional Instruction; Student's Achievement; Chemistry Education; Higher secondary level; Government and Private schools.