EFFECTIVENESS OF COMPUTER ASSISTED INSTRUCTIONS IN TEACHING THEMODYNAMICS IN A/L CHEMISTRY

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The aim of this study is to observe the effect of computer assisted instruction (CAI) used in teaching chemistry lessons specially on "Enthalpy, Entropy and Gibbs free energy" on the success of students. Computer Assisted Learning (CAL) generally refers to the use of computer based educational packages to enhance the learning process. A/L Chemistry syllabus has also been developed on competency based, student centered and activity oriented approach with the intention of developing personal and inter personal skills of targeted students.

Lessons of Enthalpy, Entropy and Gibbs free energy which are suitable to teach by using CAL were selected from that syllabus and study package was prepared by using CAL method. The students sample were randomly selected and pre test was conducted to them to reveal the prior knowledge about Enthalpy, Entropy and Gibbs free energy. Next the sample was randomly divided in to the experimental group and the control group. The experimental group received computer-assisted teaching and the control group was taught by traditional lecture methods. After five days of teaching, the students were tested again with post test. The data was analyzed using Minitab sample t-test.

At the end of the study it was found that both the groups were at the same standard at the beginning. Students in the experimental group showed better performance than the other group. Post-test marks of the treatment group was significantly higher than the post-test marks of the controlled group ([T =3.06, P=0.003] respectively). According to the data gathered in this research, CAL method was found to be significantly effective than the traditional lecture method. This method helped to increase students' self learning ability and also create an interest on studying chemistry.