

The purpose of the study was to investigate the effectiveness of modular instruction in 10th grade chemistry by employing Gagne's events of instruction. The researcher developed modules of chapter 11th and 12th of 10th —grade chemistry. The instruments developed were validated by pilot study and professional experts. The instrument was based on three cognition levels. The three sections i.e. A, B and C of 10th grade chemistry students constituted the population of the study. Sections B and C were randomly taken as sample of the study and each consisted of 28 students. Both the sections were randomly assigned as modular and traditional group. Section C was assigned the modular group while the section B was traditional group. The modular group was taught by modular instruction and the traditional group was taught by the traditional instruction/lecture method. At the outset of the experiment the students were pre-tested. The experiment lasted for 12 weeks i.e. September 2006 to December 2006. Post-test was administered at the end of the experiment for the achievement purpose. To judge the stability of the independent variable a retention test was administered in mid January 2007.

The design selected was pre-test-post-test control group design. A 2x2 factorial design was used to analyze the data. Level of significance chosen was 0.05 for the t-test and the ANOVA test. The analysis of data favored the modular approach and a significant difference was found between the modular and the traditional group. The analysis of the data further revealed the usefulness of the modular instruction and proved its effectiveness within the teaching of chemistry and facilitated student learning. The data analysis further revealed that the modular instruction was not specific to the specific levels of the achievement variable but was generalizable across all levels of the achievement variable i.e. the treatment was not dependent on learner type. No interaction was observed and the modular instruction was found beneficial for both low performers as well as high performers.