

Introduction

The purpose of the study is to design and development of E-content in chemistry based on Cognitive Development Model (ECDM) for enhancing the select cognitive variables which aims to improve the cognitive development and learning of higher secondary school students in chemistry. The investigator developed instructional objectives of E-content in chemistry based on Cognitive Development Model (ECDM) for the chapter 4 chemical bonding -molecular structure and chapter 6 Thermodynamics.

The cognitive variables refer to L Operator - Logical Structural Learning Capacity, C Operator - Content Learning Capacity, M Operator - Mental Space Capacity, F Operator- Field Dependent – Independent Capacity, I Operator - Mental Attentional Interruption and S Operator - Spatial Structural Learning Capacity of higher secondary school students. The operators are used to enhance the cognitive development of an individual. (Leone, 1978).

The most of the students feel that the chemistry is a much complex subject to learn it difficult. The chemistry learning is challenging for the students in various reasons. One of the main difficulties is the abstract nature of chemical concepts, which can be hard to visualize and not easy to understand. In such class room situations, the E-content in chemistry based on Cognitive Development Model (ECDM) is the best option for effective learning by the learners.

This developed E-content in chemistry based on Cognitive Development Model (ECDM) involves E-tutorial, E-Text, Web resources and Assessment. Hence, the E-content in chemistry based on cognitive development model (ECDM) will give teachers and trainers a template for designing more effective learning instruction.