

ABSTRACT

This study investigated the effectiveness of a teacher made Chemistry courseware to modify students' alternative conceptions about Matter and the Atomic Structure by matching their learning preferences and improving their attitudes towards Chemistry and their perceptions of the learning environment. An experimental approach with a Solomon four-group design was employed with a sample size of 114 Grade 10 students of mixed abilities and ages 13 to 15. Of the 58 students in the experimental group, 27 were pretested along with 27 of those in the control group. Data were collected using (a) the Multiple Intelligences Surveys, (b) the Attitudes and Learning Environment Surveys and (c) the Chemistry Conception Surveys. The findings indicated that hypermedia-enhanced instruction can (a) significantly modify alternative conceptions, (b) improve attitudes towards Chemistry but not significantly, (c) make the learning environment seem significantly more constructivist, and (d) match many of the students' multiple intelligences.