TOPIC OF PH.D THESIS: EFFECT OF COMPUTER BASED INDIVIDUALISTIC AND COOPERATIVE LEARNING STRATEGIES ON ACHIEVEMENT AND RETENTION IN CHEMISTRY IN RELATION TO SCIENTIFIC CREATIVITY AND SCIENTIFIC APTITUDE

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The present study investigates the Effect of Computer Based Individualistic and Cooperative Learning Strategies on Achievement and Retention in chemistry in relation to Scientific Creativity and Scientific Aptitude. The study was confined to class IX students of English medium schools of Chandigarh affiliated to Central Board of Secondary Education, New Delhi. The tools such as Scientific Creativity Test by Kalra (1993), Scientific Aptitude Test Battery by Agarwal and Aurora (2008) was used. The achievement test in chemistry was developed by investigator. Computer Based Individualistic and Cooperative Learning instructional material was also prepared and implemented to the experimental groups. Gain scores and Retention scores were computed. An analysis of variance (3×2×3) was used to arrive at the following conclusions: (i) The achievement of experimental groups was found significantly higher than control group. (ii) The achievement of students with different scientific aptitude group was found to be significantly different from one another in chemistry. (iii) There was significant interaction effect of teaching strategies and scientific creativity on achievement in chemistry. (iv) There was a significant interaction effect of teaching strategies and scientific aptitude on achievement in chemistry. (v) The retention of experimental groups was found significantly higher than control group. (vi) The retention of high and low scientific creativity group of students in chemistry was found significant when measured after an interval of 30 days. (vii) There was significant interaction effect of teaching strategies and scientific aptitude on retention in chemistry when measured after an interval of 30 days.