Scientific Creativity and Scientific Temperament of School Students in Relation to Their Institutional Climate, Anxiety and Academic Achievement

Abstract

Based on data of 1000 students (500 science & 500 non-science), researcher conducts study on 11th class boys and girls of 6 CBSE affiliated schools of Rohtak city, Tools used were VTSC by (Sharma & Shukla), STS by (Singh), SEI by (Mishra), AASSC by (A.K Singh & A. Sengupta) & academic achievement-marks in 10th Final Board Exams. The t, r, CR were computed.

Findings & Conclusions: 1. Science students were more scientifically creative, have more unusual abilities, vertical thinking, visualisation, imagination, originality, novelty than non-science students in the four tasks- (Consequences Test, Unusual Uses, New Relationship & Just Think Why) tests of Scientific Creativity. 2. Science students have more scientific temperament, more objectivity, experimentation, questioning attitude, spirit of enquiry in four areas- (Objectivity, Experimentation, Spirit of Enquiry and Courage to Question’) of Scientific Temperament, Except in Aesthetic Sensibility area, Non-science students have greater aesthetic sensibility and in Creativity area, Science and Non-science students don’t differ significantly. 3. Insignificant, negligible correlation(r) found between scientific creativity and scientific temperament with institutional climate, anxiety and academic achievement in Science & non-science students. 4. Significant correlations (CR) were found in scientific creativity and academic achievement, scientific temperament & anxiety, and scientific temperament and academic achievement, scientific creativity & scientific temperament, of Science students than non-science students. Emphasized on identification & development of scientific creativity & scientific temperament in school students. Scientific thinking, rationality, imagination, novelty, reasoning, originality, objectivity in students should be encouraged and developed. It stresses on developing the positive school environment. Teaching should be child centered neither examination nor syllabus centered. Scientific creativity and scientific temperament are essential in developing scientific thinking and rationality in students. Mainly school
teachers primarily working in this direction can develop complete child’s personality. Scientific and technological progress lies only on people having scientific outlook and rational minds. To be a modern developed country scientific reorientation of education in Indian context is necessary.

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