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Title of Thesis: **A STUDY OF LEARNING ACHIEVEMENT IN SCIENCE OF
STUDENTS IN SECONDARY SCHOOLS IN RELATION TO
THEIR METACOGNITIVE SKILLS AND EMOTIONAL
COMPETENCE**

ABSTRACT

The Investigator studied (i) the relationship between metacognitive skills, emotional competence & learning achievement and (ii) the effect of metacognitive skills and emotional competence on the learning achievement in IX class science students. The **main objectives** of the present study was: -

- 1.To study the learning achievement in science of students studying in secondary schools.
- 2.To study the emotional competence of above average, average and below average students (boys & girls) studying in secondary schools viz a viz, each component of emotional competence.
3. To study the metacognitive skills of above average, average and below average students (boys & girls) studying in secondary schools viz a viz, each component of metacognitive skill.
- 4.To study the relationship between emotional competence, metacognitive skills and learning achievement in science of students studying in secondary schools.
- 5.To determine the magnitude of interactive effect of emotional competence and metacognitive skills on learning achievement in science of the students of secondary classes.
- 6.To suggest measures to enhance emotional competence and metacognitive skills of students at secondary stage.

Method & population of the study: The present study has employed the ex-post-facto design or casual comparative research. It is a kind of descriptive research and addressed to the non-experimental situations. Thus the term ‘ex-post-facto’ refers to the meaning that the situation has already occurred and its effect is to be evaluated in terms of causal relationship. The population for the present study represents 500 students of class IX (age between 13 to 15 years) from six secondary schools situated in South West Zone of Delhi.

Tools Used: The following tools have been used to collect the information from the sample subjects:

- 1.**Achievement Test:** The test was developed by the investigator herself.
- 2.**Emotional Competence**

Scale: This scale was developed by R. Bhardwaj and H. Sharma and published by Mapan 'Bal Niwas' Taj Basai, Agra, India 1995. 3.**Metacognitive Skills Scale:** This scale was developed and published by Dr. Agnivesh Gupta in the year 2005.

Statistical Technique Used: In order to find out the difference between boys and girls in emotional competence, metacognitive skills, the test of significance 't' was used. Further, to find out overall difference in mean score of emotional competence, metacognitive skills and learning achievement of the boys and girls belonging to below average, average and above average, the 'F' ratio was adopted. To study the relationship between emotional competence and learning achievement, metacognitive skills and learning achievement, the product moment coefficient of correlational techniques was used. For estimating the contribution of emotional competence and metacognitive skills to learning achievement, the coefficient of multiple determination (R^2) was computed.

Main Findings of the Study revealed that:1.Boys and girls were more or less equal in emotional competence. However component wise analysis of emotional competence indicated that girls were more competent than their counterpart i.e. boys in the two out of five components namely adequate expression and control of emotion, encouragement of positive emotions.2.Boys were having higher metacognitive skills than girls. Further component wise analysis revealed that boys and girls were more or less equal in three out of seven components i.e. self-regulation, self reflection, and self evaluation.3. Boys were having higher learning achievement in science than the girls. 4.Boys belonging to above average groups were having higher emotional competence than average and below average groups.5.Girls belonging to above average groups were having higher emotional competence than average and below average groups. Similarly, average groups of girls have done well than below average groups.6. Boys of average group possessed more metacognitive skills in comparison to their counterparts below average group. Similarly, above average group possessed much more metacognitive skills than to below average and average group of boys.7.Girls of average group possessed more metacognitive skills in comparison to their counterparts below average group. Similarly, above average group possessed much more metacognitive skills than to below average and average group of girls.8. There were significant positive relationship between (i) emotional competence & learning achievement (ii) metacognitive skills & learning achievement (iii) emotional competence & metacognitive skills of the students studying in secondary schools. 9.There was difference in the degree and kind of the predictors i.e. emotional competence and metacognitive skills contribution to the criterion of learning achievement. It was found that emotional competence and metacognitive skills independently contributed to learning achievement 30% and 26% respectively.