

## Chapter - II

# **REVIEW OF LITERATURE**

## CHAPTER - 2

# REVIEW OF LITERATURE

2.1 The review of the literature is an important part of research and is also carried out in educational research. The review of the literature in educational research provide us with the means of getting to the particulars fields of knowledge. Until researcher learn what are the studies already under taken and what remains still to be studied he/she cannot develop a research project that will contribute to furthering knowledge in that filed. Thus the literature in any field forms the foundation upon which all future research work must be built. As in this study an attempt have been made to investigate the effect problem solving ability on the mathematics achievement of the student. The researches related directly on indirectly to it were reviewed.

**Thind S.K. 1990 Studied the :** "Effect of parental education and occupation on the mathematical problem solving ability of students of Grade VII and IX". **The objectives of this study was to** determine the relationship between parental education and occupation on the mathematical problem solving ability of grade VII and grade IX rural and urban students.

The major findings are :-

- 1) The education of the father had no effect on the problem solving ability of the rural as well as urban children.

- 2) The mother education had no impact on rural children problem solving ability whereas problem solving ability of urban children is affected by the mother's education.
- 3) The fathers occupation indicated no effect on both rural and urban children problem solving ability.
- 4) The occupation of the mother also showed no effect on rural and urban children's mathematical problem solving ability.

**Dutt Sunil (1989) studied the** "The effect of problem solving strategies on the problem solving ability in science of high students in relation to anxiety level, cognitive style and intelligence. The objective of this study was

- 1- To study the effect of different problem solving strategies on problem solving in science.
- 2- To examine whether a particular strategy of problem solving would favour a particular level of intelligence.
- 3- To study the relationship between a particular strategy of problem solving with anxiety level of the subject.
- 4- To study the relationship of cognitive style with problem solving ability among students.

The major findings are :-

- 1) Strategies of problem solving significantly affected the problem solving ability of students. The focusing strategy was found to be superior to the scanning strategy.

- 2) High intelligent students irrespective of the strategies of training scored higher on problem solving ability test than low intelligent students.
- 3) The field independent student generally scored higher than the field dependent a on the problem solving ability of students.
- 4) Anxiety did not influence the problem solving ability of students.
- 5) Cognitive style and intelligence were found to contribute significantly to be total variance in problem solving ability anxiety did not make any significant contribution.

**Kumari Vijay M.P. (1991) studied the Problem solving strategies and cognitive capabilities of children of age group 10-12. The objective of this study was -**

- 1- To identify analyse describe a variety of problem solving strategies used by children of 10 to 12 yrs of age.
- 2- To assess the cognitive capabilities of children and
- 3- To examine the relationship with problem solving strategies.

The major findings are :-

- 1) The overall problem solving ability and success on different types of problem were significantly and positively related to each cognitive capability separately as well as globally.

- 2) There was evidence for some sequential steps in problem solving and different forms or levels of responses to be associated with the tactics used by children.
- 3) A wide range of meaning variation in the tactics were evidence in relation to the nature of the problems.

**Parasnic HN (1990) Studied the development of a problem solving ability test for students of standard IX. The objectives of this study was**

- 1- To construct a test for measuring by problem solving ability of marathi medium students of standard IX.
- 2- To find out reliability and validity of the test.

The major findings are -

- 1) In the final test 10 items were retained.
- 2) The facility indices ranged from 0.61° to 0.29°.
- 3) Dissimilating power ranged from 0.42° to 0.70°.
- 4) The reliability index was found out to be 0.72°.
- 5) The discriminate validity index was 0.68

**Baskaran K.(1991) Studied the achievement motivation attitude towards problem solving and achievement in mathematics of std X students in Devakottai Educational district. The objectives of this study was -**

- 1- To identify the level of students achievement motivation attitude towards problem solving and achievement in mathematics.
- 2- To identify the significant relationship if any between achievement motivation and attitude towards problem solving achievement in mathematics and attitude towards problem solving achievement motivation and achievement in mathematics.
- 3- To find out significant difference if any between boys and girls between rural and urban students and government and aided school students in achievement, motivation attitude towards problem solving and achievement in mathematics.

The major findings are -

- 1) There was a significant relationship between achievement motivation and (a) achievement in mathematics and (b) attitude towards mathematics problem solving.
- 2) There was a positive relationship between attitude towards problem solving and achievement in mathematics.
- 3) Urban and rural students did not differ in their (a) achievement motivation (b) attitude towards mathematics.
- 4) Urban and rural students differed significant in mathematics achievement.
- 5) There was no difference between achievement motivation of boys and girls.

- 6) There was a significant difference between boys and girls in their achievement in mathematics. Girls scored higher than boys.
- 7) There was no difference in the attitude of boys and girls towards mathematics.
- 8) Government school and aided school students did not differ in their attitude towards mathematics and achievement motivation.

**Krishnan Navaneetha J. (1990)** Studied the Identification of problem solving strategies in mathematics among high school students In Devakottai Educational district. The objectives of this study was 1- To identify and categories problem solving strategies. 2-To identify how far these problem strategies are applied by the students. 3- To identify their achievement of problem solving in mathematics and 3- To find out relationship between identification of problem solving strategies. Strategies (IPSS) and applicable of problem solving strategies (APSS) and achievement of problem solving in mathematics (APSM).

The major findings are -

- 1) There was no significant relationship between the IPSS and APSS of students.
- 2) There was no significant relationship between IPSS and APSM of students.
- 3) The correlation between APSS and achievement of problem solving in mathematics was significant.

- 4) The test of relationship between the scores of the algebraically sum and APSS provided a significant r value.
- 5) The correlation between the scores of the sum in applicable and APSS was significant.
- 6) There was significant relationship between the scores of the sum in menstruation and the APSS of the remaining student.
- 7) While computing r value between the scores in achievement of problem solving in mathematics and half yearly marks in the mathematics.
- 8) There was no significant relationship between the scores of IPSS and half yearly marks in mathematics.
- 9) There was no significant relationship between the IPSS and the APSM of the students partially out the effect of APSS.
- 10) There was significant relationship between the APSS and APSM of the students partial ling out the effect of IPSS.
- 11) IPSS and APSS had an in direct effect on APSM. So it was found that 31% of students achievement in maths.

#### **AN OVER VIEW :**

The research has presented brief review of the related studies done in the field of achievement in mathematics. The researcher found some gaps and deficiencies after through study of the past research studies. An over view of the review reveal the facts that even though there is a log of research conducted in the field of mathematics achievements but most of them are in relation



to personality traits, alternative teaching methods, socio economic status and medium of instruction. No study was conducted to find out the mathematics achievement in relation to problem solving ability at elementary stage. It is also clear from the review that studies finding mathematics achievement influencing mathematical concepts are at a decrease. There is a wide scope for further research.