2.01. Introduction

A literature review is a piece of discursive prose. It is an account of what has been published on relevant topics by accredited scholars and researchers. A review may be a self-contained unit, an end in itself or a preface to and rationale for engaging in research. The literature review is a critical look at the existing research that is significant for the future research. A good literature review will satisfy the investigators major 3 purpose for the research. The three purposes are - Remember the purpose, Read with a purpose, Write with a purpose- Sharma (2003)

The key to the vast store house of published literature may open doors to sources of significant problems and explanatory hypothesis and provide helpful orientation for definition of the problem, back ground for selection of procedure, and comparative data for interpretation of results. According to Best and Khan (1993) in order to be truly creative and original, one must read extensively and critically as a stimulus to think". Besides enlargeth the knowledge about the topic, writing a literature review will give the investigator to gain and demonstrate skills in two areas:

1. *Information Seeking*: the ability to scan the literature efficiently, using manual or computerized methods, to identify a set of useful articles and books.
2. *Critical Appraisal*: the ability to apply principles of analysis to identify unbiased and valid studies

A literature review must do these things:

a. Be organized around and related directly to the thesis or research Question's developed by the investigator
b. Synthesize results into a summary of what is and is not known
c. Identify areas of controversy in the literature
d. Formulate questions that need further research
Review of Literature discusses techniques and equipment that are appropriate for investigating the topic. And, the Review of Literature summarizes the theory behind the present research. During the review lot of problems welcome the investigator.

The most difficult task in review of literature is choosing a specific topic. Often the task is especially difficult because of either lackness or vastness of knowledge in the content area. Inadequate content, lack of places with relevant knowledge source, lack of time for the investigators, clouded and clogged knowledge information’s, economical constraints, Unreliable internet informations, etc. In spite of these problems the type of content that are selected for a good review of literature should be from - theoretical presentations, review articles, and empirical research articles.

The review of literature is a fruitful source of hypothesis and it also helps to demonstrate the relationship between the completed researches and the topic under investigation. It provides a comprehensive view of the topic and also the relevant significance and practicability of the topic. In research it is essential that the investigator should survey the literature from other research studies and authoritative writings related to the problem under investigation.

To conduct the research effectively and efficiently the studies are broadly classified into - studies related to Schooling - Indian and Foreign studies, studies related to Active Learning - Indian and Foreign studies, studies related to Mind - Indian and Foreign studies, studies related to Reservation Category - Indian and Foreign studies.
2.02. Studies related to schooling

2.02.01. Indian studies

Patel (1996) conducted a study on “Study Habits of pupils and its impact upon their school academic achievement”. The objective was to study the qualitative aspect of Study Habits of the pupils and its impact on the school achievements. Major Findings were the achievement scores of the pupils having high and low intelligence were significantly different, those pupils who had good Study Habits did get significantly more achievement scores than those of poor Study Habits group and sex and Study Habits interacted significantly in the production of achievement scores.

Verma, Sheikh and Sangita (1997) conducted a study on “Study Habits of adolescent students as related to academic motivation and test anxiety in school”. The objective of the study was to find out the relationship of Study Habits of adolescent students with academic motivation and test anxiety. The major findings were adolescent students having high level of academic motivation scored more on Study Habits than adolescent students possessing average level of academic motivation and low level of academic motivation and Students belonging to high test anxiety and low test anxiety. Also, students belonging to average test anxiety had lower Study Habits scores than students belonging to low test anxiety.

Nimavathi and Gnanadevan (2009) conducted a study on “Developing Study Habits through Multimedia Program in school”. The objective was to find out the impact of multimedia on the development of Study Habits of secondary school students. The study showed that the students learning with the help of multimedia fared better in their Study Habits than the students learning through conventional methods.

Susai, Raji and et. al. (2009) conducted a study on “Are Study Habits Gender Biased in school?” The objective was to investigate the Study Habits of high school
students in Dindigul area in Tamil Nadu, with respect to home environment, reading, note taking, planning the subjects, habit of concentration, general habit and attitude, preparation for examination and school environment. The major finding was boys and girls did not differ significantly in their Study Habits with respect to home environment, reading, note taking, concentration and preparation for examination.

**Nalini and Bhatta (2009)** conducted a study on “Study Habits in school and Students Achievement in Relation to Some Influencing Factors”. The objective of the study was to find out the relationship between Study Habits and students achievement in relation to socioeconomic status, learning environment, school adjustment and intelligence. Findings of the study were there was relationship between socioeconomic status and Study Habits of X standard students and the interaction effect of socioeconomic status and school adjustment on achievement of X standard students is significant.

**Vinay, Geethe and Masroor (2010)** conducted a study on “Study Habits of visually impaired students in relation to their study related variables in school”. Study Habits are affected by several factors such as physically health of the individual home condition, emotional and social adjustment: personality traits or the study environment etc. Good Study Habits of the children may lead them to a long way in their education, rehabilitation and to achieve long term goals. The study revealed that VI student possessed good and satisfactory level of Study Habits. The association between Study Habits of VI students and their age, sex, grades, socio economic status and parental education were found statistically significant. Study related variables like attitude towards teachers, attitudes towards education, self confidence, concentration, coping with mental conflicts, social and home environment, home assignment, and attitude towards examination were also found significantly related to Study Habits of VI students.
Kumar and Aggarwal (2010) conducted a study on “Study Habits of Secondary Level Arts and Science school Students: A Comparative Study”. The main objective was to study the comparison in Study Habits of secondary level students belonging to Arts and Science stream. The major findings were secondary level students of Arts and Science streams differ significantly in their Study Habits and students of Arts stream showed poor Study Habits in comparison to students of Science stream.

Pravosh (2011) conducted a study on the “Study Habits in school and Achievement in Science of Secondary School Students”. Learning is the modification of behaviour through experience and training. The result showed a significant correlation between achievement in Science and study habit of secondary school students. There was significant difference in the mean scores of Study Habits of secondary school students with respect to sex and socio-economic status. There was significant difference between the mean scores of achievement in science of secondary school students with respect to sex, locality, medium of instruction, management of school, and socio-economic status. There was positive correlation between achievement in science and Study Habits of secondary school students with respect to sex, locality, medium of instruction, management of school, and socio-economic status.

Jyoti and Rekha (2011) conducted a study on “Impact of parent child relationship on scholastic achievement of adolescents related with school ”. The study aimed to study the impact of parent child relationship on scholastic achievement of adolescents. Findings of the study revealed that children of highly protective parents score less marks in all the subjects. Children of loving parents scored higher in all the four subjects than the children of parents who scored low on loving dimension. It was also found that parents who are not very demanding, their children scored higher in three subjects than the children of highly demanding parents.
Preethima (2012) conducted a study on “The Impact of Learning Styles and Study Habits of High School Students on their Scholastic Achievement in English in school”. The study intended to examine the impact of learning styles and Study Habits of high school students on their scholastic achievement in English. The study further revealed that students with high scholastic achievement have better Study Habits as compared to the students with low scholastic achievement. Significant interaction effect of learning styles and Study Habits on scholastic achievement in English among high school students has also been reported.

Surpreet and Karamjith (2012) conducted a study on “Interest and Study Habits of Class IX Students in relation to their Family Environment and school”. The main objectives were to study the Study Habits of class IX students and to study whether there is any relationship between Interest, Study Habits and Family Environment among class IX students. The main finding was there is significant relationship between Study Habits and Family Environment. It means that Study Habits of those students are good whose family environment is good and vice versa.

Rajeswari & Usha (2013) conducted a study on “School Climate and Parental Involvement In Education: A Comparative Study Of Tribal – Non Tribal Secondary Schools”. The major objective of the present study was to compare the school Climate was to compare the School Climate (Total and Dimension wise) and Parental Involvement in Education of Tribal and Non Tribal secondary schools of Palakkad District in Kerala. The findings of the study revealed that there exists significant difference in the School Climate (Total and Dimension wise) between Tribal and Non Tribal secondary schools in the Palakkad District. And, there exists significant difference in the Parental Involvement in Education between Tribal and Non Tribal secondary school pupils of Palakkad District. School climate can play a significant role in providing a healthy and positive school atmosphere. The positive effects that parental involvement has on students’ academic achievement appear to be
undeniable. Therefore, it should be a top priority for parents and schools to establish and maintain a strong partnership between schools and homes.

Ahmad and Gulati (2013) conducted a study on “Do Schools Make Difference? The impact of school climate upon school effectiveness”. Every school differs from another on many variables, though not always on verifiable criteria, and in spite of it, influences, the child more positively/negatively and brings in a change in behavior, develops personality and academic achievement and prepares him/her to lead a respectable life in future. Objectives of the study were- what if school fails to create a ‘teaching-learning culture’? will then school be considered effective, since overall development of the student in such a scenario will not be possible and can not take place in the rightful direction. The findings show that biased attitude of agencies involved in teaching and learning towards the community members becomes the reason for non-attendance and non-retention of already educationally marginalized children on the one hand, whereas, on the other it reduces the opportunity for effectiveness of schooling. It further becomes one of the major reasons of alienation of the students from the field of education and becomes an important cause of non-participation of the educationally marginalized children in allied fields. Vested interests, maintaining status quo and stereotypes with regard to the students and the community reduce the chance of making school effective since school’s effectiveness is dependent more on its ‘processes’ and measured by its ‘outcomes’ rather than on its ‘intake’.

2.02.02. Foreign Studies

Desiderato (1969) conducted a study on “Anxiety, Study Habits, and academic achievement in school”. The objective of the study was to find out the relationship between anxiety, Study Habits, and academic achievement. Results
recommended the use of specific rather than general scales of anxiety as predictors of academic performance and implicate Study Habits as a possible mediating process.

Entwistle (1974) conducted a study on “motivation and Study Habits in school” Among the investigations of Study Habits, the dimension of syllabus-boundness/syllabus-freedom helps to relate psychiatric work on study difficulties to research using self-report inventories. The result suggested that the students' explanations of their reactions to higher education demonstrate, in particular, that “fear of failure” and “hope for success” present alternative motivations towards academic success.

Zylbermann (1993) conducted a study on “The influence of Study Habits in school and its impact on myopia in Jewish teenagers”. The study found out that the statistically significant higher prevalence and degree of myopia in a group of 193 Orthodox Jewish male students who differed from the rest in their Study Habits. Orthodox schooling was characterized by sustained near vision and frequent changes in accommodation due to the swaying habit during study and the variety of print size. A possible myopic effect of this unique visual demand is postulated.

Wim, Henk and Robert (1994) conducted a study on “Cognition, Study Habits, Test Anxiety, And Academic Performance related with school activity”. Objective of the study was to find out the relationship between cognition, Study Habits, test anxiety, and academic performance. The result of the study expressed that there was significant relationship between cognition, Study Habits, test anxiety, and academic performance.

Wardle, Jarvis and et.al. (2003) conducted a study on “Socioeconomic disparities in school and cancer-risk behaviors in adolescence: baseline results from the Health and Behaviour in Teenagers Study (HABITS)”. This study explored the association between socioeconomic deprivation and five factors associated with long-
term risk of cancer, in adolescents. This study demonstrated the influence of deprivation on engaging in cancer-risk health behaviors. These patterns may set young people from more socioeconomically deprived social environments on a trajectory leading to increased cancer mortality in adult life.

Jianzhong (2005) conducted a study on “purposes for doing homework reported by middle and high school students”. The investigator examined purposes for doing homework perceived by 920 students in Grades 5-12. Through an exploratory factor analysis, 8 homework purposes were reduced to 2 factor structures: Intrinsic Reasons and Extrinsic Reasons. Both factors related positively to students’ use of homework management strategies. However, only Intrinsic Reasons was related to lower frequency of incomplete homework and to higher self-reported grade. Each factor was further subjected to a 2×2×2 (Grade ×Gender ×Homework Help) analysis of variance. Older students and students who did not receive homework help were more likely to disagree that they did homework for extrinsic reasons. The effect of homework help on Intrinsic Reasons was apparent among only the boys.

Plank, DeLuca and Estacion (2008) done a study on “High School Dropout and the Role of Career and Technical Education: A Survival Analysis of Surviving High School”. In particular, it examines how combinations of career and technical education (CTE) and core academic courses influence the likelihood of leaving school. Hazards models indicate a significant curvilinear association between the CTE-to-academic course-taking ratio and the risk to dropping out for youths who were aged 14 and younger when they entered the ninth grade (not old for grade). This finding suggests that a middle-range mix of exposure to CTE and an academic curriculum can strengthen a student’s attachment to or motivation while in school. The same association was not found between course taking and the likelihood of dropping out for youths who were aged 15 or older when they entered high school,
thus prompting further consideration of the situation of being old for grade in school settings that remain highly age graded in their organization.

**Vinitia (2011)** conducted a study on “An investigation related to Study Habits of the secondary and higher secondary school students”. Major Findings were there was a significant in Study Habits of secondary and higher secondary schools students. There was a positive relationship between study academic achievement of secondary and higher secondary school students better guidance, specially at the time of board examinations with reference to their study preparation in non–school hours.

**Carol and David (2011)** conducted a study on “Cognitive Strategies And Study Habits: An Analysis of the Measurement of Tertiary Students' Learning”. A conceptual reclassification of the strategy items on the SPQ as rehearsal, organisation or elaboration strategies indicated that the Weinstein and Mayer cognitive strategies framework was more consistent with the pattern of factor loadings, and that only elaboration items were adequately represented on the SPQ. It was suggested that the Weinstein and Mayer conceptualisation may provide a richer and more discriminating framework for analysing students' cognitive strategies on learning tasks.

### 2.03. Studies related to Active Learning

#### 2.03.01. Indian Studies

**Sangeetha and Surekha (2008)** conducted a study on “self – concept and academic achievement among students”. Self - concept in broad terms refers to a person’s perception of himself and Academic Achievements Motivation was the need or desires to achieve something. Results revealed that in comparison to rural students showed greater self concept related responses than the urban ones and urban students perform better than rural students. It was concluded that self – concept as the keystone of personality and academic achievement as knowledge attained or skills developed in school subjects usually designated by test scores or marks assigned by
the teacher of both. The different exists in the level of academic achievements among urban and rural school students and the self-concept factor contributing to difference. Hence the urban school students perform better than rural school students and urban students have poor self–concept than rural students.

Gaurav and Girijesh (2008) conducted a study on “impact of type of school on personality traits”. In this study, three kinds of school i.e. Convent school, Public school and Saraswathy Vidhya Mandirs have been undertaken. The interpretation showed that public school’s students were more extrovert than convent school and Saraswati Vidhya Mandire. It also indicated that Convent school’s students were less neurotic than Public School’s students and Saraswati Vidhya Mandir’s students.

Ahmad and Sinha (2009) have done “a study of academic achievements motivation as related to home environment of higher secondary students”. The study has been conducted with the objective to study the relation of academic achievement motivation and home environment of higher secondary students. The results suggested that academic achievement motivation was significantly related to favorable and unfavorable home environment affects academic achievement motivation of higher secondary students.

Priti (2010) has done a study on “The academic achievement of Tribal students of Ashram schools of Suret district”. The std X student studying in all the ashram schools of Suret district following Gujarat state education board syllabus constitute the population. Document of result of class X students–tools. The major findings of the study were –the mean achievement of girls in Gujarati was found to be 51.7 out of the total of 100. The nature of distribution of scores of the entire sample was peaked than the normal; i.e. leptokurtic. The fifty percent of the girls had scored 52 or more marks in Gujarati. Moreover, 10% of the girls had scored 64 or more than it. The mean achievement of boys in Gujarati was found to be 54.2 out of the total
The nature of distribution of scores of the entire sample was peaked than the normal i.e. Platy kurtic.

Panda and Laxmidhar (2010) conducted a study on “achievements and personality pattern of secondary level scheduled tribe students in relation to gender and type of institutions”. The research was conducted with an objective to study the achievement and personality pattern of Scheduled Tribes students of six tribal concentrated districts of Odissa. The study revealed that (1) the residential students in aggregate achievement (2) the non government secondary school students perform better than government school students. The non government secondary school students were found to have higher level of main academic achievement than government secondary school student. The study also reported that achievement didn’t have sufficient relationship with the personality pattern as a whole. Based on the finding the student suggested some realistic measures of education of Scheduled Tribes Students of the Country.

Sivakumar and Amalraj (2011) conducted a study on “Influence of Self – Esteem on the Academic Achievement of Higher Secondary Biology Students”. The objective of the study were (i) to find out the influence of self – esteem on the academic achievement of higher secondary biology students. (ii) to find out the significant difference between a) boys and girls b) rural and urban higher secondary biology students in their academic achievement and (iii) to find out the significant relationship, if any, between self – esteem and the academic achievement of biology students at the higher secondary level with reference to background variables. Results expressed that there is significant difference between boys and girls, rural and urban higher secondary biology students and self – esteem in their academic achievement

Sarfaraz and Rashmi (2012) have done a study on “Academic Achievement motivation as Related to home Environment”. The study has been conducted with the
objective to study the relation of academic achievement motivation and home environment of higher secondary students. The findings of study were the academic achievement motivation was average of higher secondary students. The academic achievement motivation was average of aided higher secondary boys and girls. There was significant relationship between academic achievement motivation and home environment of aided higher secondary boys and girls. This showed that home environment affects academic achievement motivation of aided higher secondary boys and girls. There was significant relationship between academic achievement motivation and home environment of private higher secondary boys and girls. This showed that home environment affects academic achievement motivation of private higher secondary boys and girls.

Raju (2012) conducted a study on “Relationship between Creativity and Academic achievement among natural sciences students”. The study aimed at the relationship between creativity and academic achievement in natural sciences among secondary school students of Prakasam District of Andhra Pradesh, India. The results were discussed according to the significant values obtained. There were significant differences between boys and girls, local body students and private school students, rural school students and urban school students in their creativity. There was significant difference between Residential and Non-residential Secondary school students in their academic achievement. There was significant and positive relationship between creativity and academic achievement in type management and type of school. There was significant and positive relationship between creativity and academic achievement.

Esther and Selvakumar (2012) conducted a study on “Integrated Acting Leaning (IAL) in Physical Science to Enhance Thinking Skills”. The objectives of the research study have two major focal point - To formulate an integrated active learning (IAL) module in physical science to enhance students’ thinking skills and
achievement in physical science. To investigate the effectiveness of integrated active learning (IAL) in physical science designed by the investigator on students’ thinking skills and achievement in physical science. The study demonstrated the potentially powerful effect of “Integrated Active Learning” to enhance students’ thinking skills. The highly collaborative, learner-centered, inquiry – oriented classroom environment of Integrated Active Learning (IAL) classroom has advantage over the traditional method of teaching as its is found to be effective in enhancing thinking skills and physical science achievement simultaneously.

Ravi and Xavier (2013) done a study on “Activity Based Learning as self – Accessing Strategy to promote Learners’ Autonomy”. Activity Based Learning (ABL) refers to learning where students physically and mentally explore subject by function of the work environment, manipulation of tools and materials associated with the world of work, or performance of a real work task. Activity-based learning method includes the desired activities in terms of knowledge, attitude and skill. The interactivity among the students is the key factor for successful learning. The interactive resources or environment are helpful to learners because these resources can be accessed at any time and as many forms as the learner chooses. In short, interactivity is the case for Activity Based Learning. The ABL method of earning provides the following attributes like; Learning can be fun, Learning must come from within (self-directed), Human psychology (attitude, determination, perseverance, etc) and plays a pivotal role in optimum learning. Logic and Math form the foundation for effective learning for all areas. Further, according to ABL method, learning involves 5 basic steps viz., Participation, Clarification, Understanding, Application and Reinforcement. It adopts a holistic approach to engage the body and the mind of students so that they find it refreshing, exciting and stimulating. Through ABL, teachers are able to draw out the enthusiasm of the students thereby creating responsible and proactive learners.
Activity Based Learning is a multi-directional learning experience in which learning takes place between teacher-to-student, student-to-teacher, and student-to-student. Active Learning involves activity-based learning experiences like input, process, and output. These activity-based experiences take many shapes like whole class involvement, teams, small groups, trios, pairs, and individuals. Activity-based experiences involve many forms like taking, writing, reading, discussing, debating, acting, role-playing, journaling, conferring, interviewing, building, creating, etc. The key feature of the ABL method is that it uses learner-friendly educational aids to foster self-learning and allows a learner to study according to his or her aptitude and skill. The study suggests that the ABL system will provide quality education to children in government schools.

2.03.02. Foreign Studies

Carr (1994) conducted a study on “The effect of middle school foreign language study on verbal achievement as measured by three subtests of the Comprehensive Tests of Basic Skills”. This study looked at the effects of foreign language study on the verbal achievement of middle school students as measured by three subtests of the Comprehensive Tests of Basic Skills. The students were compared with students who did not have language study but were enrolled in the Challenge Reading program. The study concluded that performance in reading comprehension, language mechanics, and language expression was significantly higher in favor of the experimental group (foreign language study) when such variables as academic aptitude and level of performance in the treatment were statistically controlled.

Rafferty, Shinn, and Weitzman (2004) examined “the school experiences and academic achievement”. 46 adolescents in families who experienced homelessness and 87 permanently housed adolescents whose families received public
assistance were taken for study. Measures taken after the homeless students were rehoused showed that both groups valued school highly and were similar in cognitive abilities assessed with the similarities sub test of the Wechsler Intelligence scale for children-revised (WISC-R). Formerly homeless students had more school mobility, more grade retention and worse school experiences by mother report and lower plans for post secondary education by self report. Both groups scored poorly on standardized test of academic achievement. Homeless was associated with further declines in achievement during the period of maximal residential disruption but did not have effective 5 years later.

Henry (2004) conducted a study on “Single Parenthood, Achievement, and Problem Behavior in White, Black, and Hispanic Children”. The investigator studied whether adverse effect of single parenthood not observed in 6-4 years-old NLSY (National Longitudinal Study of Youth) children might emerge web they reached 12-13 years of age. The findings suggested that the presence of positive maternal attitudes and parenting resources may significantly mitigate the likelihood of adverse child outcomes of single parenthood.

Pagan (2005) examined “the academic achievement scores of English learners in a two-way immersion (TWI) program and a Structured English Immersion program in two California elementary schools”. In addition, this study compared the English and Spanish academic performance of English learners with the achievement levels of English-dominant students in the same TWI program. The findings support work by other researchers who have reported that teaching English learners in their home language does not impede the acquisition of English. Similarly, English-dominant students in a TWI program, by the end of their first and third year of this study, were achieving at-or-above grade level in both English and Spanish.
Jennifer, Nancy et.al (2006) conducted a study on “Comparing Longitudinal Academic Achievement of Full – Day and Half – Day Kindergarten Students”. The authors compared the achievement of children who were enrolled in full-day kindergarten (FDK) to a matched sample of students who were enrolled in half-day kindergarten (HDK) on Mathematics and reading achievement in Grades 2, 3, and 4, several years after they left kindergarten. Results showed that FDK students demonstrated significantly higher achievement at the end of kindergarten than did their HDK counterparts, but that advantage disappeared quickly by the end of first grade.

Rezvan, Ahmadi and et.al. (2006) conducted a study on “The effects of metacognitive training on the academic achievement and happiness of Esfahan University conditional students”. The objective was to found out the effectiveness of training metacognition on the academic achievement and happiness of Esfahan University conditional student. The study predicted that training in metacognition should have positive effects on the academic achievement and that it would increase students’ happiness. The results suggested that metacognitive training had increased the academic achievement average of the experimental group.

Oshima and Christopher (2006) conducted a study on “Academic performance Gap between Summer Birthday and Fall-Birthday Children in Grades K-8”. The objective of the study was to find out the Academic performance Gap between Summer Birthday and Fall-Birthday Children in Grades K-8. The findings revealed that the academic performance gap was evident in kindergarten decreased rapidly in Grades 1-3 but persisted up to grade 5, until leveling off at middle school. The performance gap in the early grades that resulted from birth date was much larger than was the gap caused by gender difference.
Andria and Jane (2008) conducted a study on “Metacognitive awareness and academic achievement in college students”. The objective of the study was to further examine the relation between metacognition and broad based measures of academic achievement within a natural classroom setting. The findings regarding the MAI and academic achievement measures the primary goal of this study was exploratory in nature.

2.04. Studies related to Mind

2.04.01. Indian studies

Surender and Susumu (1996) conducted a study on “Metacognition an achievement through cooperative learning”. Objectives of the study were to found out the difference between the experimental and control groups in all possible manners. Major findings are (i) there was significant difference between the experimental and control groups scores at pre-test and post test stages. (ii) there was positive interaction between the groups for their achievement of the students. Mean of the achievement scores of control group and experimental group at pre-test stage were not significantly different. (iii) the mean learning awareness scores of students differed significantly between the experimental and control groups at pre-test and post-test stages. (iv) It was found that the effectiveness of co-operative learning approach in the improvement of metacognitive knowledge of the students was more than that of the conventional approach of teaching-learning.

Rajagopal (1998) had done a study on “The Impact of Metacognition and Problem Solving Strategies among low - achievers in History”. The objective of the study was to investigate whether metacognitive strategies have an impact on teaching and learning. The study showed that metacognitive and problem solving strategies can have a significant impact on academic achievement, metacognitive awareness and metacognitive knowledge.
Verma and Mishra (2002) conducted a study on “Cognitive and Metacognitive aspects of Learning Styles of Prospective Secondary teachers in relation to Teaching Aptitude and Self-esteem”. The objective was to ascertain the main and interaction effects of teaching aptitude and self-esteem on cognitive and meta-cognitive strategies of learning of prospective secondary teachers. The findings were the teaching aptitude and self-esteem to influence some cognitive and meta-cognitive strategies of learning of prospective secondary teachers in an independent manner. No interaction effect of the two variables was found on any cognitive and meta-cognitive strategy of learning.

Haneet and Varma (2004) conducted a study on “Elucidating Mathematical Problem Solving through Metacognition”. The objective of the study is to analyze awareness and knowledge of one’s own thought processes and cognitive structures facilitate the development of logical approach, critical thinking and precise decision making skills in the learner and contributes to the making of an efficient mathematical problem solver. The output had included beliefs about the nature of the subject, beliefs about the task in hand and awareness of one’s own strengths and weaknesses with respect to that task. Apart from knowing about one’s own knowledge, the problem solver should also know the “when” and “how” of using the stored knowledge. The depth and extent of one’s strengths and weaknesses helps the problem solver to plan his/ her approach towards the solution.

Reddy and Shantakumari (2004) conducted a study on “English Language Learning Difficulties; Metacognitive Awareness of Students”. The objectives were (i) to develop diagnostic tools to identify the Language Learning Difficulties (LLD) of second language learners (English) at Higher Secondary Level and (ii) to develop Metacognitive Awareness Questionnaire (MCAQ) and to find out the difference between LLD students and normal students in their metacognitive awareness. The study arrived at the findings that at HSC level, the students having LLD are in huge
proportions and there are close links between language learning difficulties and metacognitive strategies deficits.

**Ranga (2005)** conducted a study on “Meta cognition as a means for dialogue, self regulation and learning”. The purpose of this research work was to demonstrate the faint but discernible patterns one can observe through problem based learning student’s work which mark their respective positions in the spectrum of ability of self regulated, self directed learning. The result showed remarkable relation between metacognition, self regulation and learning.

**Philip and Babu (2008)** conducted a study on “Meta-cognitive Awareness of Teacher Trainees in Kerala”. The main objectives of the study were (i) to study the meta-cognitive awareness of teacher trainees in Kerala and (ii) to find out if there exist any difference in the meta-cognitive awareness with respect to gender, marital status and training period. It was found out that there is significant difference exists in respect of gender, marital status and training period in respect of meta-cognitive awareness.

**Begum and Mohan (2006)** conducted a study on “Effectiveness of Strategy to Develop Metacognitive Skills among the DIET Teacher Trainees”. The objectives of the study were i) to assess the awareness of the teacher trainees towards metacognition. ii) to identify the principles of metacognition. iii) to develop a model incorporating the basic principles of metacognition. iv) to implement the model evolved by the researcher to enhance metacognitive principles of the teacher trainees. The study revealed that there is an increase in the level of metacognitive knowledge after the treatment.

**Rajkumar (2010)** conducted a study on “Analysing the Role of Metacognitive skills involved in the process of problem solving in physics among higher secondary students”. The objective of the study was how metacognitive skills
that are involved in physics problem solving and how these skills affect the performance of problem solvers. The finding revealed that changing the learning environments, conducting group discussions and laboratory activities enhance the problem solving skills in physics.

**Gafoor and Ali (2012)** conducted a study on “Effect of a metacognitive strategy instruction on problem solving in Newtonian mechanics among vocational higher secondary students”. In view of intellectual and pedagogic challenges for students and teachers in understanding and teaching problem solving, this study reports findings on development of a strategy that encourage physics teachers to focus on a metacognitive approach to solving well-structured problems in Newtonian mechanics. Metacognitive Strategy Instruction was found significantly contributing to problem solving, the study recommends consideration of the strategy on other areas of physics and allied sciences.

2.04.02. Foreign studies

**John and Charles (1982)** conducted a study on “Study Habits and Eysenck's theory of extraversion-introversion”. Predictions derived from Eysenck's theory of personality were tested in two samples by relating extraversion scores to library study locations, frequency of study breaks, and self-report of factors which influence study location. The predicted main effects for study location were found, with extraverts occupying locations that provided greater external stimulation. Positive correlations were consistently found between extraversion and preferred level of noise, preferred level of socializing opportunities, and rated importance of socializing opportunities. The data were interpreted as providing direct support for Eysenck's theory of behavioral differences and mixed indirect support for his theory of neurological differences between introverts and extraverts.
Molia (1997) conducted a study of an “Effect of Cognitive Thought process, Meta-cognitive process and Counter suggestion process on Achievement in Mathematics”. The objective was to study the effectiveness of cognitive thought process programme, meta-cognitive process programme and counter suggestion process programme with respect to mathematical achievement, knowledge scores, understanding scores and mathematical skill scores of the students. The achievement of mathematical skill of CTP group was higher than that of other three groups. The achievement of learning process of MCP group was better than that of CT group.

Yeap (1998) conducted a study on “Metacognition in Mathematical Problem Solving”. The main objective of the study was to understand the role of metacognition in mathematical problem solving to generate a set of recommendations for classroom instruction. The thinking aloud method was used to generate data from a group of year 7 students. Data analysis using a previously developed taxonomy of problem solving behaviours and Flavell’s model of cognitive monitoring provide insights into metacognitive aspects of mathematical problem solving. The result suggested that Metacognition is an inevitable part in Mathematical Problem Solving

Grieder, Corinne and et.al. (2002) conducted a study on “A longitudinal intervention study – Students’ learning emotions and metacognitions while engaged in self – regulated learning”. The objective was to promote lifelong self – regulated learning by optimizing the apprentices’ learning strategies in the (meta-) cognitive, motivational and emotional domain of self-regulation. The interaction was indeed significant for the trained metacognitive strategies for the general academic group.

Mohamed and Nai (2005) conducted a study on “The use of Metacognitive Process in Learning Mathematics to investigate the process of solving mathematical problems in terms of definable metacognitive behaviours”. The research revealed the existence of six types of metacognitive behaviours namely suggest a plan, assess
difficulty, review progress, recognize error, new development and self-questioning. The existence of these six types of metacognitive behaviours has been found interrelated within the five phases of De Corte’s model. The research has shown that there is a strong relationship between the types of metacognitive.

Steven (2008) conducted a study on “Using Metacognitive Strategies and Learning Styles to Create Self-Directed Learners”. The objective was to help students become self-directed learners by determining what metacognitive strategies would be the most effective for a student’s specific learning styles. The results were then tallied to determine which strategies were preferred within the seven learning style groups.

Minikutty and Abbas (2011) conducted a study on “Metacognition Among Secondary School Students”. The objective of the study was to study the metacognition among secondary school students. The study revealed that the secondary school students have average metacognition and there exists significant difference in the extent of metacognition among secondary school students with respect to the various subsamples – gender, locale and type of school.

Maria (2012) conducted a study on “Metacognition- a tool for academic betterment. Learning plays a significant role in all walks of human life”. The objective of the study was to find out the relationship between Metacognition, academic betterment, learning for a meaningful human life. The study concluded by the finding that there is significant and meaningful relationship between metacognition, academic betterment, learning for a meaningful human life.

Prytula (2012) done a study on “A study of teacher metacognition within the context of the professional learning community (PLC)” was conducted to understand how teachers describe their metacognition, what they describe as the catalysts to their metacognition, and how metacognition influences their work. The findings include that the PLC was an environment in which teacher metacognition could be nurtured,
and that the PLC leaders’ recognition of their own metacognition impacted the type of work that they led in the PLC, thus potentially impacting the learning of others.

2.05. Studies related to reservation category

2.05.01. Indian Studies

Kamla (2009) conducted a study on “Mathematics Anxiety, Mathematics Performance and Academic Hardiness in High School Students”. This study has shown the relationship between Mathematics anxiety, Mathematics performance and Academic hardiness in high school students. The results have revealed that Mathematics anxiety has significant negative correlation with Mathematics performance but no significant correlation is detected with academic hardiness. It was also found that the gender differences in Mathematics anxiety were significant, whereas no significant differences were detected between boys and girls in Mathematics performance and academic hardiness. This study has established the fact that the performance of students in Mathematics can be perceived by Mathematics anxiety and females scored slightly higher on this variable but this relation has not observed with academic hardiness.

Ramganesh (2009) conducted a study “on an objective measurement of self–monitoring strategy on problem solving in Mathematics”. This study investigated the self monitoring strategies used by high school students while working individually on a Math problem. The study revealed the objective measurement of self- monitoring strategy on problem solving in Mathematics is a meaningful and needful endeavour.

Kuntala and Arundhati (2009) done a study on “Relation between school environment variables and Mathematics Achievement among school students in Bongaigaon District-Assam”. The purpose of the study was to examine the possible associations between the school environment and the Mathematics achievement of students. The study showed that school factors have an influence on achievement of
the students. It was seen that in addition to socio-economic factors which influence Mathematics learning of students, school factors comprising of school management, area, infrastructure, availability of textbooks, teaching methods, teacher student ratio also play a part in determining the Mathematics achievement of the students.

Sadia and Tahira (2011) conducted a study on “Influence of School and Students Factors on Mathematics Achievement”. This study examined the effects of school type, gender and Mathematics anxiety on Mathematics achievement. The results of the analysis showed that among the three independent variables, school type had the greatest influence on Mathematics achievement (46%), Mathematics anxiety comes second in order while gender showed no significant influence. Moreover, the students of Missionary and A.M.U. schools had highest Mathematics achievement, while students of Government and Government Aided schools had lowest achievement scores, moreover scores of students of Muslim and Hindu Managed schools slide in between the range of highest and lowest achievement. Further males reported more Mathematics achievement than females and students with low Mathematics anxiety had highest achievement scores. Findings also revealed a significant negative correlation (–0.48) between Mathematics achievement and Mathematics anxiety.

Rohaty (2012) conducted a study on “Preschool Children's Early Mathematics Achievement Based on Gender and Ethnicity”. Achievements in Mathematics are said to be influenced by several factors including gender and ethnicity. The purpose of this study was to determine the overall early Mathematics achievements of preschool children and whether there were significant differences in those achievements based on gender and ethnicity. The findings of the study indicated that there were no differences in early Mathematics achievement between boys and girls at the preschool stage.
Mahigir, Venkatesh and Ayat (2012) conducted a study on “Parent’s socio economic background, Mathematics anxiety and academic achievement”. The objective of the study was to determine the effect of parent’s socio economic background on Mathematics anxiety and academic achievement in high school students. The results have revealed that among the parent’s socio economic background variables, only parent’s education has a negative correlation with Mathematics anxiety and multivariate regression for this model revealed that combination of age, income and education can be a good predictor for Mathematics anxiety.

Ranjan and Gunendra (2013) conducted a study on “Math Anxiety: The Poor Problem Solving Factor in School Mathematics”. The objective of the study includes to find out the Math anxiety indicating psychologically a negative mind-set towards solving mathematical problems which impacts on students, learning practices and outcomes. The study revealed the concept of math anxiety and solving mathematical problems highlighting math anxiety as an important factor of poor performance in terms of solving mathematical problems of school students in Mathematics.

2.05.02. Foreign studies

Olsen and Brown (1992) Conducted a study on “The relation between high school study of foreign languages and ACT English and Mathematics performance”. The objective of the study was to find out that relation between high school study of foreign languages and ACT English and Mathematics performance. The result expressed that the Analysis of the American College Test (ACT) scores of 17,451 students applying for college admission between 1981 and 1985 found that high school students who studied a foreign language consistently scored higher on ACT
English and Mathematics components than did students who did not study a foreign language in high school.

Gersten, Baker and Lloyd (2000) conducted a study on “Mathematical word problem solving in third-grade classrooms”. The objective of the study was to find out the problem solving skills towards Mathematical words in third-grade classrooms. Results of Study indicated mean score improvements from pretest to posttest on word problem solving and computation fluency measures. It also revealed student improvement on the word problem solving and computation fluency measures. Overall, the study helped to learn about effective ways to enhance the problem-solving curriculum as well as facilitate teacher implementation and student learning.

Turnbull, Hart and Lapkin (2003) done a study on “Grade 6 French immersion students' performance on large-scale reading, writing, and Mathematics tests: Building explanations”. The analysis confirms the results of earlier program evaluations that any lags in immersion students' achievement in reading, writing, and math disappear by grade 6. The lag explanation holds that taking reading, writing, and math in French until the end of grade 3 creates a lag in achievement until English is introduced into the curriculum, after which immersion students catch up to regular students' performance. The selection explanation suggested that immersion test performance improves by grade 6 relative to regular English program counterparts because the composition of the grade 6 cohort was more selective than that of earlier cohorts.

Tara, William and et.al. (2004) conducted a study on “Role of Mathematics Self-Efficacy and Motivation in Mathematics Performance Across Ethnicity”. The researchers evaluated self-efficacy and motivation orientation across hispanic and caucasian students to predict variable relate to Mathematics achievement including Mathematics performs and students plans to take additional Mathematics courses.
Findings indicate that similar motivational system exist predict Mathematics achievement across ethnicity; however caucasian students do not place as much emphasis on prior mastery experience as do Hispanic students, suggesting that other facts are acting influencing their self efficacy.

**Eunsook and John (2006)** conducted a study on “Test-Taking Strategies of High and Low Mathematics Achievers”. The objective of the study was to analyse the test-taking strategies of high and low Mathematics achievers. The result showed that a large number of students did not engage in higher order mathematical thinking, but instead, focused on superficial reviewing, repeating, or checking facts and formulas without challenging themselves to understand and reason mathematically. The findings of the study support the need for instructional interventions for test-taking or study-skill enhancement, improvement of student motivation, and anxiety reduction to help students perform optimally in Mathematics tests as well as in other subject matter areas.

**Bracha and Nava (2006)** conducted a study on “Online discussion and Self–Regulated Learning: Effects of Instructional Methods on Mathematical Literacy”. The investigators studied on the effects of online discussion embedded within metacognitive guidance on mathematical literacy and self-regulated learning (SRL). Results showed that the Online learning students significantly outperformed the other students, who, in turn, significantly outperformed the Online and other students mathematical literacy of standard tasks, real-life takes, and various, results were mixed, these students outperformed the other students on part of the criteria for standard problem-solving standard tasks and real-life tasks.

**Amy and Debra (2006)** done a study on “striking the right balance students motivation and affect in elementary Mathematics”. The investigators explored the relationship between motivation and affects in upper elementary Mathematics classes
from the perspective of flow theory. Result suggested that emphasizing the balance of challenge and skill, supporting self efficiency and value for Mathematics, and fostering positive affect can enhance student motivation in the classroom.

Robert and Cynthes (2008) done a study on “Effective program in elementary Mathematics: a best evidence synthesis”. The objective of the study was to find out the effective program in elementary Mathematics: a best evidence synthesis. The study concluded that the program designed to change daily teaching practices appear to have more promise than those that deal primarily with curriculum or technology alone.

Feng, Chiu and et.al. (2011) conducted study on “Mathematics teachers education quality in yeads: globalizing the views of future teachers and teachers education”. The framework of the study included five indicators: future teacher achievements, instructor effectiveness, coherence between universities and school, courses/ content arrangements and overall effectiveness of teacher education programs. The findings indicate that it was necessary to combine theoretical knowledge with practical teaching into teacher education: another finding is that for all countries involved, future teacher were less approving of the course /content arrangement of the teacher education program then were program educators, thus perhaps lowering education motivation to improve the arrangement.

2.06. Critical Review

The investigator has presented review of seventy five studies. The studies have been categorized as studies related to Schooling - thirteen Indian Studies and nine foreign Studies; Studies related to Active Learning - ten Indian Studies and eight foreign Studies; Studies related to Mind- ten Indian Studies and nine foreign Studies; Studies related to Reservation Category - seven Indian Studies and nine Foreign
Studies. In the present study the objective and findings of the study are given importance so as to define and delimit the study.

a) Studies related to Schooling

After critical evaluation of related studies related to Schooling the investigator has made the following conclusions. Patel (1996) conducted a study on “Study Habits of pupils and its impact upon their school academic achievement”. Major Findings were the achievement scores of the pupils having high and low intelligence were significantly different, those pupils who had good Study Habits did get significantly more achievement scores than those of poor Study Habits group and sex and Study Habits interacted significantly in the production of achievement scores. Verma, Sheikh and Sangita (1997) conducted a study on “Study Habits of adolescent students as related to academic motivation and test anxiety in school ”. The major findings were adolescent students having high level of academic motivation scored more on Study Habits than adolescent students possessing average level of academic motivation and low level of academic motivation and Students belonging to high test anxiety and low test anxiety.

Nimavathi and Gnanadevan (2009) conducted a study on “Developing Study Habits through Multimedia Program in school ”. The study showed that the students learning with the help of multimedia fared better in their Study Habits than the students learning through conventional methods. Susai, Raji and et. al. (2009) conducted a study on “Are Study Habits Gender Biased in school ?” The major finding was boys and girls did not differ significantly in their Study Habits with respect to home environment, reading, note taking, concentration and preparation for examination.

Nalini and Bhatta (2009), conducted a study on “Study Habits in school and Students Achievement in Relation to Some Influencing Factors”. Findings of the
study were there was relationship between socioeconomic status and Study Habits of Xth standard students and the interaction effect of socioeconomic status and school adjustment on achievement of X standard students is significant. Vinay, Geethe and Masroor (2010) conducted a study on “Study Habits of visually impaired students in relation to their study related variables in school”. study revealed that VI student possessed good and satisfactory level of Study Habits

Kumar and Aggarwal (2010) conducted a study on “Study Habits of Secondary Level Arts and Science school Students: A Comparative Study”. The major findings were secondary level students of Arts and Science streams differ significantly in their Study Habits and students of Arts stream showed poor Study Habits in comparison to students of Science stream. Pravosh (2011) conducted a study on the “Study Habits in school and Achievement in Science of Secondary School Students”. The result showed a significant correlation between achievement in Science and study habit of secondary school students. Jyoti and Rekha (2011) conducted a study on “Impact of parent child relationship on scholastic achievement of adolescents related with school”. Findings of the study revealed that children of highly protective parents score less marks in all the subjects.

Preethima (2012) conducted a study on “The Impact of Learning Styles and Study Habits of High School Students on their Scholastic Achievement in English in school”. Significant interaction effect of learning styles and Study Habits on scholastic achievement in English among high school students has also been reported. Surpreet and Karamjith (2012) conducted a study on “Interest and Study Habits of Class IX Students in relation to their Family Environment and school”. The main finding was there is significant relationship between Study Habits and Family Environment. It means that Study Habits of those students are good whose family environment is good and vice versa.
Rajeswari & Usha (2013) conducted a study on “School Climate and Parental Involvement In Education: A Comparative Study Of Tribal – Non Tribal Secondary Schools”. The findings of the study revealed that there exists significant difference in the School Climate (Total and Dimension wise) between Tribal and Non Tribal secondary schools in the Palakkad District. Ahmad and Gulati (2013) conducted a study on “Do Schools Make Difference ? The impact of school climate upon school effectiveness”. The findings show that biased attitude of agencies involved in teaching and learning towards the community members becomes the reason for non-attendance and non-retention of already educationally marginalized children on the one hand, whereas, on the other it reduces the opportunity for effectiveness of schooling.

Desiderato (1969) conducted a study on “Anxiety, Study Habits, and academic achievement in school ”. Results recommended the use of specific rather than general scales of anxiety as predictors of academic performance and implicate Study Habits as a possible mediating process. Entwistle (1974) conducted a study on “motivation and Study Habits in school ”. The result suggested that the students' explanations of their reactions to higher education demonstrate, in particular, that “fear of failure” and “hope for success” present alternative motivations towards academic success. Zylbermann (1993) conducted a study on “The influence of Study Habits in school and its impact on myopia in Jewish teenagers”. Orthodox schooling was characterized by sustained near vision and frequent changes in accommodation due to the swaying habit during study and the variety of print size. A possible myopic effect of this unique visual demand is postulated.

Wim, Henk and Robert (1994) conducted a study on “Cognition, Study Habits, Test Anxiety, And Academic Performance related with school activity ” The result of the study expressed that there was significant relationship between cognition, Study Habits, test anxiety, and academic performance. Wardle, Jarvis and et.al.
(2003) conducted a study on “Socioeconomic disparities in school and cancer-risk behaviors in adolescence: baseline results from the Health and Behaviour in Teenagers Study (HABITS)” This study demonstrated the influence of deprivation on engaging in cancer-risk health behaviors. These patterns may set young people from more socioeconomically deprived social environments on a trajectory leading to increased cancer mortality in adult life. Jianzhong (2005) conducted a study on “purposes for doing homework reported by middle and high school students”. Older students and students who did not receive homework help were more likely to disagree that they did homework for extrinsic reasons. The effect of homework help on Intrinsic Reasons was apparent among only the boys.

Plank, DeLuca and Estacion (2008) done a study on “High School Dropout and the Role of Career and Technical Education(CTE): A Survival Analysis of Surviving High School”. This finding suggests that a middle-range mix of exposure to CTE and an academic curriculum can strengthen a student’s attachment to or motivation while in school. Vinitia (2011) conducted a study on “An investigation related to Study Habits of the secondary and higher secondary school students”. Major Findings were there was a significant in Study Habits of secondary and higher secondary schools students. Carol and David (2011) conducted a study on “Cognitive Strategies And Study Habits: An Analysis of the Measurement of Tertiary Students' Learning”. A conceptual reclassification of the strategy items on the SPQ as rehearsal, organization or elaboration strategies indicated that the Weinstein and Mayer cognitive strategies framework was more consistent with the pattern of factor loadings, and that only elaboration items were adequately represented on the SPQ.

**b) Studies related to Active Learning**

After critical evaluation of related studies related to Active Learning the investigator has made the following conclusions. Sangeetha and Surekha (2008)
conducted a study on “self – concept and academic achievement among students”. Results revealed that in comparison to rural students showed greater self concept related responses than the urban ones and urban students perform better than rural students. Gaurav and Girijesh (2008) conducted a study on “impact of type of school on personality traits”. The interpretation showed that public school’s students were more extrovert than convent school and Saraswati Vidhya Mandire. Ahamad and Sinha (2009) have done “a study of academic achievements motivation as related to home environment of higher secondary students”. The results suggested that academic achievement motivation was significantly related to favorable and unfavorable home environment affects academic achievement motivation of higher secondary students.

Priti (2010) has done a study on “The academic achievement of Tribal students of Asram schools of Suret district”. The nature of distribution of scores of the entire sample was peaked than the normal i.e. Platy kurtic. Panda and Laxmidhar (2010) conducted a study on “achievements and personality pattern of secondary level scheduled tribe students in relation to gender and type of institutions”. The study also reported that achievement didn’t have sufficient relationship with the personality pattern as a whole. Based on the finding the student suggested some realistic measures of education of Scheduled Tribes Students of the Country. Sivakumar and Amalraj (2011) conducted a study on “Influence of Self – Esteem on the Academic Achievement of Higher Secondary Biology Students”. Results expressed that there is significant difference between boys and girls, rural and urban higher secondary biology students and self – esteem in their academic achievement. Sarfaraz and Rashmi (2012) have done a study on “Academic Achievement motivation as Related to home Environment”. There was significant relationship between academic achievement motivation and home environment of private higher secondary boys and girls. This showed that home environment affects academic achievement motivation of private higher secondary boys and girls.
Raju (2012) conducted a study on “Relationship between Creativity and Academic achievement among natural sciences students”. There was significant and positive relationship between creativity and academic achievement in type management and type of school. There was significant and positive relationship between creativity and academic achievement. Esther and Selvakumar (2012) conducted a study on “Integrated Acting Leaning (IAL) in Physical Science to Enhance Thinking Skills”. The highly collaborative, learner-centered, inquiry – oriented classroom environment of Integrated Active Learning (IAL) classroom has advantage over the traditional method of teaching as its is found to be effective in enhancing thinking skills and physical science achievement simultaneously. Ravi and Xavier (2013) done a study on “Activity Based Learning as self –Accessing Strategy to promote Learners’ Autonomy”. The key feature of the ABL method is that it uses learner-friendly educational aids to foster self-learning and allows a learner to study according to his or her aptitude and skill. The study suggest that the ABL system will provide quality education to children in government schools.

Carr (1994) conducted a study on “The effect of middle school foreign language study on verbal achievement as measured by three subtests of the Comprehensive Tests of Basic Skills”. The study concluded that performance in reading comprehension, language mechanics, and language expression was significantly higher in favor of the experimental group (foreign language study) when such variables as academic aptitude and level of performance in the treatment were statistically controlled. Rafferty, Shinn and Weitzman (2004) examined “the school experiences and academic achievement”. Both groups scored poorly on standardized test of academic achievement. Homeless was associated with further declines in achievement during the period of maximal residential disruption but did not have effective 5 years later.
Henry (2004) conducted a study on “Single Parenthood, Achievement, and Problem Behavior in White, Black, and Hispanic Children”. The findings suggested that the presence of positive maternal attitudes and parenting resources may significantly mitigate the likelihood of adverse child outcomes of single parenthood.

Pagan (2005) examined “the academic achievement scores of English learners in a two-way immersion (TWI) program and a Structured English Immersion program in two California elementary schools”. The findings support work by other researchers who have reported that teaching English learners in their home language does not impede the acquisition of English. Similarly, English-dominant students in a TWI program, by the end of their first and third year of this study, were achieving at-or-above grade level in both English and Spanish.

Jennifer, Nancy et.al (2006) conducted a study on “Comparing Longitudinal Academic Achievement of Full – Day and Half – Day Kindergarten Students”. Results showed that FDK students demonstrated significantly higher achievement at the end of kindergarten than did their HDK counterparts, but that advantage disappeared quickly by the end of first grade. Rezvan, Ahmadi and et.al. (2006) conducted a study on “The effects of metacognitive training on the academic achievement and happiness of Esfahan University conditional students”. The results suggested that metacognitive training had increased the academic achievement average of the experimental group. Oshima and Christopher (2006) conducted a study on “Academic performance Gap between Summer Birthday and Fall-Birthday Children in Grades K-8”. The performance gap in the early grades that resulted from birth date was much larger than was the gap caused by gender difference. Andria and Jane (2008) conducted a study on “Metacognitive awareness and academic achievement in college students”. The findings regarding the MAI and academic achievement measures the primary goal of this study was exploratory in nature.
c) Studies related to Mind

After critical evaluation of related studies related to Mind the investigator has made the following conclusions. Surender and Susumu (1996) conducted a study on “Metacognition an achievement through cooperative learning”. It was found that the effectiveness of co-operative learning approach in the improvement of metacognitive knowledge of the students was more than that of the conventional approach of teaching-learning. Rajagopal (1998) had done a study on “The Impact of Metacognition and Problem Solving Strategies among low - achievers in History”. The study showed that metacognitive and problem solving strategies can have a significant impact on academic achievement, metacognitive awareness and metacognitive knowledge.

Verma and Mishra (2002) conducted a study on “Cognitive and Metacognitive aspects of Learning Styles of Prospective Secondary teachers in relation to Teaching Aptitude and Self-esteem”. The findings were the teaching aptitude and self-esteem to influence some cognitive and meta-cognitive strategies of learning of prospective secondary teachers in an independent manner. Haneet and Varma (2004) conducted a study on “Elucidating Mathematical Problem Solving through Metacognition”. Apart from knowing about one’s own knowledge, the problem solver should also know the “when” and “how” of using the stored knowledge. The depth and extent of one’s strengths and weaknesses helps the problem solver to plan his/ her approach towards the solution.

Reddy and Shantakumari (2004) conducted a study on “English Language Learning Difficulties; Metacognitive Awareness of Students”. The study arrived at the findings that at HSC level, the students having LLD are in huge proportions and there are close links between language learning difficulties and metacognitive strategies deficits. Ranga (2005) conducted a study on “Meta cognition as a means for
dialogue, self regulation and learning”. The result showed remarkable relation between metacognition, self regulation and learning. Philip and Babu (2008) conducted a study on “Meta-cognitive Awareness of Teacher Trainees in Kerala”. It was found out that there is significant difference exists in respect of gender, marital status and training period in respect of meta-cognitive awareness.

Begum and Mohan (2006) conducted a study on “Effectiveness of Strategy to Develop Metacognitive Skills among the DIET Teacher Trainees”. The study revealed that there is an increase in the level of metacognitive knowledge after the treatment. Rajkumar (2010) conducted a study on “Analysing the Role of Metacognitive skills involved in the process of problem solving in physics among higher secondary students”. The finding revealed that changing the learning environments, conducting group discussions and laboratory activities enhance the problem solving skills in physics. Gafoor and Ali (2012) conducted a study on “Effect of a metacognitive strategy instruction on problem solving in Newtonian mechanics among vocational higher secondary students”. Metacognitive Strategy Instruction was found significantly contributing to problem solving; the study recommends consideration of the strategy on other areas of physics and allied sciences.

John and Charles (1982) conducted a study on “Study Habits and Eysenck's theory of extraversion-introversion”. The data were interpreted as providing direct support for Eysenck's theory of behavioral differences and mixed indirect support for his theory of neurological differences between introverts and extraverts. Molia (1997) conducted a study of an “Effect of Cognitive Thought process, Meta-cognitive process and Counter suggestion process on Achievement in Mathematics”. The achievement of mathematical skill of CTP group was higher than that of other three groups. The achievement of learning process of MCP group was better than that of CT group.
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**d) Studies related to Reservation Category**

After critical evaluation of related studies related to Reservation Category the investigator has made the following conclusions. Kamla (2009) conducted a study on “Mathematics Anxiety, Mathematics Performance and Academic Hardiness in High School Students”. This study has established the fact that the performance of students in Mathematics can be perceived by Mathematics anxiety and females scored slightly higher on this variable but this relation has not observed with academic hardiness. Ramganesh (2009) conducted a study “on an objective measurement of self – monitoring strategy on problem solving in Mathematics”. The study revealed the objective measurement of self- monitoring strategy on problem solving in Mathematics is a meaningful and needful endeavour.

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Robert and Cynthes (2008) done a study on “Effective program in elementary Mathematics: a best evidence synthesis”. The study concluded that the program designed to change daily teaching practices appear to have more promise than those that deal primarily with curriculum or technology alone. Feng, Chiu and et.al. (2011) conducted study on “Mathematics teachers education quality in yeads: globalizing the views of future teachers and teachers education”. The findings indicate that it was necessary to combine theoretical knowledge with practical teaching into teacher education: another finding is that for all countries involved, future teacher were less approving of the course /content arrangement of the teacher education program then were program educators, thus perhaps lowering education motivation to improve the arrangement.

The investigator found it difficult to found out studies which are similar. Even though almost similar and path provoking few literature were collected. After a cursory view on collected relevant literature it could be understood that the present study differs from the rest of the studies in several ways. First of all, there is no study undertaken so for which had combined the variables of Deschooling Tendency, Active Learning Activities, Mind Style and Reservation Category Higher Secondary Students. Therefore the present study has its own importance in this regard.

Secondly, it could be understood that there are many studies that deal with mind of students, but there are no studies that directly deal with Mind style of reservation category higher secondary students. Hence this study stands unique.

Thirdly, with regard to the variable of Deschooling Tendency and Active Learning Activities there are no studies initiated so far; this study is the first of its kind in this regard.

Fourthly, the present study assumes greater significance in that it differs from the rest of the studies in terms of population and sample. It is also found from the
above studies that none of them directly deal with mind style related to Deschooling Tendency and Active Learning Activities.

Fifthly, the present study stands unique for its subject inter-relativity among Psychology, Philosophy, Sociology and Technology.

The critical review of literature summarizes the studies, appropriate for investigating the topic, like the library and Internet help to make a prediction of what will occur in ones experiment, and then whether that prediction is right or wrong. Review of literature as such will produce the knowledge to understand; what, why, where and how to propel the study by a meaningful and useful path.