REVIEW OF RELATED STUDIES

2.1 INTRODUCTION

An attempt has been made in this chapter to present a review of researches available in this particular field, so that steps could be taken to safe-guard against the weakness in the past investigation and take advantage of what has already been searched in the area. Thus, the review of literature helps the investigator to explore a specific area of her interest in respect of researches that have been conducted uptill now. It helps in developing a perspective to ascertain the general trends in the field, the investigator is interested. It provided insight and dissection in identifying the problem which needs investigation, in taking a sample, in choosing appropriate methodology and statistical design.

Hence, comprehensive and detailed review of related foreign and Indian studies, Abstracts, Journals, International Dissertation Abstracts and other written material have been conducted and classified into the following categories.

1. Studies on Self - Regulated Learning
2. Studies on Creativity
3. Studies on Achievement
2.2 **STUDY ON SELF – REGULATED LEARNING**

Despite the large investment of resources in planning and implementing educational activities, there has been a little research on the teaching, learning process in relation to self-regulated learning. The concept of self-regulated learning is new and emerging field, one that is greatly expanded but on which limited research has been conducted particularly in India. However, the researches done in foreign countries and ours have been reviewed in following two sections.


### 2.2.1 Survey Type Studies On Self - Regulated Learning

In a study conducted by Domino (1970), 100 students were grouped in according with their perceptions of how they learned. Some of the group were then taught in a manner consonant with their perceived Self-Regulated Learning (achievement orientation), while others were taught in manner dissonant with their orientation. The testing data revealed that the students who had been exposed to a teaching style consonant with the ways, they believed they learned, scored higher on tests, fact knowledge, attitude and efficiency of work than those who had taught in a manner dissonant with their orientation.

Buell (2005) says behaviourism is an approach to learning which focuses only on objectively observable
behaviours and discounts mental activities. The most critical factor that influences learning is the environmental condition, meaning the arrangement of stimuli and consequences within the environment. The learner is viewed as passively adapting to their environment. The instruction focuses on conditioning the learner's behaviour. Learning occurs when there is a measurable change in the frequency of observable performance. The learner adapts her or her behaviour to contingencies of events and objectives. Buell (2005) suggests learning is a gradual strengthening of the learned relationship between cue and behaviour, driven by a pattern of consequences (reinforcement).

Learning is viewed as an active process in which the learner uses sensory input and constructs meaning out of it. People learn to learn as they learn, that is, learning consists both of constructing meaning and constructing systems of meaning. Physical actions and hands-on experience may be necessary for learning, especially for children, but are not sufficient; teachers need to provide activities which engage the mind as well as the hand. Dewey (1933) called this reflective activity. Learning involves language and the language that we use influences our learning. Vygotsky (1978) argued that language and learning are inextricably intertwined. Learning is a social activity and our learning is intimately associated with our connection with other human beings, our teacher, our peers, our family, as well as
casual acquaintances. Dewey (1933) pointed out that most traditional learning is directed towards isolating the learner from social interaction, and seeing education as a one-on-one relationship between the learner and the objective material being learned. Learning is contextual, that is, we learn in relationship to what else we know, what we believe, our prejudices and our fears. We need knowledge to learn, it is not possible to absorb new knowledge without having some structure, developed from previous knowledge, to build on. The more we know, the more we learn. Learning is not instantaneous; it takes time to learn. For significant learning we need to revisit ideas, ponder them, try them out, play with them, and use them. The key component to learning is motivation (Epstein, 2002, p. 3). I will now link these general principles of constructivist learning to the key theorists.

Richardson (1997) says that psychological or Piagetian constructivists assume that students come to classrooms with ideas, beliefs, and opinions that can be altered or modified by a teacher who facilitates this alteration by devising tasks and questions that create dilemmas for students. Knowledge construction occurs as a result of working through these dilemmas. Characteristic instructional practices include ‘discovery learning’ and hands-on activities, such as using manipulatives; student tasks that challenge existing concepts and
thinking processes; and questioning techniques that probe students' beliefs and encourage examination and testing of those beliefs.

Piaget (1983) discussed the role of maturation (simply growing up) in children's increasing capacity to understand their world. She believed they could not undertake certain tasks until they are psychologically mature enough to do so. She proposed that children's thinking does not develop entirely smoothly: instead, there are certain points at which it ‘takes off’ and moves into completely new areas and capabilities. She described the transitions as taking place at about 18 months, seven years, and 11 or 12 years. In effect, before these ages, children are not capable (no matter how bright) of understanding things in certain ways. Piaget’s ideas have been used as the basis for scheduling the school curriculum.

Vygotsky (1978) suggests that social constructivism emphasizes education for social transformation and reflects a theory of human development that situates the individual within a socio cultural context. What is taught (knowledge), and how it is taught and presented are influenced by the historical and cultural environment that generates them.

Montalvo and Torres (2004) claim that self-regulated learning research has emerged since the mid-1980s within psychological literature, and become one of the essential axis of
educational practice. McManus (1995) states that the construct of self-regulated learning is still ill-defined but is viewed broadly as an amalgam of numerous cognitive, metacognitive, motivational, and social factors which effect how a learner approaches learning. Zimmerman (1989), one of the leading researchers in this field, describes self-regulated students as those who are metacognitively, motivationally, and behaviourally active participants in their own learning process. Self-regulated students personally initiate and direct their own efforts to acquire knowledge and skill rather than relying on others, such as teachers, parents, or other agents of instruction.

2.2.2 Correlation studies on Self-Regulated Learning

Nice (1976), however, revealed that Self-Regulated Learning variables did not have a non-linear relationship to achievement. She found that distance between an instructor’s style and his/her students Self-Regulated Learning was found to be related with student achievement.

Bandura (1977) identified the next key element of this learning theory: self-belief. From this new perspective, people are viewed as self-organising, proactive, self-reflecting and self-regulating rather than as reactionary shaped by environmental forces or inner impulses. Bandura renamed her theory ‘Social Cognitive Theory’ and presented a framework that emphasized the critical role cognition plays in people’s capability to construct reality, self-regulate, encode information, and perform
behaviours. Bandura’s Social Cognitive Theory, particularly her interactive framework is relevant to my study because it emphasizes the links between classroom environments and self-regulatory practices, both aspects are central to this study.

Pajares (2002) claims the social cognitive theory can be clearly contrasted to the theories of human functioning that emphasise the importance of environmental factors in human development. Social cognitive theory extends behaviourism and considers, in addition to behaviour and the environment, learners' beliefs and expectations. Eggen and Kauchak (2003) state that modeling lies at the core of social cognitive theory as in learning from models, observers go through the processes of attention (observation), retention in memory, reproduction of the observed behaviour, and motivation to produce the behaviour in the future. Pajares (2002) argues that while the social cognitive theory upholds the behaviourist notion that response consequences mediate behaviour, it contends that behaviour is largely regulated antecedently through cognitive processes.

thinking and behaviour. Pintrich’s model is also derived mainly from the social cognitive approach.

Puustinen and Pulkkinen (2001) make a valid and pertinent point when they state that a major goal of any modern education should be the promotion of self-regulatory skills, and thus the creation of opportunities for life-long learning. Therefore, it is desirable that in the future we move towards a more integrated conception of self-regulated learning in order to contribute to the development of educational aims in this field. By situating itself within the more holistic social cognitive theory of self-regulated learning, this study offers further insight into, and understanding of, how to develop self-regulated learners from a young age.

Zimmerman was a key theorist in shaping my initial thinking. Her research on self-regulated learners is based on a social constructivist perspective which also underpins the inquiry learning context for this study. Zimmerman (1989) defines three major phases of the self-regulated learning cycle: forethought, performance or volitional control, and self-reflection. The forethought phase is what a learner brings to the learning situation, that is, what they know or think they know and can do; it “refers to influential processes and beliefs that precede efforts to learn and set the stage for such learning” (Zimmerman, 1989, p. 2). The performance or volitional control
phase is basically the ability to stay on task no matter the distractions or challenges; it “involves processes that occur during learning efforts and affect concentration and performance” (Zimmerman, 1989, p. 2). The *self-reflection* phase involves the learner in self-assessing and reflecting on their progress, adapting and formulating their next learning steps; it “involves processes that occur after learning efforts and influence a learner’s reactions to that experience” (Zimmerman, 1989, p. 2).
2.3 STUDIES ON CREATIVITY

For all practical purposes, most communally used batteries of creativity test measure cognitive abilities that are not relatively distinguishable from intelligence; this facts undoubtedly accounts in part, for their positive correlation with academic achievement.

The review of literature suggests that creativity is more than a specific set of skills. It includes a classroom atmosphere, a particular set of teacher-attitude and like.

For the sake of convenience the available studies on creativity have been classified into following sub-categories.

1. Survey type studies on creativity.
2. Correlation studies on creativity.

2.3.1 Survey Type Studies on Creativity

Wallach and kogan (1963) found that high creative tended to be broad rather narrow categorizers, to be tolerant of an unconventional type hypothesizing about the world, and to be responsive to affective aspects of environments.

Raina (1968) compared quantitatively significant differences between high and low creative group of students on certain measures of cognitive abilities, personality, manifest anxiety, academic achievement and socio-economic status. It was hypothesized that high and low creative groups would differ from each other with regard to certain cognitive abilities,
personality characteristics, socio-economic status and sex. The result findings support all these hypotheses.

Jha (1975) explore and analysed certain personality dimensions and some personality profiles of highly creative persons in various fields. After factor analysis, it was found that highly Creative persons have rational optimism, high egostrenth, realistic and healthy aptitude towards life, openness to experience, assertive, self confidence and tendency for selfactulozation.

Gopal (1975) found high creative science students and engineering students more reserved, emotionally stable, assertive, sober, expedient, venturesome, suspicious, imaginative, shrewed, experimenting, self-sufficient and in relaxed than low creative science students were more insightful and had better understanding than high creative engineering students.

Singh (1977) designed a study to compare high and low creativity group of student-teachers in terms of value-orientation, personality adjustment, teachers attitude, family background, age, sex, type of residence, marital status, religion and caste. The study revealed that high creativity among students-teachers tended to go with higher economic value, better personality adjustment, better family background and rural living. Teachers attitude, sex, marital status, religion and
caste did not seem to have significant differential effects upon high and low creativity among student-teachers.

Fairchild’s (1978) problem was to determine if high creative potential could be increased “low creative” gifted fifth and sixth graders by a programme of specific instruction in creativity developing activities. It was found that although low creative divergent students did raise their creativity scores, convergent student did also. Thus, the activities presented were not responsible for increased scored.

Agarwal and Gupta (1982) found a significant relationship between rural / urbanity and how /low creative potential among student-teachers (urban) had more high creativity potentiality and low creativity in case of rural-student-teachers.

Oleksy-ojikutu (1986) examined the normal development of creativity within the contest of an urban primary school in Lagos State, Nigeria. Findings show that males had a greater mean score for fluency in the figural creativity task than did females. Males produced greater mean scores in figural originality. Intelligence has a significant positive correlation with all five creativity subscores. Neither intelligence nor creativity had a significant relationship with academic achievement. Male generated more ideas in life than did females.

Time (1989) compared spelling performance of more creativity and less creative students at three grade levels. The
outcome of the study suggests that more creative students function differently than less creative students in number of spelling generated, in response to pronounced words, ability to choose correct spellings out of alternatives generated, and in the unusual nature of words they generate first among alternatives.

Orieux (1990) in this research studied the correlates of creative ability and performance were investigated for 157 grade 11 Girl students from an urban-rural public high school. Correlational analyses were conducted to determine the relationship of the creativity measures with intellectual ability, assessed with a group intelligence test and academic achievement, obtained from school records data. The creativity measures demonstrated significant internal reliability and convergent validity for this sample. It revealed that both creative ability and performance were significantly related to intellectual ability and academic achievement at moderate to low levels.

2.3.2 Correlational Studies on Creativity-

Joshi (1974) designed a study of relationship between creativity and personality traits of gifted students. It was found that (I) Giftedness was the most effective contributor of all types of Creativeness, (II) Age and an important correlate of creativity at 15 years age level, and (III) There was positive but low correlation between intelligence and all types of creativity scores.
Lal (1974) tried to study the relationship between creative thinking and vocational anxiety. Analysis of data revealed that the teacher-trainees in high and low creative thinking groups did not differ significantly from each other in vocational anxiety, though they differ significantly in general anxiety.

Rao (1976) tried to identify some correlates of creativity in boys belonging to class X. It was concluded that boys with field-independent generally did better in their performance on creativity tests by displaying more originality, more adaptive flexibility, more ideational fluency, more associated fluency, more sensitivity to problem and more redefinition.

Cropper (1977) took a study to find out the relationship of creativity and self-concept with counselor effectiveness of counselor-in-training. It was concluded that both creativity and self-concept measures would be valuable criteria to be used in the selection process of persons applying for a counselor training programme.

Srivastava (1977) found on significant relationship between neuroticism, extraversion, fluency, flexibility, originality and total creativity. She, however, found that creativity is positively and significant correlated with urbanity, high S.E.S. and level of education of parents.

Jackson (1978) examined and determined the relationships among mental abilities, creativity and muscularity in community college Girl students. The findings revealed that the correlation
between creativity and muscularity was not significant. The correlation between mental ability and creativity was, however, significant at the \( P = 0.05 \) level.

The problem of Taylor’s (1978) study was to find the nature of the relationship between cognitive style, flexibility and creativity. The flexibility index showed important correlation to both creativity and cognitive style but could not distinguish between high and low cognitive style, and only provided a limited predictor of creativity. Cognitive styles were found to uncorrelated to age and sex difference (against the earlier findings of within that females are significantly more field dependent than male). Further no interaction effect was found between cognitive style and flexibility in relation to creativity.

Mourad (1979) studies the relationship of grade level, sex and creativity to readiness for self-directed learning among intellectually gifted students. Some significant correlations were found between self-confidence in abilities and skills for learning and both verbal flency and originality. Significant correlations were also found between ‘complexity’ adventure, independence in learning’ and verbal originality.

Allen (1985) showed the effected of personality factors and creativity on time estimation during Hemisphere appropriate task. Findings suggest that creative people do perceive time differently. Further, creative people are well adjusted socially, but not personality. Subject scoring on high measures of flency
and flexibility scored lower (less well adjusted) on measures of personal adjustment.

Toth (1987) found a relationship among student creativity, laterality, Self - Regulated Learning and achievement does exist; since the utilization of these measures, in conjunction with traditional mental ability measures resulted in incensement in girl student achievement prediction. This relationship was also found to be influenced by the grade level and sex of the respondents is this study. Thus, results of this study imply that the assessment of creativity, laterality and Self - Regulated Learning preferences, together with traditional mental measures, can provide educators with a more holistic approach to the identification of individual girl student learning patterns for the purpose of enhancing girl student academic achievement.

Jacobvitz (1988) designed to investigate the relation- ships among specific measures of ability, creativity and motivation for a vocational technical school population. Findings indicate that there was a difference on the mean scores for the measures of ability, creativity and motivation. There was significant differences among the means scores for males and females for measures of ability. There were no significant among the mean scores for males and females for measures of creativity and motivation.

Bal (1989) found a relationship among creativity, cognitive style and academic achievement amongst university
students. 150 female Indian college Girl students were administered the Enbeded Figural Test-From A and Torrance Test of High Creative Thinking (TTCT). Field-independence-dependence and academic achievement (AA) were related to TTC scores of fluency, flexibility, originality and to creative assessed by Remote Associate Test (RAT). Cognitive Style and AA interacted with RAT but not TTC creativity.

2.4 STUDIES ON ACHIEVEMENT-

Many researches have been conducted on academic achievement of students in different areas having various variables. The current research is mainly concerned with the achievement of students. The related review is mainly categorised into two sub-sections as follows:

1. Survey type studies on achievement
2. Correlational studies on achievement

2.4.1 Survey Type Studies on Achievement-

Sewell and Severson (1974) studied the relationship between achievement and a number of variables shown to be associated with learning ability, including I.Q. to determine their predictive effectiveness. Findings suggest that diagnostic teaching exceeded I.Q. in predictive effectiveness, prospects for a more precise determination of the learning potential in young children.
Douglass (1979) experimented with high school biology students and verified that student’s styles can be reported and that when their styles are appropriately matched with complementally instructional resources, achievement increases, when girl student resources are mis-matched, achievement decreases.

Taglieber (1984) assessed the level of science achievement of eighth grade Girl students and examined the relationships between science achievement scores and background variable. Result indicate that girl student performance on science Achievement from small cities outscored their peers from main cities. Girl students from day time classes out performed girl students from evening classes.

Barron (1987) explored the relationship between contrasting advanced organizers and achievement of students in a secondary biology laboratory with different sensory modality preferences. 126 tenth grade students enrolled in five intact modern biology classes participated in this study. She found that in a high school biology laboratory, the main effect of contrasting advanced organizers on achievement was significant. No differences were found between overall biology achievement and sensory modality preferences. Students of higher aptitude did achieve higher than students of lower aptitude.
Lee (1987) experimented on 237 boys and girls of eighth grade junior high school students to determine learning achievement. Research result demonstrated that prior achievement was the main determine of later achievement in school learning. Intelligence aptitude, self-concept and achievement motivation had indirect rather than direct effects on learning achievement.

Peloquin (1989) predicted academic achievement from visual-verbal and visual-perceptual processing skills among elementary school age children. Findings indicate that groups of peer readers were significantly less efficient that good readers on measures that most clearly involved sequential and part whole processing. These findings collaborated the hypothesis that visual-verbal translations are crucial for efficient reading.

2.4.2 Correlational Studies on Achievement

Srivastava (1974) studies the effect of academic and personality characteristics on academic achievement of boys reading in class X. Major findings of the study were: (I) Personality traits of reserve-outgoing and less-intelligent-more intelligent were significantly correlated with academic achievement at 0.1 level of significantly. (II) Personality traits of venturesome, expedient-conscientious and undisciplined-controlled were significantly correlated with academic achievement at 0.05 level of significance. (III) Traits of tough-minded-tender minded, phlegmatic-excitble, relaxed-tense
were negatively and significantly correlated with academic achievement. (IV) High and low academic achievers were found to differ significantly in their academic motivation.

Mathew (1976) studies some personality factors related to under achievement in science and found under achievers significantly lower than the normal achievers on variables like sense of personal worth; sense of personal freedom, withdrawing tendency and higher on anxiety and maladjusted.

Stapling (1985) found a relationship between Self-Regulated Learning and reading achievement. Thus study was designed to determine whether a relationship exists between Girl students Self-Regulated Learning and reading achievement. Findings indicates that some relationship were found to be exist between Self-Regulated Learning and reading achievement it could not be demonstrated that either positive or negative. Factors that did relate significantly include Adult Motivation, Persistent, Responsibility Structure, Learning on several ways and auditory.

Al-Hemasian (1986) made an exploratory research on 208 seventh grade male studies to show science achievement, attitudes towards science, learning motivation and divergent creative of Saudi Arabian. The results revealed the gifted students demonstrated significantly higher science achievement scores, significantly more positive attitudes towards science, significantly higher learning motivation and
significantly more divergent creativity as compared to non-gifted students.

Nelson (1986) experimented with 75 college students enrolled in undergraduate telecourse at Anchorage Community. She showed the effects of field-indicate that students with a field-independent Self-Regulated Learningscored higher grades than students with field-dependent style.

Anderson (1987) investigated the relationship of cognitive style to academic achievement and social competence in IV and Vth grade students. She found positive residual correlations, after age had been partialed out between field-dependent-field independent and achievement in reading, language and math. On sociometric variables when boys did the ranking field dependent was positively related to higher sociometric status. While girls did ranking, field independence was negatively related to higher social status.

Clark (1987) designed to determine whether students achievement, self concept and creativity were affected by a change in school attendance areas assignment. Findings indicate that achievement, self concept and creativity were not significantly affected by attendance area reassignment. It also shows that change in attendance area assignment has no effect on student’s achievement, self concept and creativity.

Mehta et al. (1988) examined a relationships of academic achievement with intelligence, personality, study habits,
adjustment and academic motivation. Subject were postgraduate students. Result indicate that psychological variables in terms of personality, intelligence, study habits, academic motivation and adjustment are not related and are independent of achievement. There was hardly any regularity of relation-ship among the independent variables.

Elias (1989) found a correlation between study of cognitive development and intelligence as related to achievement and placement in freshman biology. The sample was 500 students from urban high school. Result indicate that at 0.05 level of significance, correlations involving I.Q. cognitive development and achievement demonstrated moderate to high levels of significance. The effectiveness of achievement, intelligence and cognitive development test as indicators of successful performance in freshman biology yield conflicting result. In some instances, result range from moderate to low statistical significance.

2.5 **THE PRESENT STUDY**

The present study is a humble attempt to explore different Self - Regulated Learning of Junior high school girls students having different degrees of creative ability. As very few such studies have been attempted so far in India, the investigator was very much hopeful that it would contribute significantly to the
existing knowledge regarding the learner, mechanism of learning, strategies of teaching and the like.

Although, little formal researches on this subjects has been conducted the researchers have started to make attempts to understand that different ‘self regulated learning’ are needs for effective learning. There is no evidence that any one self regulated learning is better or worse than another; if we are not careful, we may get caught in the trap of judging a learning wrong, just because it doesn’t match our own.

The present study goes one step further, and attempts to find out the achievement in high creative and low creative Junior high school Girl students with their Self – Regulated Learning.

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