CHAPTER-II

REVIEW OF THE RELATED LITERATURE

The preceding research on factors which influence academic achievement bears out the fact that, it is not one factor which enters into the phenomenon of a student’s achievement in classroom. In fact, there are other several factors also which determine the phenomenon of academic achievement. Broadly speaking, achievement influencing factors can be grouped under three categories. These are cognitive, psychomotor and affective. Factors included under cognitive are intelligence, thinking, reasoning, problem solving, creativity and the like. Studies conducted on these factors in respect of their influence on academic achievement show little unanimity on the magnitude of their influence. However, there is a substantial agreement among research workers that these factors, though differing on the magnitude of their influence on academic achievement, do influence the phenomenon of academic achievement. Also, resident either within the cognitive domain of the learner, as for example, intelligence, thinking, reasoning, creativity, problem solving and memorization, some are such factors as may referred to be in the domain and besides the cognitive and psychomotor factors, there are affective factors which too do not play an insignificant role in determining the academic achievement status of a learner. A host of research studies have been conducted during the preceding
decades to ascertain the exact relationship between various psychomotor abilities of the learner as well as of his affective personality characteristics as self concept, level of aspiration, extroversion, introversion, anxiety level, adjustment, emotional intelligence and the like on the one hand and academic achievement on the other.

The second category of factors, namely, psychomotor has not fascinated the educational research workers for ascertaining their influence on academic achievement of learners within a classroom situation. However, notwithstanding the small number of studies on the relationship between psychomotor factors and academic achievement, the findings drawn in respect of their relationship indicate a positive but mild relationship.

The third category of factors, that is affective, has been a subject of active consideration in respect of the contribution of each one of the individual affective factors to the academic achievement phenomenon. Findings drawn on the relationship of different affective factors with academic achievement are neither uniform, nor substantive. This observation, however, does not imply that affective factors have no role to play in academic achievement phenomenon.

The chapter in hand proposes to briefly present the studies that have been undertaken during the preceding more than half a century. It will endeavor to present the tools employed by earlier research workers to measure the study variables, the methodology adopted, the techniques
employed and the procedure used for achieving the objectives by the research workers who made appreciable efforts to probe and crystallizing the phenomenon of academic achievement. The paragraphs and pages that follow this observation will apprise the reader with the existing status of academic achievement in context of (A) cognitive, (B) psychomotor and (C) affective factors.

The present researcher believes that after going through the related research literature revered in this chapter, the reader may appreciate the rationale for the choice of the study in hand.

The researcher is aware of the complexities shrouding the achievement phenomenon. She, therefore, decided to understand it in the context of institutional learning climate, intelligence and creativity. As such, the chapter in hand presents the earlier studies on achievement phenomenon under the following heads:

A. Institutional Learning Climate and Academic achievement

B. Intelligence and Academic achievement

C. Creativity and Academic achievement

**A. Institutional Learning Climate and Academic Achievement**

Before presenting studies on the influence of school or institutional climate on academic achievement, it seems worthwhile how the earlier researchers have conceptualized school/institutional climate. Most of the
researchers believe to be a composite of the following components:-

(i) A physical environment that is welcoming and conducive to learning among learners

(ii) A social environment that promotes communication and interaction between teacher on the one hand and students on the other

(iii) An affective environment that promotes a sense of belongingness and self-esteem among the learners and teachers

(iv) An academic environment that promotes learning and self-fulfillment in the learners and teachers

Several research studies have been designed with a view to examine the influence of institutional or school climate on academic achievement of the students. To name a few of the research workers who probed the achievement phenomenon in the context of institutional climate are Xavier Dumay (2009); MacNeil, Angus J., Prater, Doris L.; Busch, Steve, (2009); Xie (2008); Taylor (2008); Smith (2008); Feigenberg’s (2007); Krawczyk (2007); Prendergast (2007); Elena Silva (2007); (Cohen 2006); Chauncey (2005), Fulton and Lee (2005); Hauser-Cram, Warfield, Stadler, & Sirin (2005); Kannapel & Clements (2005); Kannapel, Clements, Taylor, and Hibpshman (2005); Berkowitz & Bier (2005); Durlak & Weissberg (2005); Catalano, et. al, (2004); Rand
Corporation (2004); Tschannen-Moran and Barr (2004); Hoy, and Sweetland (2003); Simon & Izumi, (2003); Greenberg, et.al (2003); Benninga, Berkowitz, Kuehn, & Smith (2003); Kerr (2004) and Finnan, et. al, Ghaith (2003); Volkwein (2003); Torney- Purta (2002); Youniss et al. (2002); Blum, et.al., Osterman (2002); Wentzel & Wwatkins (2002); McNeely, et. al., (2002); Catalano, et.al. (2002); Griffith, J. (2002); Najaka, et.Al., (2002); Goddard (2001); Towns, Cole-henderson, Serpell (2001); Serpell (2001); Tschannen-Moran, & Hoy (2001); Torney-Purta et al., (2001); (Cohen. 2001); Carter (2000); Wang, et.al., 1993); McEvoy & Welker (2000); Banta (1999); Parnes and Brunelle (1999); Shanta Kumari, K.M. (1998); Freiberg (1998); Hanna (1998); Wentzel, (1997); Guilford (1997); Raina (1995); Hoge, et. al (1990); Finkelstein (1989); Rutter et al., Phi Delta Kappa (1980); Rutter, Mauhan, Mortimore, Ouston, and Smith (1979) and Brookover and Lezotte (1979); Ellett & Walberg (1979); Rutter et al. (1979); McDill and Rigsby (1973), Weber (1971); Miller (1968); Eldvebel, Maxwell (1967); Hale (1965) and Feldvebel (1964). In the succeeding pages an attempt has been made to briefly throw light on some of the notable relevant studies.

Xavier Dumay, (2009) attempted to find out the influence of an educational institution’s culture homogeneity with the transformational leadership (TL) behavior of a principal and teachers’ collective decision
making activity. He found that the impact of TL on culture homogeneity is partially mediated by teacher’s collective decision making.

Besides, the study did not find any moderation effect of culture homogeneity on the relationship between cultural values and students’ achievement. It did find a positive contribution of leadership of principal and teachers to the emergence of collective cultural values.

**MacNeil, Angus J.; Prater, Doris L.; Busch, Steve (2009)** sought to find out whether exemplary, recognized and acceptable schools differ in respect of such aspects of their school climate as ten dimensions of the Organizational Health. Significant differences were found on all 10 dimensions of the Organizational Health Inventory, with Exemplary schools out-performing acceptable schools. However, no statistical significance was found between exemplary and recognized schools on some of organizational health dimensions. But the recognized schools were found to be acceptable schools on the organizational health dimensions. The findings of this study suggest that students achieve higher scores on standardized tests in schools with healthy learning environments.

**Xie (2008)** found a positive relationship between teachers shared decision making and student achievement. **Taylor (2008)** on the basis of his study observed significant difference in the academic achievement of student under different types of school climate. The findings of this study
received support from the study conducted by Smith (2008). He found a moderate positive relationship between school climate and English language achievement. However, no significant relationship was observed between institutional climate and mathematics achievement. Feigenberg’s (2007) also found a moderate positive relationship between a healthy school climate and student reading achievement. A similar finding was observed in the study conducted by Krawczyk (2007). He found a positive relationship between student academic performance and teacher perceptions of the overall school climate. However, this relationship did not hold true for all subcategories of climate, as for example, the teacher learning environment, the student learning environment, the student social and physical environments. Prendergast (2007) designed a study to ascertain a relationship between achievement expectation of students and their actual achievement. A positive but weak relationship was observed between these two variables. Elena Silva (2007) subsequently confirmed the findings drawn in his study.

Cohen (2006) observed from his study that school climate reflects subjective experiences in school. The study concluded that there is a complex set of elements that make up school climate. There is not one commonly accepted ‘list’ of the essential dimension that color and shape school climate. A few of the these elements of school climate are environmental, structural, safety, teaching and learning relationship,
sense of school community, morale, peer norms, school-home-community partnership, mutual support and ongoing communication and learning community.

Chauncey, (2005) , Fulton and Lee, (2005) while studying the implications of preparing school leaders observed that school leaders can be prepared but only when they are provided with a better school climate which promotes collaboration between learning communities and understanding teachers. Researchers like Hauser-Cram, Warfield, Stadler, and Sirin, (2005) have found that students who live in poverty, experience school differently from more affluent students.

Kannapel & Clements, (2005) during the same year found that students studying in schools with positive climate make better academic progress. Kannapel, Clements, Taylor, and Hibpshman (2005) after conducting their study concluded that school climate factors are related to academic success. Factors like high expectation from students, collaborative decision making between the teacher and the principal, caring staff and faculty, parent/teacher communication, strong faculty morale and work ethic, a strong academic and instructional focus, and coordinated staffing strategies are such of these factors of school climate which influence students’ academic achievements.

Besides the above studies, a few of the studies conducted by Durlak & Weissberg, (2005); Benninga, Berkowitz, Kuehn, &
Smith, (2003); Berkowitz & Bier (2005) and Greenberg et al., (2003) have found factors which improvement school climate, create safe, caring, responsive and participation encouraging schools.

Taylor (2008), Berkowitz and Bier, (2005), Greenberg, et.al, (2003) and Catalano, et.al. (2002) in their studies have found that effective risk prevention and health promotion efforts are correlated with safe, caring, participatory and responsive school climate. Needless to say, such a climate promotes, optimizes learning among students.

Tschannen-Moran and Barr (2004) found that positive school climate increases the student achievement. Goddard (2004) confirmed the findings drawn by these researchers. Similar was the finding of Hoy, and Sweetland (2003). He also found a positive relationship between overall school climate and student achievement. Simon & Izumi, (2003) in a replication study found that students from elementary schools with positive climates make better progress to reach to the level of middle schools.

Kerr,( 2004 ) and Finnan, et. al, Ghaith, (2003) confirmed the findings drawn by earlier researcher workers on the relationship between institutional climate and academic achievement. Volkwein (2003) concludes from his studies that student outcomes assessment is the act of assembling and analyzing both qualitative and quantitative teaching and learning outcomes evidence in order to examine their congruence with the institution’s stated purposes and educational objectives.
Torney-Purta, (2002); Youniss et al., (2002) reached the conclusion that activities like community service and debates enhance the learning environment by providing students opportunities to actively participate in the learning process and construct their own knowledge of social and government systems. Moreover, when such activities are presented in a supportive, collaborative environment, they encourage students to build upon one another’s ideas on projects. The findings drawn by these research workers are similar to the findings drawn by Wentzel & Watkins, (2002).

Blum, et al., Osterman, (2002) in a subsequent study confirmed the earlier findings that Safe, caring, participatory and responsive school climate tends to foster academic learning. One of the fundamentally important dimensions of school climate is relational and how “connected” people feel to one another in school.

Torney Purta, (2002) and Youniss et al., (2002) also made the same conclusion in their study.

McNeely, et. al., (2002) has observed that one of the fundamentally important dimensions of school climate is relational and how “connected” people feel to one another in school. There is a growing body of research that suggests that connectedness is a powerful predictor of adolescent health and academic outcomes.
Griffith, J. (2002) has also observed a relationship between school learning and social environment one hand and academic achievement on other in elementary schools.

Towns, Cole-henderson, Serpell (2001) found that caring respect of students as equals, while teaching improve students’ learning. Serpell (2001) examined four urban schools serving low-income populations with high academic success. All four schools had strong principals, high expectations for achievement, monitored student progress, maintained discipline, and strong parental involvement. Studies conducted by Tschannen-Moran, & Hoy( 2001) show a link between school climate and student performance. Torney-Purta et al., (2001), observed that a positive climate raises academic status of the students.

Cohen. 2001; Najaka, et.Al., 2002; Rand Corporation, 2004; Wang, et.al., (1993) in different independent studies found that positive school climate is a critical dimension linked to effective risk prevention and health promotion efforts as well as teaching and learning.

McEvoy & Welker, (2000) also found that positive interpersonal relationships and optimal learning opportunities in all demographic environments increase school achievement levels and reduce mal-adaptive behaviors. Providing a positive and supportive work environment and climate for faculty and staff improves faculty, staff and student performance.
Banta, (1999) observed that assessment is the systematic collection, review, and use of information about educational programs improve student learning and development.

Carter (2000), reviewed twenty one high-performing, high-poverty schools (nationwide) and found School climate to be related to student achievement and also found that, among other things, principals in these schools were free to decide whom to hire, principals held high expectations, and the pursuit of excellence was the norm.

Shanta Kumari, K.M. (1998) ascertained the influence of classroom and approaches to studying on achievement in physics of secondary school pupils. In the study it was found that, “Institutional learning climate is an important factor which enters into the academic achievement phenomenon. The better is the climate of an educational institution; the greater is the probability for learner studying in it to make high academic achievement. In the context of these true vital conclusions, it becomes very significant to improve the learning climate of an institution so that the students studying in it perform well”. Freiberg (1998) in an in-depth analysis of the environment of the school in question found that a lack of faculty and staff respect for administration, a hostile work environment, and overall low morale cause frustration and anger on the part of faculty and staff which indirectly influence academic achievement of the students.
Hoge, et. al (1990) have found that school climate and social emotional climate of schools facilitates learning among students.

Rutter, Mauhan, Mortimore, Ouston, and Smith (1979) and Brookover and Lezotte (1979) found a positive relationship between teacher’s morale, attendance and student performance. This again indicates that institutional learning climate influences academic achievement of learners.

The relationships among administrators, faculty, and staff have also been found to be related to student achievement by Ellett & Walberg, (1979), Feldvebel (1964), Hale (1965), and Miller (1968) to be a facilitating factors in learners’ academic achievement.

In the context of the studies on School/Institutional Climate and academic achievement surveyed in present chapter can be concluded that institutional learning climate is an important factor which enter into the academic achievement phenomenon. The better is the climate of an educational institution; the greater is the probability for learner studying in it to make high academic achievement. In the context of this conclusion, it becomes very significant to improve the learning climate of an institution so that the students studying in it academically perform well.
[B] Influence of Intelligence and Emotional Intelligence on Academic Achievement:

Intelligence is an important factor which influences academic achievement of the learners of an institution.

A plethora of research on the relationship between intelligence and academic achievement has been conducted in India and abroad. To name of the researchers who have done systematic studies to ascertain the relationship between intelligence and academic achievement mention may be made of Bhalla, Nauriyal (2004), Coover & Murphy (2000), Kierstead (1999), Finnegan (1998), Cangelosi and Petersen (1998), (Pasi, 1997), Richardson and Evans (1997), Ediger (1997), (Mirsky 1997), Dr. Reuven (1996), Daniel Goleman (1995), Goleman (1995), Mayer and Salovey (1995), Elias et al, (1991), Barron (1988), Sternberg (1988), Howard Gardner (1983), Torrance (1981), Barton, Dielman and Cattell (1972), Cattell and Butcher, (1968), Bhalla and Nauriyal (2004) and Kierstead (1999) in studies independently conducted by them found an emotionally intelligent person is likely to be skilled in two key areas within one’s emotional competence framework, namely, “personal competence” – how one manages the self; and ‘social competence” - how one manages relationships. While the former essentially implies self-awareness of internal states, preferences, resources, and inhibitions, self-regulation of internal states, impulses and
resources and motivation traits that facilitate accomplishing goals; the latter comprises empathy or the ability to understand other’s emotions, and other’s talents or skills needed to influence, communicate, lead, develop others, manage conflicts, promote team work, or catalyse change and social skills such as expertise in inculcating desirable responses in others. Thus, emotional intelligence is made up of a set of skills and these skills can be improved through education. Schools serve as the prime location for the promotion of emotional intelligence.

**Coover & Murphy (2000)** conducted a study that examined the relationship between self-identity and academic persistence and achievement in a counter-stereotypical domain. The study revealed that the higher is the self-concept and self-schema, the more positive the self-descriptions, the better is the academic achievement at about eighteen years of age. The study also showed that self-identity improves through social interaction and communication with others, which enhances achievement. In a conference (1999) on emotional intelligence in Chicago, IL an attempt was made to find out the most comprehensive learning forum on emotional intelligence and its impact in the workplace. Linkage Incorporated claims that research shows that well-developed EI distinguishes individual star performers and plays an important role in determining which organizations will outperform the competition, due in part to higher retention rates, better morale and heightened results.
Finnegan (1998) on the basis of his empirical study concluded that schools help students to learn the abilities underlying intelligence. Cangelosi and Petersen (1998) found that students often experience failure in school, at home, with friends, and on the job because they have poor communication skills. Pasi (1997) concluded that emotional well-being is a predictor of success in academic achievement and job success among others. Richardson and Evans (1997) explored some methods for teaching social and emotional competence within a culturally diverse society. Their purpose was to help students connect with each other, in order to assist them in developing interpersonal, intrapersonal, and emotional intelligences. Ediger (1997) observed that emotions, feelings, and values are vital for a person’s well being and achievement in life.

Reuven (1996) concluded from his study that intelligence reflects ability to deal successfully with other people and with the feelings of a person. He developed the BarOn EQ-i after 17 years of research, and this inventory is the first scientifically developed and validated measure of intelligence that reflects one's ability to deal with daily environmental challenges and helps predict one's success in life, including professional and personal pursuits.

However, the term "emotional intelligence" entered the mainstream only with Daniel Goleman in 1995. His study found that IQ contributes only about 20% to success in life, and other forces contribute
the rest. On the basis of emotional intelligence, luck, and social class are among those other factors. He also says that emotional intelligence is a new concept indeed, but the existing data imply that it can be as powerful as IQ and sometimes even more. And, at last of his study he concluded that there can be improvement in children’s crucial emotional competencies.

Goleman (1995) and Mayer and Salovey (1995) have observed that emotional intelligence is a multidimensional construct. According to his this conceptualization, emotional intelligence consists of “abilities” such as being able to motivate one and persist in the face of frustrations, to control impulses and delay gratification to regulate one’s moods and keep distress from swamping the ability to think; to empathize and to hope.

Howard Gardner (1972) introduced his theory of Multiple Intelligences which opened doors to other theories like Emotional Intelligence. Several studies were conducted for ascertaining the relationship between multiple intelligence and academic achievement. Barton, Dielman and Cattell (1972) concluded in their study that IQ together with the personality factor—which they called conscientiousness—predicted achievement in all areas. What was tested under personality was--among others--whether the student is reserved or warmhearted, emotionally unstable or emotionally stable, undemonstrative or excitable, submissive or dominant, conscientious or
not, shy or socially bold, tough-minded or tender-minded, zestful or reflective, self-assured or apprehensive, group dependent or self-sufficient, uncontrolled or controlled, relaxed or tense.

**Cattell and Butcher (1968)** tried to predict both school achievement and creativity from ability, personality, and motivation. The authors succeeded in showing the importance of personality in academic achievement.

The research studies reviewed above lead to the following conclusions:

(i) Intelligence of a learner exerts a significant influence on a student’s academic performance. There is a significant relationship between intelligence and academic achievement. But the magnitude of relationship between these variables varies from study to study.

(ii) By and large, studies conducted so far on intelligence and academic achievement indicates a correlation ranging from (.18 to .82). The median correlation, however, between intelligence and academic achievement is about 0.55.

(iii) By and large, it can be safely asserted that other factors being same, the more intelligent is an individual, the better is his academic achievement.

Since, the present research studies aimed to explore into the magnitude of influence of institutional learning climate of IX<sup>th</sup> grader’s
academic achievement, therefore, it was considered as vital to control the influence of intelligence on academic achievement. This was accomplished by comparing the academic achievement of IXth graders at three different levels of intelligence, namely, high, average, and low.

[C] Influence of Creativity on Academic Achievement


We in India, as far as creativity research is concerned, are stuck with the unproductive dust bowl empiricism which characterized much of earlier American research in this field. There is no dearth of studies which are based on empirically derived questionnaires/tests, in which the typical hypothesis stated is that one group rated higher than another on a creativity criterion (which itself may be of a doubtful value) and will be
significantly different from another group on a specific set of psychological variables. We have yet to come across an authentic, perceptive and scholarly theoretical analysis of creativity from an Indian standpoint. It must be appreciated that dust-bowl empiricism need not necessarily smother good theory. Just as the Institute of Personality Assessment and Research reaped good results with empirically derived tests, so it has also been the home of a valuable paper on creativity which is derived from theory.

The theories on creativity are of the view that creativity is as much a function of the direction of one's intelligence, as it is of the level of one's intelligence.

Carl R. Rogers considers the creative process to be formed out of the following three elements.

1. An observable product.
2. The products must be novel and
3. Non-restriction to any particular type of content.

Creativity is the main source of emergence and development of human culture. The present day scientific and technological progress has been made possible through creativity. Music, Painting, Poetry, and other forms of art that give us not only pleasure and joy, but also lend a new meaning to life, are all products of creativity. Let us imagine thousands of
years back, in some primitive habitation, there was a man, endowed with
a spark of creativity, who for the first time thought of planting a seed, or
who devised a wheel, or who decorated the walls of his rock shelter with
drawings of animals. These were the persons, who not satisfied with the
pattern of life and ways of carrying out day-to-day activities, boldly
thought of something new. They were followed by countless others
whose creative endeavors have held to the comforts, facilities, and
enriched life that we enjoy today.

Creativity is too complex in nature Different view points have been
put forward to explain the concept emphasizing different aspects of
creativity. According to Taylor (1964) creativity involves the ability to
produce original ideas and to perceive new relationships among unrelated
things and is multifaceted construct.

four distinct approaches of creativity: (a) product, (b) person, (c) press,
and (d) process. According to them, the product approach to creativity
focuses on outcomes and those things that result from creative process. It
is concerned with important characteristics that distinguish more creative
from less creative products as perceived by different people for different
purposes. Creative products are emphasized for elements of newness,
freshness, and inventiveness they have. The quality of originality is
represented in these products involving fusion of perception in new way,
finding new connections and relationships, producing new insights, and moulding of experiencing in new organizations. Creative products are novel – they are not imitations, nor are they mass produced.

Sternberg (2003) found that some cognitive correlates of creativity such as field independence, problem solving styles, cognitive complexity and wisdom are related to academic achievement. The press approach to creativity typically includes the total complex situation (press) in which creative processes are initially stimulated and sustained through completion. Press influences may be general and operate through implicit evaluation and tradition; or more specific. Gaynor & Runco (1992) found family structure and school environments to be relevant contributors in the development of creative achievement. His findings received support from Hasirci and Demirkan (2003). The process approach has been less personal and more behavioral and has been more oriented to delineate various steps, styles, and strategies within the creative process. Generally, creativity is taken as a process of seeing or creating relationships comprising process of discrimination from many alternatives and synthesizing elements in altogether new and original ways Pesut (1990) & Sternberg (2003) and Torrance in their analytic studies have found that fluency, flexibility, originality, and elaboration related to academic achievement.
Rajgopalan. S. (1998) observed a significant relationship exists between creativity and academic achievement. He found that the magnitude of relationship between creativity and academic achievement is moderate.

Ganeshan (1997) found that creativity of knowledge workers and their innovative performance has a positive but insignificant relationship. He found that institutional climate by itself is related to innovative performance. The institutional climate gives satisfaction of achievement to the creative learners.

Gulati Sushma (1995) in her study found that the difference between the mean score of pre-test and post-test score was consistently significant both in the case of flexibility and originality. Further the difference between the two means was more pronounced in the case of verbal and non-verbal measures.

Jackson & Messick (1995) found that creativity bears a moderate relationship with academic achievement. Stein, (1985) conducted a study to find out the relationship between creativity and values. Evidence accruing from his study is that culturally determined values are result of creativity.

On the basis of the studies reviewed above the following conclusions emerge:

(i) There is a significant but low relationship between creativity and academic achievement.
(ii) The magnitude of relationship between these two cognitive variables is rather low.

(iii) Relationship between institutional learning climate and academic achievement, though low, but the influence of creativity on academic achievement needs to be controlled.

Therefore, the present study has accomplished this objectives by comparing the academic achievement of IX\textsuperscript{th} graders belonging to different levels of institutional climate on three independent groups of creative students, namely, high, average and low.