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CHAPTER-II

THEORETICAL BACKGROUND

2.1 Introduction

Much more emphasis has been laid on the cognition sanctioning as children in school learning that upon effective process. Several studies have been reported in the "Third survey of Research in Education (Buch, 1986) and second survey in psychology (Pareek, 1980). The present set of studies have been classified as cognitive style, classroom environment and achievement motivation.

Students cognitive processing during teaching consists of reciprocal interactions among this cognitive processing system on the hand and curriculum and instructional cues on the other. Genetic factors school environment factors and social factors have been suggested as contributing to the origin and development of a cognitive style. Briel (19789), Sharma and Ahuja (1972), Faugua (1990), Verma and Shaikh (1993) examined the relationship between cognitive styles and scholastic achievement and sound it significant.
Research evidence show that classroom environment and achievement were closely related Puri (1977), Christian (1984), Mainov (1991) Rymond and Peffery studies classroom environment and its relationship with achievement. So, the investigator selected cognitive style and classroom environment as independent variables for the resent study.

Science plays an important role in the intellectual development of the child. A brief overview of related studies reveal that researches on achievement in physics has not yet come up to expected number as in the developed countries. The investigator therefore made an attempt to study the effect of cognitive style, classroom environment and achievement motivation on achievement in Physics (Science) of X standard pupils of Belgaum District.

2.2 Conceptual Description of Variables

Following are variables used in the study.

2.2.1 Cognitive Style

Cognitive styles refer to the preferred way an individual processes information. Unlike individual differences in abilities (for example: Gardner, Guilford, Sternberg), which describe peak performance, styles describe a person's typical mode of thinking, remembering or problem solving. Furthermore, styles are usually considered to be bipolar dimensions whereas
abilities are unipolar (ranging from zero to a maximum value). Having more of ability is usually considered beneficial while having a particular cognitive style simply denotes a tendency to behave in a certain manner. Cognitive style is a usually described as a personality dimension, which influences attitudes, values, and social interaction.

A number of cognitive styles have been identified and studied over the years. Field independence versus field dependence is probably the most well known style. It refers to a tendency to approach the environment in an analytical, as opposed to global, fashion. At a perceptual level, field independent personalities are able to distinguish figures as discrete from their backgrounds compared to field dependent individuals who experience events in an undifferentiated way. In addition, field dependent individuals have a greater social orientation relative to field independent personalities. Studies have identified a number connection between this cognitive style and learning (Messick, 1978). For example, field independent individuals are likely to learn more effectively under conditions of intrinsic motivation (for example: self-study) and are influenced less by social reinforcement.

Other cognitive styles that have been identified include:

- **Scanning** – differences in the extent and intensity of attention resulting in variations in the vividness of experience and the span of awareness.
• **Leveling versus Sharpening** – individual variations in remembering that pertain to the distinctiveness of memories and the tendency to merge similar events.

• **Reflection versus Impulsivity** – individual consistencies in the speed and adequacy with which alternative hypotheses are formed and response made.

• **Conceptual Differentiation** – differences in the tendency to categorize perceived similarities among stimuli in terms of separate concepts or dimensions.

Learning styles specifically deal with characteristic styles of learning. Kolb (1984) proposes a theory of experiential learning that involves four principal stages: concrete experiences (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE). The CE/AC and AE/RO dimensions are polar opposites as far as learning styles are concerned and Kolb postulates four types of learners (divergers, assimilators, convergers, and accommodators) depending upon their position on these two dimensions. For example, an accommodator prefers concrete experiences and active experimentation (AE, CE). Pask has described a learning style called serialist versus holist. Serialists prefer to learn in a sequential fashion, whereas holists prefer to learn in a hierarchal manner (that is: top-down).
Each child evolves a personal way of processing information and learning concepts. That is each child perceives, thinks, remembers and solves problems according to one's own unique style. This unique way of processing information in the course of learning is referred to as Cognitive style.

Cognitive style was first referred to as Perceptual style or Cognitive style stabilities. Klein (1957) first used the idea of Cognitive style as "the personal world thorough perceptions". Gardner (1953) first used the term Cognitive style.

Sigel and Brodzinsky (1977) defined the Cognitive style as an individual manner. This reflects individual's personality or preference, nor his or her ability or intelligence. Witkin et al., (1977) define "Cognitive styles are the characteristic, self consistent modes of functioning which individual show in their perceptual and intellectual activities". These Cognitive styles are manifestations in cognitive sphere of still broader dimensions of personal functioning which cut across diverse psychological areas.

The best-known Cognitive style is the Field-Dependence/Independence dimension, which was developed and refers to a level of organization, which is more general than the specific structures fundamental to perception, memory and judgment. It addresses the manner in which an individual will
approach specific tasks, solves problems. Cognitive styles are patterns of thought and behavior.

Cognitive style differs from ability in that it is typically described in terms of contracting poles rather than, as a single dimension. It is also thought to be associated with Personality effective and motivational characteristics. It is considered to be relatively stable being consistent across both time and task.

There is no universally accepted definition of Cognitive style. But most researchers have emphasized three futures; styles are intellectual characters of individual. The describe process which are relatively stabled over time and intra-individual is used extensively by Witkin and his associates (1977). The present study focuses on this dimension of Cognitive style, which come under major category of perceiving.

2.2.1.1 Characteristics of Field-Dependence and Field-Independence

Field-dependence/independence is defined by an individual's ability to consider an event or object separately from the context in which it occurs or appears. Witkin (1967) as field independent and those have categorized those who respond accurately without regarding the external visual field prone to respond regarding external field referred as field-dependent.
Highly field-independent person will have little difficulty in considering an object or event separately from its field. Children who are field-independent can decide how to act on their own. Field-dependent children experience difficulty in locating the embedded figures. They are usually more sociable (Witkin and Good, 1977). Field independent children are more analytic and structural in their thinking, likely to be more successful in dealing with situations that relate logical analysis (Moss and Belins, 1986). Witkin (1967) was able to demonstrate that people are likely to be consistent in their preferred mode of perceiving over periods of many years. The researcher agreed that the preference was partly inherited and partly the result of child rearing practices. The researcher viewed that Cognitive styles are culturally induced and develops from socialization practices; respect for social conversion and environment.

2.2.1.2 Characteristics of Reflectivity and Impulsivity

Another type of Cognitive style studied by theorists is Reflectivity/Impulsivity. It refers to the tendency of the person to pause and reflect on the quality of his answer in problem-solving situations, which involve moderate to high response uncertainty (Messer, 1976). Impulsive children tend to respond with the first answer, which "Pops into their head"; as a result they are frequently incorrect. Reflective children are more careful
and detailed in their internal analysis of problems; as a result they are more likely to be correct. Research indicates that with increasing age children become more reflective, at least through the early adolescent years. The Reflection/Impulsivity pattern has been linked to many areas of problem-solving, academic achievement and socio-emotional behavior, usually with the outcome that Reflective children perform more adaptively than Impulsive children.

Researchers have identified many characteristics of Repulsive/Impulsive children. Fear of failure leads to a slowing down of response and more careful analysis of the problem, which in turn is likely to lead to increased accuracy (Kagan and Kogan, 1970).

2.2.1.3 Categorization Styles

The third type of development aspects of Cognitive style is the Categorization style. Categorization styles refer to the types of groupings by means of which a person classifies or arranges stimuli. Several people will justify the grouping of the same objects according to different criteria. Categorization styles have been subdivided into three types.

1) A descriptive-analytic style concentrates on a single obvious detail common to all objects.
2) The relational-contextual approach seizes on a common theme or function.

3) A categorical-inferential style focuses on the class of objects.

As children develop cognitively, they tend to become more descriptive-analytical and less relational-contextual (Sigel and Brondzinsky, 1977).

2.2.1.4 Importance of Cognitive Style in Education

Education today lays emphasis on individualization of instructional process. Success of an individual learner could well be the function of the Cognitive style or ability to analyze complex stimulus configurations. In many areas of academic achievement Cognitive styles are major individual dimensions that are significantly involved. Witkin et al. (1977) did the most comprehensive analysis of educational implications of Cognitive style. It gives importance to the learning process rather than teaching techniques.

Research studies indicated that reasoning, recalling, analytical thinking, abstract thinking, reflective thinking are more or less accessible to students with different Cognitive style. As children gain cognitive maturity, especially after the age of eleven, they are better able to answer quickly with high degree of accuracy (Salkind and Nelson, 1980). Field-dependent children do best with interpersonal areas requiring social skills such as teaching social
welfare etc. Field-independent individuals are best in disciplines such as science, mathematics, engineering, technical and mechanical actions. Field-independent individuals are analytic in the approach to various situations and have abstract thinking. The skills and quality of Field-independent individuals appears to be counted more highly in the society.

2.3 Classroom Environment

Classroom environment is the climate or atmosphere of class as social groups that potentially influence what students learn. The classroom environment refers to tangible aspects of contexts of learning of teaching and learning (Husen and Postlethwaite, 1985). For the study classroom environment is considered as a combination of both physical facilities and academic activities that are rationally expected by any student. Asking students to perceive and rate the psychological characteristics of their classroom group on questionnaire items often infer classroom Environment. These items typically concern the effective and social relations among the class members completion of the learning tasks and their implicit and explicit system of rules and organization of the class.

Hawes (1982) defined classroom environment as “the totality of external surroundings including conditions, circumstances and events in education often considered for extent to which such surrounding facilitate
learning”. It may be noted that the term ‘Classroom Environment’ and ‘Classroom Climate’ are used synonymously, as the idea contained in both are almost the same. Dave (1963) defined educational environment as “The conditions, processes and psychological stimuli, which effect the educational achievement of the child”.

The approach described in present study defines classroom environment in terms of shared perception of student and some time the teacher. Classroom environment can be defined as the environment prevailing in a classroom when the process of teaching learning takes place. This includes the emotional, physical and intellectual climate set up by teacher and students to create a wholesome learning situation. Classroom environment depends not only on the physical factors of the classroom but on social, emotional, educational and economic factors also, and how students and teachers perceive the classroom situation for bringing about maximum interpersonal relationships, thereby creating atmosphere for effective learning.

2.3.1 Classroom Environment and Educational Outcomes

Psychological perceptions of classroom environments have important influence on student achievement performance and self-concept as well as other valuable educational outcomes. Initially study on classroom environment attempts to measure classroom behavior in terms of description of classrooms
on the basis of observations and then by assessing different values to different behaviors. This trend was later broadened and relation between classroom measure and measures of people outcome were examined.

Classroom environment measures were practical, inexpensive and valued, and they predict learning outcomes more accurately. Data on constructive educational climate may be conveniently gathered and provided as feedback to school staff for planning and execution of data. The work of Anderson et al. (1946) is a classical work from which most observable was research done. Since then a number of instruments assessing classroom environment and classroom climate were developed by various authors in Europe, Australia and America (Fraser, 1986).

Research on socio-psychological environment of classroom emphasizes perceptions and judgment of students. As primary consumers of educational affairs students are at good vantage point for making such judgments. Another way to find out the suitability of learning environment is to ask the trained observers to report their perceptions. Fiedler's (1977) study of Classroom Transaction showed that students perception of their own influences on class but not observer estimates of the same, predict academic gains.
2.3.2 Why is Classroom Environment Important?

The classroom environment is more than just the physical space; it is the entire setting for learning. It encompasses the relationships between and among students and teachers, as well as the expectations and norms for learning and behavior. Positive classroom environments are associated with a range of important outcomes for students.

**Achievement**: It is difficult to establish a direct causal link between positive classroom environments and academic achievement because of the many variables involved. However, there is a proven relationship between these two aspects of education, and science is the leading field for research on classroom environment. Numerous studies have clearly demonstrated that the learning environment has a significant impact on student achievement, as well as emotional and social outcomes at all grade levels (Fraser, 1994; McRobbie & Fraser, 1993). In fact, positive classroom environments have been shown to improve the achievement of low-performing students (Pierce, 1994). Such findings suggest that deficient skills are not the sole reason for students' low performance on tests.

Another interesting outcome of the research is that student achievement is higher when the actual classroom environment is consistent with students' preferred classroom environment (Fraser, Giddings, & McRobbie, 69).
Of course, this does not mean that teachers should attempt the impossible task of tailoring the classroom to all students' individual preferences. But perhaps contrary to conventional wisdom, teachers do not have to choose between high student achievement and creating a congenial classroom (Fraser, 1994).

**Motivation:** A widely accepted theory about the relationship between classroom environment and academic achievement is that the effect is mediated through student motivation. Research shows that motivation is highly related to both academic achievement and the learning environment (Cheng, 1994; Uguroglu & Walberg, 1986).

Motivation is related to later mathematics achievement and attitude (Reynolds & Walberg, 1992). Currently, there is a trend of decreasing achievement in mathematics that is linked to a decline in student interest and motivation in mathematics (Schiefele & Csikszentmihalyi, 1995). There is a general decline in students' achievement motivation in middle school, with the greatest declines in intrinsic motivation occurring in science (Gottfried, 1985). The characteristics of the learning environment may account for this decline, including the deterioration of relationships between teachers and students and a decrease in students' sense of choice and control (Eccles et al., 1993).
Cognitive Research: New understandings about the effect of emotions on brain processes have important implications for the learning environment. Cognitive scientists have found that positive emotions and relationships enhance learning and memory, while negative emotions have the opposite effect. Ignoring the social and emotional aspects of the classroom lowers students' attention levels and hinders their ability to make meaning of what they are learning (Jensen, 1998).

Student Perceptions: Students' beliefs about the learning environment determine whether or not the classroom climate has a positive effect. Yet students' perceptions and reactions to the learning environment may not match the teacher's intentions. Changing the classroom environment to improve students' perceptions improves achievement as well as outcomes such as interest and motivation (Waxman & Huang, 1996). For example, students' positive perceptions of the classroom environment contribute to developing a favorable attitude toward mathematics (Reynolds & Walberg, 1992).

2.3.3 Changing the Classroom Environment

"Constructivist teachers ask rather than tell, they model rather than explain, and they work as hard as possible to get out of the limelight so that their students may shine."

(Marlowe, 1998)
It is clear that the classroom environment plays an important role in learning. Research about the characteristics of effective learning environments suggests that changes need to take place in science and mathematics classrooms. Traditional ideas of teacher and student roles and tightly controlled classroom management, as well as insufficient attention to emotions and relationships, do not facilitate meaningful learning. There are three primary reasons that need change to be made: to make the classroom environment more congenial for students, to support how students really learn, and to foster standards-based teaching and learning.

Creating a Supportive and Inspiring Classroom: Research on classroom environment has identified a number of qualities associated with positive learning outcomes. The following are the key areas for improving the learning environment in mathematics and science classrooms:

- Supportive relationships among teachers and students
- Student participation in creating classroom norms, making decisions, and setting goals
- Clear expectations and responsibilities
- Opportunities for collaboration
- Adequate time for completing tasks and for discussions
• Opportunities to work on open-ended tasks

• Interesting and meaningful activities

(McLeod, 1992; McRobbie & Fraser, 1993; Henningsen & Stein, 1997; Huffman, Lawrenz, & Minger, 1997)

In mathematics and science, many of the classroom factors listed before also influence students' positive attitudes. For example, students with favourable attitudes toward science feel that they are involved in class and perceive a great deal of both academic and personal support from the teacher. These students also understand the classroom expectations and rules and report friendly and strong relationships with their classmates (Fouts & Myers, 1992).

Helping Students Construct Their Own Knowledge: Beliefs and theories about how children learn are also changing ideas about what schools and classrooms should be like. Many educators believe that people do not learn by having information transmitted to them, but by creating their own knowledge. While some people are able to do this by listening to a lecture or reading a textbook, many others must have direct experiences and opportunities to talk about their ideas in order to understand what they learn. A constructivist approach is based on the premise that learning is most effective when "the learner is actively engaged in creating his or her own knowledge and
understanding by connecting what is being learned with prior knowledge and experiences" (McCombs and Whisler, 1997).

Constructing knowledge and understanding is a social, interactive process (Driver et. al. 1994). Students learn from each other by sharing their ideas and points of view, asking questions, and building on their shared methods and ideas. The processes of communicating about their thinking and of working to create shared ways of thinking are also essential for learning (Bruner, 1996).

The learning environment is a key component in guiding students toward an interactive and constructivist approach to learning. Some features that help to create such an environment include small group discussions, student-generated research topics and investigations, active involvement, and evaluations that emphasize reasoning, evidence, and personal interpretations rather than only correct results (Roth and Roychoudhury, 1994).

**Meeting High Standards:** Both the National Science Education Standards (National Research Council [NRC], 1996) and the Professional Standards for Teaching Mathematics (National Council of Teachers of Mathematics [NCTM], 1991) outline the classroom environment that is necessary to help students learn and understand challenging and important mathematics and science. Both documents emphasize students' active participation in the classroom,
opportunities for cooperative learning, and creating and maintaining a safe environment.

The influence of the classroom environment on students' motivation and enthusiasm is especially important as students are asked to develop deep understanding of challenging mathematics and science topics. One of the goals of the mathematics and science standards is to encourage students to have favourable attitudes toward mathematics and science, in part because of the effects on students' learning. Positive emotions and intrinsic motivation are essential for success in problem solving, creativity, and conceptual understanding (Schiefele and Csikszentmihalyi, 1995).

2.3.4 School and Classroom Environment

Learning takes place within a web of social relationships as teachers and pupils interact both formally and informally. Schools are institutional spaces for communities of learners, including both students and teachers. Play and scuffle with one's friends on the school grounds, free time to sit on the benches and chat with one's friends during breaks, gathering together for morning assembly and other festive and significant occasions in the school, studies carried out in the classroom, anxious turning of pages before a class test, and trips made with one's classmates and teachers to places outside the school, all these are activities bring the community together, giving it the
character of a learning community. Behind the scenes, but still significant in giving the school its character are the teachers and the Head master, planning and carrying out daily routines, examinations and special events that mark the school calendar. How can we organize the environment in the school and classroom so that such interactions support and enhance both teaching and learning? How can the space of the school be nurtured as a context where children feel safe, happy and wanted, and which teachers find meaningful and professionally satisfying? The physical and psychological dimensions of the environment are important and are inter-related.

The Physical Environment: Children are constantly interacting with the physical environment of their schools during structured or unstructured time, consciously or unconsciously. Yet not enough attention is paid to the importance of physical environment for learning. Often classrooms are overcrowded, with no alternative spaces to learn, nor are they attractive, inviting or sensitive towards children's needs. Inappropriate school design may drastically affect the teacher's productive output and classroom management. In fact, the role of this all encompassing, physical environment has been restricted merely to shelter the educational activity. When children are asked about the kind of spaces they like, very often they want to be in a place that is colourful, friendly, peaceful and playful with lot of open space with small nooks and corners, animals, plants, flowers, trees, and toys. In
order to attract and retain the children, the school environments must have these in and around them.

Classrooms can be brightened up by first ensuring adequate natural light inside and then made lively by placing children's work on display on the walls of the classroom and in different parts of the school. Drawings, art and craftwork put up on the walls and shelves give powerful message to children and their parents that their work is appreciated. This must be put at locations and heights that are physically and visually comfortably accessible to the children of various age ranges in the school. Schools continue to run in dilapidated and dingy buildings, presenting a dull, drab and un-stimulating physical settings. This can be changed with simple innovations, with combined efforts of school teachers, administrators and architects.

Buildings are the most expensive physical assets of the school. Maximum educational value should be derived from them. Creative and practical solutions can be used to maximise this educational value while repairing or upgrading existing schools or making new buildings. The enhancement of physical environment through this can bring about not just a cosmetic change but an inherent transformation in the way physical space connects with the pedagogy and the child. In many parts of the country, the school and classrooms have large permanent displays painted on the walls.
Such visuals are over-stimulating with time, they become monotonous, and cease to enhance the quality of the space. Instead smaller sized, judiciously chosen murals may be a better way of adding colour to the school. Most of the wall display area should be utilized for children's own work, or charts made by the teacher, and these should be replaced about a month. Preparing such wall displays and participating in putting them up can be also valuable learning activities for children.

Many schools lack playgrounds for outdoor learning activities. This compromises the quality of learning provided through the curriculum. Ensuring that minimum requirements of infrastructure and materials are available, and supporting flexible planning that will help achieve curricular aims are important features that Heads of schools, cluster and block functionaries should focus on in their support to teachers. This applies to almost all aspects of school life. Many new pedagogies that have been promoted through efforts such as the one suggested by DPEP that the physical layout of the classroom could be altered so that children can sit together in small groups, or gather in a large circle for story telling, or sit on their own to carry out some individual reading or writing tasks, or assemble in a group near the radio or TV for a broadcast. For this, the arrangement of desks and chairs, benches and daris could be altered. Many schools have begun to acquire simple furniture that is suitable for such flexible organization. Single small chowkis, or desks and
chairs for individual or pairs of children and daris are well suited for such classrooms, and could be adapted or altered to suit the needs of children with disability. But still many schools invest in heavy metal benches and long desks which can only be placed in rows, and which reinforce the teacher and blackboard-centered system of learning. Worse still, many of these do not have adequate place for children to keep their books and belongings, nor are they wide enough or with back supports suitable for the physical comfort of the child. Such furniture should be banned from school spaces.

The maximum use can be made available in school and classroom spaces as pedagogic resources. In some areas, the walls of the primary school classrooms till about 4 feet is to be painted black so that they serve as a free slate, drawing board for children. In some schools geometric designs can be used for activities to be painted on the floor. A corner of the room may be used to organize learning materials, to keep some appropriate storybooks, puzzle or riddle cards and other self-access learning materials. When some children have finished their assigned lessons early, they can feel free to come and pick up something from this corner to occupy themselves.

Children can be encouraged to participate in activities to make the school and classroom attractive for study, work and play. Most government schools have the healthy practice of giving children the charge of cleaning,
thereby encouraging the inclusion of work into the routine of the school. But it is also distressing to note that there are schools where it is the girls or the children coming from lower castes who are expected to do this work. In elite schools children do not take on any such responsibilities, and cleaning activities are often meted out as 'punishments' for misdemeanours. Such practices stem from and reinforce cultural norms of the division of labour on gender lines, and the association of distasteful jobs with traditional hereditary occupations of lower caste groups. As schools are public spaces that must be informed by values of equality as well as respect for labour/work of all kinds, it is important that teachers consciously avoid distributing tasks on the basis of cultural notions. On the other hand keeping the classroom clean and putting things in place are important curricular experiences through which children learn to take individual and collective responsibility and to keep their classrooms and schools as attractive as possible. The understanding of being part of a larger collective, and the abilities needed to work within a collective can be internalised in children in a variety of ways as they interact in groups within the classroom and school.

**Nurturing An Enabling Environment:** As public spaces, schools must be marked by the values of equality, social justice and respect for diversity, as well as of the dignity and rights of children, these values must be consciously
made part of the perspective of the school and from the foundation of school practice. An enabling learning environment is one where children feel secure.

2.4 Achievement Motivation

McClelland’s (1959) basic thesis is that in underdeveloped countries and in lower class populations in the United States, increased opportunities for advancement will not in itself motivate individuals to achieve more. There must also be a programme of attitude or personality change that develop a high motivation to take advantage of the new opportunities open to them. The researcher has also been convinced that they express; the participant learns to engage in behavior and thinking that are characteristic of high achievement-oriented persons. By learning to think in achievement motivation terms participant is equipped to evaluate the future behavior in regard to achievement motivation. The third area is the use of cognitive supports for engaging in achievement-oriented behavior.

The new cognitive structure must be integrated into old cognitive structures, such as

(1) What kind of person he thinks he is?
(2) What is reasonable, logical and scientific to him? and
(3) What is important and valuable in his life?
In addition, the assumptions of the culture are discussed in order to integrate one’s need for achievement with one’s culture. The fourth area is the use of group supports in order to provide emotional as well as rational support for the changes involved in the training programme. The instructors who maintain throughout an accepting, non-manipulative attitude give emotional support. The message they attempt to convey by word, thought and deed is: “who ever you are, we accept you as worthy of respect. Whatever you decide you want to be, we will respect your choice – including the possibility that you may decide the achievement motive is not for you”. In addition, the experiences in group living and discussions on small groups facilitate building a new reference group that supports achievement – motivated behavior.

McClelland (1956) conducted a training programme in India. The goal of this training programme was to push a whole community in an economic “take off” by training a significant number of its business leaders in achievement motivation. 52 men comprised predominantly of small businessmen, from one city were training in a ten-day residential course in groups of twelve to fifteen each. The researcher followed the above-mentioned procedure. The results showed that the programme produced an unusual influence on the entrepreneurial activities of the participants; the activities of the experimental group after participation in the programme were significantly higher than their activities before participation or the activities of a central group.
The above theories helped the investigator in understanding the concept of achievement motivation, the method of increasing the level of n-achievement in individuals.

Finally, the method of analysis of motive for achievement is based on the premise – if an individual writes achievement related stories under neutral conditions, his level of achievement motive is high; the opposite is true of an individual whose stories contain little on no achievement relates theme – which is an extended logic of the results got by McClelland and others in an investigation done with a view to clarify theoretical view points and establish a workable system of analysis of human motives.

For the purpose of this investigation, "A motive is defined as a relatively stable disposition to strive for rather general kinds of goal objects. The motive to achieve is a disposition to strive for success in situations where as individual's performance is evaluated". This motive is referred to as n-Achievement in the present study.

2.4.1 Need Achievement and Performance

Academicians are generally interested in asking questions like: What is the use of achievement motivation? Has it got any relationship with performance? Does it affect non-academic performance? Does the
development of n. Achievement lead to higher performance.? The present investigator is trying to find out a replay to the above mentioned questions.

Since 1968 quite a number of investigations have been carried out to find out the relationship between motivation and achievement in school. the prediction of academic achievement both at school and university level has been the primary concern of many investigators.

The present investigation is about the relationship between achievement motivation and performance. Here one may raise the questions like: What do we mean by performance? Is it academic performance or performance in different fields also? Here one should not restrict oneself to only academic performance but also to the accomplishments in other areas.

2.4.2 Motivation in Classroom

Loud cries of change are heard everywhere in this world today students and teachers alike have changed the climate of education by asserting the right and demanding the freedom to set their own goals and to have control over a significant portion of their own lives. But these teachers and students do not cry for the same thing. Teachers believe that students mis-use their freedom, that the majority of students are not mature enough or sufficiently motivated to manage their own education. Teachers are afraid to
yield lest they lose control over their classroom. Therefore, teachers need new ways and methods to work with students towards common educational goals. They need more effective methods of motivating the majority of students to set high standards and to attain those standards. Therefore, our problem is how to increase students' need to achieve. The need to achieve involves a special way of planning to attain excellence, a set of strong feelings about doing well. These elements of n-achievement have been identified through psychological research and studied by behavioural scientists for over 20 years. Achievement motivation now can be taught directly by students. Applying these new methods can make an important difference in the level of the student's achievement motivation, though no approach can guarantee that all the students will become highly achievement oriented. But there are many other important human needs like the enjoyment of friendship, influence, to nurture, to satisfy curiosity, to obtain a sense of security etc. It is impossible to increase these motives using the same methods of achievement motivation training. These methods belong to the wider and emerging field of psychological education, which consists of ways for promoting psychological growth directly in educational settings.

There are numerous psychological education courses designed to increases awareness and excitement, creative thinking, interpersonal sensitivity, joy, self-reliance, self-esteem, self-understanding, self-
actualization, moral development, identity, non-verbal communications, body awareness, value clarity, meditative process and other aspects of ideal adult functioning. Psychological education offers a new more direct way of helping students become more mature.

To increase students' motivation in the classroom, it is more important to change the way they learn than what they learn. The way students think, act and feel in learning is determined by the rules of the implicit learning game and the teacher's leadership. The role of leadership and the rules governing the learning can be readily modified, although generally these methods of motivating students are not consciously used. Some teachers without realizing is work against their own declared purposes by having students learn in ways that are inconsistent with the content of their courses. In achievement motivation training, the rules and leadership style must be consistent with the course, and there must be opportunities after the course for the students to use their increased achievement motivation.

It is disheartening to admit the fact that though most teachers say they believe and are interested in achievement, yet in their actions they encourage submission. The classroom factors which encourage achievement motivation, compliance, curiosity or any other motive often are subtle and not adaptable to neat formulas for changing the learning environment.
During schooling often times achievement motivation and the student's belief in his ability to control his own fate are discouraged rather than nurtured. With the increasing demands for higher education to qualify for better and well paid jobs, the greatest rewards go to those who demonstrate academic excellence. Students with high achievement motivation do not always excel academically and sometimes don't even like schools. Their feelings may be attributed to several structural aspects of schooling. Most school curricula inhibit the students' individuality and risk-taking behaviour as far as their goals are concerned. Schools do not provide the necessary environment to project their initiative, independence and self-reliance, and even if they do succeed, the teachers interpret it as rebellion and call them anti-social elements. They are often categorized as slow-learners and potential dropouts. It is no wonder then, that they develop negative self-images and dis-taste for school their achievement motivation may fade out or remain latent within schools.

It is important, therefore, that the process as well as the content of formal education should be designed to prepare students to live mature, effective, adult lives. What they learn in school should be useful for them in adulthood. Whatever motives are taught in school should be consistent with the cultural values and demands of the society.
Often loyalty, obedience and slavish adherence to authority, are the valued tactics of the brightest students who believe that the teachers in return will give good grades and recommendations.

Devastating conflicts and results can occur in classrooms when achievement-oriented students are led by power-oriented teachers, or when teachers desire to increase the achievement motivation of students who feel threatened to set their own goals and merely want to follow their teacher's instructions. Students' motivation can be shaped by the learning rules of the classrooms.

2.4.3 Factors Contributing to Achievement Motivation

Achievement motivation is a social motive, the development of which is influenced by a number of variables in home, school and society. Family is the most important socio-cultural unit that affects achievement motivation of the child. Its roots are traced to the early childhood experiences and the child rearing practices. The child's achievement expectations arising from the mother's demands are the source of his achievement motivation. Parental expectations for achievement and guidance to the child develop need for high achievement in life. If parents do not express confidence in their children's ability to succeed, it is difficult for children to develop much confidence in themselves.
The type of parental attitudes, which facilitates development of achievement motivation, has been theorized from the early studies of McClelland et al. (1953), Winter bottom (1958), Rosen and D'Andrade (1959), Crandall et al. (1960) and Atkinson (1964).

Early mastery training promotes high n-ach provided it does not reflect generalized restrictiveness, authoritarianism or rejection by the parents. The stress on independence training at an age neither too early for the child's abilities nor too late for it to internalize those standards as own is optimal for producing high n-achievement. Setting reasonably high standards of excellence for the child to attain, imposed at a time when it can attain them, a willingness to let it attain them without interference, reward for its efforts, encouragement of intellectual pursuits and real emotional pleasure in the achievements short of overprotection or overindulgence are the parental behaviors that facilitate the development of high n-achievement. A homely atmosphere devoid of too much restriction but enriched with warmth resulting from positive mother child interaction, lesser dominance of the father and provision of opportunities for the child to participate in family's decision making process are other factors congenial for the development of high n-achievement.
Later studies indicated that parents of high achievement motivation children were inclined to express high expectations and to praise successful move toward solving problems (Herman et al., 1972); the parents were perceived by the children as being more acceptant and less hostile (Nuttal and Nuttal, 1976) and as more demanding and caring (Touliatos and Lindholm, 1977). Ojha (1984) found that mother’s love goes with high n-achievement level in boys whereas mother’s rejection and protection are associated with low-achievement level. The n-achievement remains uninfluenced by mother’s restriction, permissiveness and neglect.

Adequate n-achievement motivates an individual to strive for success in various spheres of life. The level at which the goal is set is determined by the expectations of its achievement. Accomplishing a goal leads to satisfaction and pride in accomplishment. Achievement oriented activities are characterized by the fact that the individual is responsible for the outcome (success or failure) and that an individual anticipates some degree of uncertainty or risk.

Certain psychological factors also influence the need for achievement, namely anxiety, self-esteem, level of aspiration etc. Even though research literature shows anxiety as a debilitating force of motivation; the role of anxiety as motivation facilitating force has its roots in Freudian psychoanalytic theory.
Recently an Attributional Theory of Achievement Motivation and Emotion has been proposed by Weiner (1985) in which casual ascriptions play a key role with achievement strivings as the theoretical focus. In achievement-related contexts there are a few dominant causal perceptions. The perceived causes of success and failure share three common properties: locus, stability and controllability. According to the Attributional theory all three dimensions of causality affect a variety of common emotional experiences such as anger, gratitude, guilt, hopelessness, pity, pride and shame. The perceived stability of causes influences changes in expectancy of success. Expectancy and affect in turn guide motivated behavior.

2.4.4 Factors Affecting the Achievement Motivation

There is a statewide interest in increasing the number of students attending higher education institutions. According to the 1999 Maine Census data, 85.2 % (14,506) of Maine seniors graduated from high school. Also, 65.5% (7,601) of seniors indicated that they intended to pursue formal education. The percentage of seniors in public schools planning to enroll in post-secondary education ranged from 51.7% of seniors in Lincoln County to 69.3% of seniors in Piscataquis County. The percentage of students in public schools who intend to pursue formal education was lower than that of adolescents enrolled in private schools in Maine, as 72.6% of seniors in
private schools intended to enroll in a post-secondary institution after graduation. Furthermore, while 65.5% of Maine seniors intended to pursue post-secondary education, only 52.4% actually enrolled in a college or university. The state of Maine has a keen interest in increasing the number of students in public schools pursuing education after high school. Over the past several years, the Maine State Legislature has reviewed bills addressing the need to increase access to higher education. Another key factor in increasing post-secondary attendance is that students must be motivated to achieve in high school, and motivated to actually enroll in higher education. Therefore, this study examines factors related to achievement motivation.

The decision of students to continue their education upon high school graduation is affected by multiple factors. There has been extensive research on the influences on students' achievement motivation. Educational and psychological research has identified multiple factors that play a role in predicting adolescent achievement motivation. A review of the literature indicated that, examined individually, family background, individual, and school experience factors are related to adolescents' achievement motivation (Eccles & Wigfield, 1985; Eccles & Harold, 1993; Hanson, 1994; Hossler & Stage, 1992). Among these are parental level of education, parental educational expectations and encouragement, school climate, and teachers' educational expectations and support.
School and Achievement: Few studies have investigated the significance of the school environment on adolescents' achievement motivation (Quaglia & Perry, 1996; Wilson & Wilson, 1992). The school environment may hinder or support children’s development and achievement motivation (Esposito, 1999; Goodenow, 1993; Mouton & Hawkins, 1996). Factors within the school environment that may influence adolescents' motivation to achieve include sense of safety, belonging, and support in the school and classroom. Goodenow (1993) established that a sense of belonging and support was strongly associated with motivation and academic achievement. As Mouton and Hawkins (1996) indicated, lack of attachment may lead to a sense of isolation in school and could eventually result in school failure (1996). Wilson and Wilson indicated that adolescents' perceived teachers’ aspirations had a significant effect on adolescents’ aspirations (1992). Furthermore, Esposito (1999) established that the most important factor associated with children’s school adjustment is the teacher/student relationship, and that security of the school, and the parent and school relationship, contribute to the child’s academic achievement. However, Marjoribanks established that while the school environment has a moderate correlation with adolescents’ achievement motivation, this association becomes almost negligible when family influences are taken into consideration (1985).
Understanding the factors that affect achievement is important because motivation affects achievement and level of occupation (Farmer, 1985). Murray described achievement motivation as the desire to “accomplish something difficult... to overcome obstacles and attain a high standard; to excel oneself” (1938, p. 164). Burger (1997) indicated that high-need achievers are moderate risk takers, have an energetic approach to work, and prefer jobs that give them personal responsibility for outcomes. McClelland and Pilon (1983) proposed that parents promoted the need for achievement by providing support and encouragement. However, as Burger indicated, it is important that parents provide enough support to allow the child to develop a sense of personal competence without robbing the child of independence and initiative (1997). That is, parents must reward their children's accomplishments, but too much involvement might leave the child with an undermined sense of accomplishment.

2.5 Conclusion

Academic achievement depends on cognitive learnings, classroom environment and motivation. Classroom climate is a significant determinant of pupils learning. Learning studies reflect control over design conceptual basis, procedure and data analysis and have implications for classroom practice.