Chapter I
Introduction
CHAPTER - 1
INTRODUCTION

Academic Achievement has been considered as an important factor in the educational life of the students. It encourages the students to work hard and learn more. Also it helps the teachers to know whether teaching methods are effective or not and helps them in bringing improvement accordingly.

Academic Achievement is the status of a person’s learning and his ability to apply what he has learnt. It means, the extent to which teaching and study have resulted in mastery. It is the outcome of general and specific learning experiences. Academic Achievement of pupils, refers to the knowledge attained and skills developed during their academic career in the subjects which are assessed by the school authorities with the help of achievement tests, which may be either standardised or teacher made. In other words, Academic Achievement means the achievement of pupils in academic subjects, such as Reading, Writing, Arithmetic, History, etc.

1.1 ACADEMIC ACHIEVEMENT

The study of Academic Achievement and its factors had claimed the attention of researchers even before 1930, by which year a number of studies had been reported. They were reviewed by Harries (1931). In the year between 1930 and 1937 greater research enthusiasm was shown in this area and Harries (1940) published another 328 studies made during this period. Emme (1942) similarly reviewed, studies in 1941. Garrett (1949) reported about 63 studies in which personality factors were studied as predictors of Academic Achievement.

Affective area deals with the Self-Concept, personal growth and emotional development of the students.
Trow (1956) defines Academic Achievement as “the attained ability or degree of competence in school tasks usually measured by standardised tests and expressed in grades or units based on norms, derived from a wide sampling of pupils performance”.

Good (1959) refers to Academic Achievement as “the knowledge attained or skills developed in the school subjects, usually designated by test scores or marks assigned by the teacher.” Beasley (1959) reviewed research on factors of Academic Achievement. Gowan (1960) summarised studies on factors of Academic Achievement. All these consistently emphasise the role of non-intellectual and dynamic factors in students performance.

Mehta (1969) expressed the view that the word ‘performance’ is a wider term which includes both the Academic and Co-curricular performance of an individual. Achievement is the learning outcome of a student. A level of Academic Achievement, in the academic field of a student, is included in the performance of an individual.

In view of other authors, such as Good (1959), Biswas and Aggarwal (1971), there seems to be considerable similarities in as much as, all of them place emphasis on knowledge attained or skills developed in the academic subjects and usually designated by test scores. It is different from proficiency in the area of different arts or physical skills. Academic or educational age, accomplishment quotient or achievement quotient are the most commonly used means to interpret the ‘level’ of Academic Achievement of pupils in general or in specific given subject matter.

The justification of measuring Academic Achievement is based on the fundamental assumptions of psychology, namely, there are differences within an individual from time to time, from one class to another and from one educational level to another. Besides, there are individual differences. Individuals of the same age group, same grade and of the same potential ability usually differ in their academic proficiency, whether measured by
standardised measures of achievement or by teacher’s grading or by marks obtained in tests and examination.

Academic Achievement has been assessed in variety of ways such as Grade Point Average (GPA), performance on standardised tests as the Stanford Achievement Test (SAT), the Science Research Associate Test (SRA) and scores on essay type examination etc. In many studies, performance in various courses, such as Mathematics, reading and other areas, has been linked with yet another aspect of performance in the classroom, the verbal behaviour of high achievers and low achieving children.

Academic Achievement is often referred to as the degree or level of success or proficiency attained in some academic work. According to Christian (1980), the word achievement indicates the learning outcome of students. As a result of learning different subjects, the behaviour pattern of the students changes. Learning affects three major areas of behaviour of students: (i) cognitive (ii) affective and (iii) psychomotor. Christian (1980) is of the view that all these three levels are not affected in equal measure at a time, a student may be at a higher level in one domain and lower in another.

Cognitive area is primarily concerned with intellectual growth of an individual. It involves acquisition of basic intellectual skills, such as reading, ability to add, subtract, learning of facts etc. The present study concerns itself with only the Academic Achievement of the students. It is known through experiences and experiments that Academic Achievement is affected by different variables. Fig. 1.1 gives an illustration of the correlates of Academic Achievement.
Academic Achievement

Personality Study Habits N-Ach. Interests Creativity Self-Concept Adjustment Aspiration

Educational Facilities

Socio-Economic Status

In Instruction

Method of Teaching

Evaluation System

Educational Facilities

Behavioural

II

Environmental

Fig. 1..1
Correlates of Academic Achievement
Attempts have been made to review variables, on which relatively more emphasis has been laid down by the research workers in this field. Out of the above correlates, only those variables are discussed here, which have been included in the present study.

1.2 SELF-CONCEPT

The term Self-Concept is so widely used in the field of education and psychology that in its most native sense it can be generally understood as the person’s ideas, feelings and attitudes about one’s self i.e. how one perceives one’s self.

The term ‘self’ gained impetus in 1937 with Allport. Since then, there have been many approaches, to explain the term ‘self’ with different perspectives and points of views. Sarbin (1952) looks upon self as a cognitive structure which consists of one’s ideas about various aspects of his being, conception of his body, of his sense organs and musculature and of his social behaviour. Thus ‘self’ is the sum total of person’s ideas about whom and what he is, what he appears to be, what he thinks of himself to be and what others judge him to be. Rogers (1951) puts forward a self-theory. According to Hall and Lindzey (1957), the principal conceptual ingredients of this theory are:

- The organism, who is total individual.
- The phenomenal field which is totality of experiences and
- The self which is differentiated portion of the phenomenal field and consisting of a pattern of conscious perceptions and values of the 'I' and 'me'.

The properties of ‘self’ according to Rogers’ theory of self are:

- It develops out of an organism’s interaction with the environment.
- The self strives for consistency.
- The organism behaves in ways that are consistent with the self.
- Experiences that are not consistent with the self-structure are perceived as threats.
The self may change as a result of maturation and learning.

Hall and Lindzay (1957) point out two different meanings of self-concept. The first denotes the person's attitudes, feelings perceptions and evaluation of himself. The second meaning involves a group of psychological processes which govern behaviour and adjustment of the person. Lundholm (1940) distinguished between a subjective self and an objective self. Subjective Self, according to him, comprises those words by which an individual is aware of himself and the Objective Self consists of those symbols by which others describe the person.

The Self-Concept includes three components; Perceptual: a way in which the person sees himself, idea of the impression he makes on others; Conceptual: a person's idea of his own distinctive characteristics, abilities and limitations; an Attitudinal: own feeling of identity in environment, attitudes regarding present and future and degree of self-esteem.

A person's behaviour in any situation depends upon the way he perceives the situation, his 'self' being the part of that perceived situation. Gale (1969) states that man 'creates his world' from the experiences around him. Only by 'self' man can achieve his distinctly human attributes. Murphy (1947) said that a large part of behaviour that constitutes personality is self-oriented behaviour. Glanz and Walston (1958) opine that what a person does or how he behaves is determined by his self-concept. The understanding of the 'self' is the factor that makes various behaviours (or expression of personality) consistent, controllable, and to some extent predictable. Self-Concept gives meaning to behaviour. Not only do the behaviour and Self-Concept go together and have mutual interaction, but all behaviour is motivated and it is caused. To this, Snygg and Combs (1949) add that in the motivation of all behaviour is the part of perceptual field – to be most characteristic of himself ... his self concept...- that is important for understanding one's self and for directing behaviour. Staines (1971) expresses that the aspects of self are of supreme importance for behaviour.
since many of the individual’s actions are ordered by his constant efforts to maintain and enhance these various aspects of the self-picture. These expressions suggest that to understand behaviour, it is essential to study the Self-Concept, which can be helpful in unfolding the unique characteristics of human nature.

The study of Self-Concept is essential not only because it is a product of complex social milieu and one must find one’s self in social setting, but also because it is one of the very important aspects of our personality and provides it with unity, equilibrium, and stability.

Smith’s (1961) idea of the ‘self’, is a person as perceived, felt and thought of by himself. As he can perceive other objects and persons, so he can perceive himself, but just as his perceptions of himself are never entirely accurate, so his perceptions of himself are never entirely complete. Similarly, according to Sartain et al (1958), the individual’s beliefs about the kind of person he is and he is not may be called his self picture. Further explaining the meaning of the term ‘Self’, they say that the ‘self’ as opposed to self-picture refers to all the beliefs, ideas, attitudes, and feelings, whether conscious or unconscious, which an individual has concerning himself. Jourard (1963) adds that the Self-Concept comprises all the beliefs the individual holds concerning what kind of person he is; i.e. conclusions concerning his modal or typical reaction patterns to typical life situation.

Coopersmith (1967) carried his research on attitudinal studies, regarding ‘self’ and attempted to define ‘self’ as an abstraction, that an individual develops about the attributes, capacities, objects, and activities, which he possesses and pursues. This abstraction is represented by the symbol “me” which is a person’s idea of himself.

Another definition presented by Lebenne and Greene (1969) of self-concept is the person’s total appraisal of his appearance, background and origins, ability and resources, attitudes and feelings, which culminate as a directing force in behaviour.
Sherif (1968) says that self is a developmental form of an individual, consisting of interrelated attitudes that an individual has acquired in relation to his own body and its parts, to his capacities, and to objects, persons, family groups, social values, goals and institutions which define and regulate his relatedness to them in concrete situations and activities. This definition seems to be quite comprehensive.

So far, all the above mentioned experts have given an idea of ‘self’ in terms of subjective cognition, ideas, attitudes, belief about one’s self. Another direction regarding the construction of Self-Concept has been suggested by Gorden (1968). For him, the self is not a thing, it is a complex process of continuing interpretative activity – simultaneously, the person’s located subjective stream of consciousness including perceiving, thinking, planning, evaluating, choosing, etc.

To conclude with James (1950), a man’s ‘self’ is the sum total of all that he can call his, not only his body and psychic powers, but his clothes and house, his wife and children, his ancestors and friends, his reputation and works, his lands and houses and yacht and bank account.

1.2.1 Origin and Development of Self-Concept

Self-Concept is not hereditary, rather it develops in a person as a result of his interactions with an environment. It is a life-long process and develops continuously in a social setting. As a child grows and develops, he learns more and more about himself. It is not taught to him by others, but a child acquires it as a by-product of learning experiences. Gale (1969) states that man ‘creates his world’ from experiences around him. The development of Self is a social product. According to him, self-awareness does not happen all at once, but it is dynamic on going developmental process that begins during infancy and early childhood and continues until death.

Glanz and Walston (1958) are of the opinion that many of the adjectives that a child hears, become a significant part of his earliest
conception of his self-image. Sherif (1968) points out that the earliest manifestation of self-hood starts with the bodily states like hunger or sleep, than facilitation and resistance, acceptance and punishment by persons, etc. are all responsible for formulation of self-system.

Nash (1970) reported that it is difficult to say, just when the child becomes aware of himself. But one thing is certain that other familiar persons like parents are recognised before self-awareness begins.

Watson and Lindgren (1973) suggest that through learning the opinions, attitudes and expectations that others have for him, the child learns about himself.

Thus, building of Self-Concept is a slow process, which grows out of the reaction of parents and others to the child’s early behaviour. Self-Concept of an individual undergoes changes during the course of his life. It is a dynamic and not a static characteristic of an individual. Bugental (1955) observed that self-concept of an individual is bound to be affected by the success with which he adjusts himself to the problems of adult life. An individual’s Self-Concept undergoes a change by the challenge offered by the circumstances of life and the way people respond to him.

McClelland and Winter (1969) say that, “what does seem to be essential is that the man develops a strong faith in himself as an origin or agent of change; as someone who can solve problems efficaciously on his own. The most effective strategy in other words appears to be to change the man’s image by direct instruction, on this key point and then leave the rest to him”.

The concept of self is not restricted to attitudes and adjustments but is equally important in the area of academic learning. Whenever learning involves ‘self’ the learner learns well. It is the Self-Concept, which is to a greater extent responsible for a high or low achievement. The Self-Concept is responsible for the success of a person in life. The more confident he is of himself, the more able he is to tackle problems on his own. It has been found
that greater success of children from high status families can be attributed to the ‘self-image’ that leads to extra-effort and extra persistence.

Thus, Self-Concept is an important factor which has an unquestioned bearing upon the Academic Achievement of an individual. Lewis & Adank (1975) found positive inter-relationships among the measures of intelligence, achievement and self-esteem for all groups, exposed to different modes of instruction. In view of its importance in determining the success of a child in academics, it has been taken up as a variable along with Cognitive Styles and Personality Types for the present study.

1.2.2 The Measurement of Self-Concept

A number of current approaches to personality assessment states Anastasi (1968), concentrate on the way an individual views himself and others (Kelley, 1955, Snygg and Combs, 1959). An individual’s self-description, thus becomes of primary importance in its own right, rather than being regarded as a second best substitute for other behavioural observations.

Self concept in a subjective phenomenon, which has both conscious and unconscious aspects, which may cause the investigator to face the difficulty of making inferences of the obtained results on the basis of objective measurement. Besides, both from technical and theoretical point of views, measurement of Self-Concept is not easy, since there are a number of theoretical constructs of ‘self’, there cannot be a single measure which can be a true measure of Self-Concept.

As one reviews the studies conducted on Self-Concept, it becomes obvious that the methods used vary considerably, depending on research design and the factors to be measured, with a little agreement on definition and great differences in the reticuar orientation.

1.3 COGNITIVE STYLES

Cognitive Styles are, what many educators are discussing, when they use the term “learning styles”. ‘Cognition’ covers various modes of knowing, perceiving, imagining, remembering, conceiving, judging and reasoning. The
notion of Cognitive Styles grew out of research on how people perceive and organise information from the world around them. These studies show that individuals differ in how they approach the experimental tasks but these variations do not reflect levels of intelligence or pattern of special abilities (Tyler, 1974).

Cognitive Style is a broad dimension of individual differences that extends across both perceptual and intellectual activities.

Cognitive Styles refer to the modes an individual employs in perceiving, organising and labelling various dimensions of the environment. Thus, it may be said, “Cognitive Styles appear to reflect consistencies in the manner or form of cognition, as distinct from the content of cognition or the level of cognitive skills displayed. Kagan (1964a) conceives Cognitive Styles as the preferred use of a specific class of conceptual responses, whereas for Shuell (1981), Cognitive Style refers to the “preferred ways that different individuals have for processing and organising information and for responding to environmental stimuli.”

The term ‘style’ is used because what is at issue is the characteristic approach an individual brings with him to a wide range of situations. Since the approach encompasses both his perceptual and intellectual activities, it is called his ‘Cognitive Style’.

Cognitive Styles are often described as falling on the borderline between mental abilities and personality traits (Shuell, 1981). They are styles of “thinking” and thus are probably influenced by and in turn influence cognitive abilities (Brodzinsky, 1982).

Cognitive Styles reflect aspects of personality as well as cognition. Thus, although they function to control and regulate the course of information processing and are typically measured as response consistency on cognitive tasks, their operation may be in the service of underlying personality traits for such dynamic themes as anxiety over error, expectancy of success and failure.
and vulnerability to distraction which are central to many of the measures utilised in their assessment.

It has been observed that certain individuals tend to respond very quickly in most situations (impulsive Cognitive Style); others are most reflective and slower to respond (reflective Cognitive Style), even though both types of individuals are equally knowledgeable about the task at hand. Cognitive Style, thus, suggests that individuals approach the same task in different ways but these variables do not reflect levels of intelligence or patterns of general abilities.

Although, defined as modes of information processing, Cognitive Styles are not simple habits in the technical sense of learning theory, for they are not directly responsive to principles of acquisition and extinction. They develop slowly and do not appear to be easily modified by specific training. Research reveals that Cognitive Styles exhibit stability and persuasiveness across diverse spheres of behaviour; that though they entail generalised habits of information processing, they are intimately interwoven with affective, temperamental and motivational structures as a part of the total personality. Thus, it may be said that the manifestation of a core personality structure in cognition is Cognitive Style.

Under Cognitive Styles, Messick (1976) includes dimensions such as the following:

Field independence versus field dependence (responding to the environment in analytical as opposed to global terms), cognitive complexity versus simplicity (the tendency to construct the world in a multidimensional or abstract was as opposed to a single dimensional or concrete way); reflection versus impulsivity (differences in the speed and adequacy with which alternative hypotheses are formulated and information is processed); risk taking versus cautiousness (individual differences in a person’s willingness to take chances to a desired goal); and sensory modality
preferences (individual differences in relative reliance upon the visual or auditory sensory modalities).

Research suggests that Cognitive Styles may be related to learning. Recently many educators have argued that learning can be improved by adapting teaching to student’s learning styles (Cognitive Style) or by putting students with teachers who have similar learning styles (Dunn and Dunn, 1978; Fischer and Fischer, 1979; Rechinger, 1979).

Instruction can be improved when it is based upon Personality Type, Intelligence level and process oriented Cognitive Styles that are related to knowledge about the encoding strategies of the brain. Zelniker and Jeggrey (1976) found that reflective children use a left hemispheric analysis Cognitive Style and impulsive children used a right hemisphere global Cognitive Style. Findings of Zelniker and Jeggrey imply that we can expect learning to be difficult when a mismatch exists between a child’s global cognitive strategy and the analytic organisation of many instructional tasks.

No single strategy or model of teaching aims as enhancing creative problem solving skills or developing brain potential. A combination of models, which share many features is perhaps a useful approach to work out a system of teaching in this context. Inquiry model (Suchman, 1966) or Inductive Teaching Model (Taba, 1966) or most importantly the synectics model (Gordon, 1961) will have to be considered seriously to arrive at a meaningful model for the teaching of right brain. Torrance (1965) conducted a good deal of research on class-room nurturance of creativity and suggested that creative skills of students can be enhanced.

A number of research studies have been conducted in the past in this area.

1.3.1 Characteristics of Cognitive Styles

Satterly (1992) suggests three features of Cognitive Styles. Styles are intellectual characteristics of individuals; they describe processes, which are relatively stable over time.
The essential characteristics of Cognitive Styles in general have been given by Witkin et al (1977). According to them, Cognitive Styles are concerned with the form rather than the content of cognitive activity.

- These refer to individual differences as to how we perceive, think, solve problems, learn and relate to others.
- They are persuasive dimensions but cut the boundaries traditionally used in compartmentalising the human psyche and so hold to restore the psyche to its status as holistic entity.
- They are stable over time, it is not that they are unchangeable, some may be rather easily altered. This stability makes stylistic dimensions particularly useful in long range guidance and counselling.

In addition, with regard to value judgements, Cognitive Styles are bipolar and range from one extreme to the opposite extreme wherein each end of the dimension has different implications for cognitive functioning. Each pole, thus, has adaptive value under specified circumstances and may be judged positively in relation to those circumstances.

Cognitive Styles differ from intellectual abilities in a number of ways. Whereas ability dimensions refer to the content of cognition or the question of what (what kind of information is being processed by what operation in what form), Cognitive Styles bear on the question of ‘how’? (on the manner in which behaviour occurs). While the concept of ability implies the measurement of capacities in terms of maximal performance, that of Cognitive Styles implies the measurement of preferred modes of operation in terms of typical performance.

Another way in which they differ from intellectual abilities is in the values usually placed upon them. While high quantitative aptitude may be valued over low quantitative aptitude, we would hardly have the same general preference for impulsive, as opposed to reflective cognitive dimension. Neither end of Cognitive Style dimension is uniformly more adaptive. Rather
their adaptiveness depends upon the nature of the situation and upon the cognitive requirements of the task at hand. This has important implications for education, since it serves to establish that Cognitive Styles are usually not considered as outcome objectives of educational or training programmes except possibly for younger students. Rather, Cognitive Styles are important to be considered as input variables that might moderate the operation and effectiveness of educational/training programmes or interact with programme components to produce differential results. Each of an individual cognitive dimensions has been found to correlate with certain intellectual tasks and the ability to learn and perform in school. Of the many listed Cognitive Styles identified by researchers over the years, a few prominent ones that are used to prepare cognitive profiles of individuals are field dependence/independence (more recently termed analytical-global), reflectiveness versus impulsivity, levelling versus sharpening, tolerance versus intolerance, focus-nonfocus, broad-narrow and fixity-mobility. Out of these, field-dependence/independence Cognitive Style has been the most widely researched and used.

Witkin et al (1954) identified the field dependent-independence cognitive style and it has been found to be directly responsible for wide variations in the way individual pupils react to learning situations. People who are field-dependent tend to perceive a pattern as a whole. They find it difficult to focus on any one aspect of a situation or to analyse a pattern into different parts. Field-independent persons are more likely to perceive separate parts of a whole, and to be able to analyse a pattern according to its components (Wittrock, 1978).

Another important Cognitive Style, on which students differ, is impulsivity versus reflectivity. Impulsive individuals have a fast conceptual tempo; work and make decisions quickly, give quick responses, finish objective tests early, concentrate more on speed and in the process make a few errors. On the other hand, reflective individuals tend to deliberate a lot,
consider all the possible alternatives at length, are slow and careful to respond to test-items but are likely to make lesser number of errors since they tend to concentrate on accuracy rather than speed (Entwistle, 1981). Kagan (1964b) found that impulsiveness is a general trait that appears early in a person’s life and is consistently revealed in a great variety of situations.

As with field-dependence, impulsive and reflective Cognitive Styles are not highly related to intelligence within the normal range. However, as children grow older, they tend to become more and more reflective, and for school-age children, being more reflective does seem to improve performance on certain school tasks (Messer, 1976). Also for reflective children, the chances of failing in one of the early grades are much less than for impulsive children (Messer, 1976). Impulsive students can be taught to be reflective by means of self-instructional training (Meichenbaum, 1977) or by scanning strategies.

Awareness of these varying styles of conceptualisation may help the teacher to understand, to some extent, the wide individual differences in the way pupils react to different instructional approaches (Biehler, 1978). For example, an analytical or field independent person will try to induce the inherent structure in a situation or to impose his own structure on it, rather than have structure imposed from without. At the other end, a global or field-dependent person will prefer to have the structure provided, perhaps in the form of detailed instruction.

Research evidence has been accumulating on the field dependence/independence Cognitive Styles ever since the year 1952, when it was first identified by Witkin et al (1954), who suggested that a Cognitive Style approach may be profitably applied to a variety of educational issues (Witkin et al, 1954, 1972, 1976). Work on Cognitive Styles of field-dependence/independence has resulted in the formulation of various concepts and methods and these are increasingly being applied to research on problems of education. The construct has been related to intellectual functioning and to
hemispheric functioning and these two variables have been related to each other. Research evidence reveals that individuals demonstrate pervasive self-consistency in cognitive functioning and so the division into the perceptual and intellectual is hardly of value in the study of Cognitive Styles. Measures of field-dependence have been reported to be significantly related to total standard intelligence test scores and this significant relationship is carried largely by those portions of intelligence tests, which require analytical functioning. Thus, the relation is based on the expression of a particular style of field approach in both.

As Witkin (1976) suggests, the Cognitive Style approach can be profitably applied to a variety of educational issues. On the basis of some research, he identified the Cognitive Style of field-dependence/independence to be important for Academic Achievement. People, who are field-dependent tend to perceive as a whole of a situation or analysing a pattern into different parts. Field-independent people are more likely to perceive separate parts of a total pattern and to be able to analyse a pattern according to its components (Witkin, 1977).

The concept of field-dependence emerged, initially, from the studies by Witkin et al (1970) on perception of the upright in space studies of RAT (Room Adjustment Test), BAT (Body Adjustment Test) and RFT (Rod & Frame Test). Their tests demonstrated that an individual tends to be consistent in his perceptual function from test to test. Therefore, the person, who is unable to maintain the “separateness” of his body from the surrounding field in the BAT, cannot also determine the position of the rod independently of the titled form in RFT. A little later, they found significant correlation between these orientation tests and RFT, which measure field-dependence in a purely visual paper and pencil situation. This test features the ability to perceive an item independently of its context and does not involve body position with the accumulation of research data, field dependence soon came to be regarded as the perceptual component of a broader personality
dimension designed as global versus articulated cognitive style or psychological differentiation (Witkin et al, 1972). Evidence indicates that this Cognitive Style exhibits considerable stability through childhood and early adulthood and is related to a number of personality variables such as leadership and social conformity (Witkin et al, 1977), field-independence refers to a consistent mode of approaching the environment, in analytical as against global terms. It entails a tendency to experience items as discrete from their backgrounds and reflects ability to overcome the influence of an embedding context.

Some clear developmental trends are visible in Cognitive Styles. As children grow older, they generally become more field-independent, at least until the middle of their teens. Then development levels of until later adult life, when there is a tendency to become more field-dependent. Even with these changes, over the years people remain fairly stable in comparison with others in their age. So a person who tends to be field-dependent as a child may become more field-independent with age but may still be less field-independent than peers who have also changed with age. People differ in the extent to which their perception is analytical. The field-independent person is able to break up the total field and attend to the relevant items, while withholding attention from irrelevant items. They, thus, tend to perceive figures, as discrete from their backgrounds. They are generally more facile on tasks requiring differentiation and analysis, whether in identifying the presence of logical errors or in understanding the point of a joke. This analytical penchant leads to a high degree of differentiation of the self from its context. Field-dependent persons have trouble breaking information down into units and recombining the parts into new patterns. So, the task of organising information from many different sources can be difficult for students who have a field-dependent Cognitive Style. Such individuals cannot withhold attention from the context in which the relevant figure is embedded.
Each Cognitive Style has advantages and disadvantages (Woolfolk, 1987). It means that field-dependent individuals are superior in remembering social information, such as conversations or interpersonal interactions. They are often better in subjects like History, Literature and Social Sciences. Field-independent people are better at analysing complex, unstructured material and reorganising to solve problems and Science & Mathematics may be their stronger subjects (Shuell, 1981).

Accumulating research data points out that field-dependence/independence extends into psychological domains beyond cognition (Witkin, 1976). Such individuals differ from each other in important personal characteristics and in inter-personal relations. Field-dependent individuals are more influenced by the attitude of an authority figure or peer group but the field-independent individuals are less responsive to the human content of an environment.

Evidence of differences in characteristics falling in the domain of social behaviour between field-dependent and field-independent individuals is impressive. Field-dependent (global) individuals tend to identify more with a group, are susceptible to external influence and markedly affected by isolation from other people. Taken collectively, the characteristics that distinguish persons, with contrasting styles, suggest that relatively field-dependent persons are likely to be attentive to and make use of prevailing social frames of reference.

Since field-dependent persons are seen to be relatively sensitive to social cues and interested in what others say or do, it is hardly surprising that they should be generally better liked; perceived as being warm, tactful,
considerate, socially outgoing and affectionate. These social qualities taken
together likely to contribute to greater skill in getting along with people.

On the other hand, field-independent individuals tend to have a more
impersonal orientation, ‘not sensitive to social undercurrents’, ‘cold and
distant with others’, ‘unaware of their social stimulus value’ and
individualistic. There is additional evidence that along with their impersonal
orientation, field-independent persons are more likely to be interested in the
abstract and theoretical (Stidham, 1967).

Thus, these social domain characteristics of field-
dependence/independence can be linked up with classroom situations, so as to
produce differences in achievement. Research evidence has more or less
established match-mismatch in Cognitive Styles as a factor in teacher-student
and other kinds of social interactions also, but whether it makes for better
student learning is still an issue.

Although teachers cannot determine all the variations in students’
Cognitive Styles, they should be aware that students approach problems and
process information in different ways. Woolfolk (1987) says that some may
need help in learning to pick out important features and to ignore irrelevant
details. This does not mean that they are less intelligent but simply that they
tend to perceive patterns as whole and have trouble analysing. They may
seem lost in less structured situations and need clear step-by-step instructions.
They may work best in social situations and be less motivated by individual
contracts or projects. Other students may be great at organising but less
sensitive to the feelings of others and not as effective in social situations.
Witkin et al (1977) observe, “Teachers’ adaptation will be a realisable goal, if we are able to identify particular teaching strategies, which teachers may use, either spontaneously or with training, when teaching students with different Cognitive Styles”.

Learning characteristics of field-dependent and field-independent individuals are given in Figure 1.2:

<table>
<thead>
<tr>
<th>Field-Dependent</th>
<th>Field-Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Are better at learning material with social content.</td>
<td>• May need help in focusing attention on material with social content.</td>
</tr>
<tr>
<td>• Have better memory for social information.</td>
<td>• May have to be taught how to use context in understanding social information.</td>
</tr>
<tr>
<td>• Require externally defined structure, goals and reinforcement.</td>
<td>• Tend to have self-defined goals and reinforcement.</td>
</tr>
<tr>
<td>• Are more affected by criticism.</td>
<td>• Are less affected by criticism.</td>
</tr>
<tr>
<td>• Have greater difficulty learning unstructured material.</td>
<td>• Can impose their own structure on unstructured situations.</td>
</tr>
<tr>
<td>• May need to be taught to use memory aids.</td>
<td>• Can analyse a situation and reorganise it.</td>
</tr>
<tr>
<td>• Tend to accept the organisation given and be unable to reorganise.</td>
<td>• Are more likely to be able to solve problems without explicit instructions and guidance.</td>
</tr>
<tr>
<td>• May need more explicit instruction on how to solve problems.</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1.2
Learning Characteristics of Field-Dependent and Field-Independent Students
(Adapted from ‘Field-dependent and Field-independent Cognitive Styles and their educational implications, Witkin et al - 1977)
The question - ‘How to adapt teaching to the needs of individual students?’ has been studied and debated for years and some of the attempts to adapt instruction to individual interests, aptitudes and styles have been made for honours courses, vocational courses, experience in performing arts, co-operative work study programmes, independent study, programmed learning, team teaching etc. Psychologists doing research on aptitude-treatment interaction have established that student differences do interact with the teaching method and that whatever the limitations or merits of each approach, no single method can be equally successful with all individuals in a class. This does not, however, call for the introduction of individualised teaching with different methods designed for each one alone but does bring out the necessity and urgency of developing flexible instructional strategies that can reasonably fit the diverse requirements of different individuals in a classroom individuals having field-dependence or field-independence Cognitive Style of those having high or low general mental ability.

If different pupils are to make the intellectual journey from a state of no knowledge in a subject to the mastery of fundamentals, they could do so by taking quite different instructional routes. Taking the same route might lead to great differences in progress among them and even to inordinate frustration and defeat for some. Thorough investigation of aptitude-treatment interactions’ potential for improving education and maximising learning is a most important endeavour for educational researchers and psychologists.

The message that rings out clearly for teachers is that all differences in class performance, that are seen, are not due to differences in ability or efforts. Rather, they may be due, in part, to the individuals’ preferred way of processing new information and to blind spots in one’s approaches to new tasks or problems. Thus, differences in Cognitive Style may offer as valid an explanation of differential achievement levels as those in mental ability. For these forceful reasons, the independent variable of Cognitive Style, along with
that of mental ability was chosen by the researcher to examine, if adaptation of teaching strategies to pupils’ Cognitive Styles results in maximal learning or not.

1.4 PERSONALITY TYPES

The word “personality” has been traced back by etymologists to the Latin words \textit{PER} and \textit{SONARE}, which means “to sound through”. The word ‘personare’ derives from these two words and originally meant an actor’s mask, through which the sound of his voice was projected. Later \textit{PERSONAR} was used to mean not the mask itself but the false appearance which the mask created. Still later, it came to mean the characters in the play (dramatic personnel).

Personality is taken as the external appearance of an individual, but in terms of philosophy, the meaning of personality has been interpreted in the sense of internal self. Psychologists explain it as the combination of both and something more than that. Personality is not a fixed state but a dynamic totality, which is continuously changing due to interaction with the society and environment.

The field of personality is one of the most popular, challenging, important and confused in contemporary psychology. To the layman, personality is frequently defined in terms of one’s reputation, such as “he is easy going, she is sweet and understanding”. In other words, the layman tends to define one’s personality in terms of what other people think of one. Those conceptions, however, include only the individual’s social value to other members of his group (that is more or less superficial attractiveness or reputation) are inadequate because they are concerned only with overt behaviour, while they ignore the inner aspects of the personality and motivation, perceptions, feelings, reactions, attitudes, values, prejudices that are the basis of one’s behaviour.
Thorpe (1938) says that personality is synonymous with the idea of the organic functioning of an individual, including his all verbally separated aspects, such as intellect, character, drive, emotionalised attitudes, interests, sociability and personal appearance, as well as his general social effectiveness.

According to the Psycho Analytic Theory propounded by Freud, “Personality is made up of three major systems, ‘Id’, ‘Ego’ and ‘Super Ego’ and the human behaviour is the product of interaction among these students.

Cattell (1950) defined personality as that which permits a prediction of what a person will do in a given situation. The goal of psychological research in personality is, thus, to establish laws about what different people will do in all kinds of social and general environmental situations. Personality is in the first place concerned with the behaviour of an individual, both overt and under the skin. It is concerned with a range of behaviour extending from an individual’s political and religious views, to the way he digests the food. However, at one extreme that concerned with behaviour of groups of personalities the most intensive study is left to the social psychologists and the social scientists while at the other extreme that concerned with neurology and physiology the more detailed examination is left to physiological psychology and biological sciences.

Allport (1952), after evaluating 49 definitions of personality written by so many eminent persons laid down his own definition of personality, which seems to be comprehensive including all aspects of an individual’s personality. According to him, “Personality is the dynamic organisation within an individual of those psycho-physical systems that determine his unique adjustment to the environment.”

Eysenck (1952) describes personality more or less stable and enduring organisation of person’s character, temperament, intellect and physique, which determines his unique adjustment to his environment.
Garett (1955) is of the opinion that psychologists have used the term personality to denote considerably more than social attractiveness. In fact, their definition of personality not only includes an individual’s characteristic ways of conducting himself in everyday situations, but stresses as well such conditioning factors as physique, appearance, intelligence, aptitude and character traits.

Prince (1959) accepting the role of both heredity and environment, defines personality as, “Personality is the sum total of all the biological inmate dispositions, impulses, tendencies, appetite and instincts of the individual and the dispositions and tendencies acquired by experience.”

The term ‘Personality’ has been variously defined because personalities are complex and inclusive of all traits, hence, there is much room for differences in comprehensiveness of the definition. Some definitions look at personality from the standpoint of the individual in question emphasising his unique qualities of characteristics.

From the definitions stated so far, we can draw some conclusions regarding the nature of the term “Personality”. Personality traits do not exist independently or act in isolation. They are inter-related and interact in an organised and coherent manner. The term “Personality” stands for the whole individual, his physical organism, his skills, his knowledge, his interests, attitudes and ideas, his fears, hopes and aspirations, his habits, sentiments and character. It is the integrated unity of all aspects of his being physical, mental and social.

Uniqueness or distinctiveness is also a characteristic of personality. The organisation of traits and qualities which it represents is such as to form the basis of individuality making off one individual from another.

Lastly, an individual’s personality does not merely grow from within. It is the product of interaction between himself as a developing organism having certain psychological and biological needs on the one hand and on the
other, his environment that has nurtured, influenced, directed, satisfied, or in varying degrees failed to satisfy those needs.

Good (1973) defined personality as the total psychological and social reactions of an individual, the synthesis of his subjective, emotional and mental life, his behaviour and his reactions to the environment: the unique or individual traits of a person are connoted to a lesser degree by personality than the term character.

Arndt (1974) defined that omnibus definitions state that personality is the sum of a person's attributes. These are definitions by enumeration of qualities and acquired mental qualities. Since qualities are added together, this position denies the significance of the relations of interactions that may obtain among the stated qualities. Personality is seen as an aggregate, not as an organisation or configuration.

Wilson (1976) maintains that the layman uses the term Personality in two senses: Sometimes he describes an acquaintance as having a 'good' or 'strong' personality, meaning that he has qualities enrolling him to 'win friends and influence people.' At other times, he describes people in terms of their most striking characteristics like submissiveness, impulsiveness, aggressiveness, etc. This latter usage corresponds closely with the way that psychologists use the term. Broadly, the psychology of personality is concerned with important individual differences between people. Traditionally, however, the field has been further delimited: individual differences in abilities and aptitudes are not usually included in the real personality or attitudes and beliefs.

A distinction worth mentioning at the outset is between traits and states. Nearly all of the adjectives that can be used to summarise people's behaviour like anxious, aggressive, talkative, depressed, sober, etc. can refer either to characteristic differences between people (traits) or to temporary fluctuation or moods within the same individual (states). Personality is
mainly concerned with enduring characteristics of an individual i.e. Traits rather than States.

Wilson (1976) described structure of personality, that is described by the earliest theories of personality of Hippocrates, which was extended and popularised by Galen in the second century A.D. They supported that there are four temperamental types corresponding to four ‘humours’ (a bit like homones); the names given to these types as melancholic, choleric, phlegmatic and sanguine still survive in common usage. The descriptive part of this theory is an over implication in that people cannot be pigeon holed into four clear cut categories. Most of us exhibit some mixture of these characteristics.

Parvin (1980) describes personality in terms of response. According to him, “Personality represents those characteristics of a person or of the people that generally account for consistent patterns of response to situations.”

1.4.1 Types of Theories

It is generally known that each person is unique. Most of us find it convenient to classify individuals into groups, according to some traits or characteristics, which they hold in common. Thus, we “type” people as athletic, studious, fun loving, religious, and so on.

Jung’s theory is varied and complex. He proposed that people can be divided generally into two types: Extrovert and Introvert, each of which can be subdivided into four subtypes: Thinking, Feeling, Sensation and Instruction. According to Jung, each person is both, introvert and extrovert, with one type predominating consciously and the other type unconsciously.

In the extrovert, according to Jung, we have an individual whose decisions and actions are determined primarily by objective relationships and not by objective values. His attention and interest are centred on the immediate environment. The extrovert’s inner needs and inner life tend to
succumb to external necessity. He is an objective, reality oriented individual who may, however, go so far in the direction of objectivity as to deny many of his own inner needs and aspirations.

The introvert, on the other hand is governed primarily by subjective factors or objective values. What he does, tends to be guided by his old ideas, by absolute standards. He tends to lack flexibility and to adjust to his own inner values. Thus, introvert tends to be subjective, instead of subjectively oriented. This, of course, is the opposite of the extrovert.

<table>
<thead>
<tr>
<th>Thinking</th>
<th>Feeling</th>
<th>Sensation</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTROVERT A</td>
<td>Seen mainly in women who express their confidences in diaries and secret poetry</td>
<td>An oil painter like Renoir</td>
<td>A mystical dreamer may be an artist or an unappreciated “genius”</td>
</tr>
<tr>
<td>Philosopher like Kant</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXTROVERT A</td>
<td>Fashion conscious people interested in causes and cultural affairs especially common in women</td>
<td>An outgoing seeker of “sense” experience, as a gourmet or an art lover</td>
<td>A promoter who has a keen nose for new enterprises showing promise for development</td>
</tr>
<tr>
<td>Scientist like Charles Darwin</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fig. 1.3**

Jung’s Classification of Personality Types

*Source: C.G. Jung, Psychological, Pantheon, New York, 1959*

Personality, as an important variable of development and behaviour in relation to all developmental stages of life, makes the study of this stage more meaningful and scientific. Different aspects of personality can act as effective variables in determining the behaviour and performance of an individual during a particular period of life.
1.5 DISTANCE EDUCATION

‘Distance Education’ is used as a generic term, to comprise all patterns of student-centred learning process, in which the teacher has only a limited role. The old forms of correspondence education, external or extra mural studies and home based study come under this description. All of them have certain common characteristics that keep them separate from the traditional patterns of face-to-face learning. The most outstanding characteristic is the physical distance between the student and the teacher.

Distance Education is a self paced learning process, wherein the student can frame his own timetable according to the time at his disposal. This makes it possible for the people employed in full time jobs, housewives with numerous household chores and youth waiting for employment to carry on education at the leisure available to them. Further, Distance Education makes use of various communication media like printed texts, broadcast, audio-video cassettes and computers to disseminate knowledge to the students. Therefore, Distance Education can be defined as the teaching-learning process in which students are separated from the teachers by a physical distance, which is often bridged by modern communication media.

The concept of Distance Education has emerged as a result of man’s search for an education system, which could be provided to a person at home. ‘Necessity is the mother of invention’ is too well known a proverb to be elicited. In the days gone by; education from a distance was never thought of, because teachers were available to teach those who wanted to quench their thirst for knowledge. Not everybody was interested in higher education or education for leisure or for that matter enhancing his knowledge for further promotion in his job.

But the situation is quite different at present, when we are entering the 21st century very shortly. Time never ran so fast as today. Competition in life was never so hard as we find at this juncture. Knowledge of man never
became obsolete in such a short time as we find today. Ambitions are going higher and higher. Every country has realised the need of educating its population in the real sense of the term. Every man or woman wants to improve his/her lifestyle and living standard. Continuing education is becoming a part of educational system. As such, it was increasingly realised that formal system of education, as has been prevailing till now, was not sufficient enough to meet the demands of the coming century. Constraints in terms of manpower and money, to build educational institutions, appoint teachers, provide other infrastructure and the distance of student from the schools/colleges lead to the search of a via media which could be alternatively use to expand education and fulfil educational needs of all. Instead of bringing students to the schools/colleges, it was proposed to take school to the student and hence, this concept of Distance Education came into existence.

Till almost the middle of the twentieth century, the term Distance Education was unknown, although, it had existed since the time the postal services became popular. In fact, with the beginning of the postal services, man or woman started sending messages or advise to his/her ward, living far off. This was no doubt an education from distance. The letters written by Pt. Jawahar Lal Nehru to his daughter Indira Priyadarshini (Smt. Indira Nehru Gandhi) from Naini Jail, can be cited as the first known example of Distance Education in our country. Most quoted definition of Distance Education is that of Professor Borje Holmberg. According to him, Distance Education is “the various forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which, nevertheless, benefit from the planning, guidance and tuition of a tutorial organisation.”

Distance Education describes mode of education, in which teachers and learner carry out their essential tasks apart from one another.
1.5.1 Early Developments

The Education Commission submitted its report in 1966 and made wide ranging recommendations about the reconstruction of education in India. These recommendations became the major basis of the National Policy on Education formulated in 1968 and later also in 1986. In respect of correspondence courses, the Education Commission examined the whole issue in the larger context of higher education.

Considering programmes, like correspondence courses, to be the only means of providing higher education to those who desired to study further but were either compelled to take up employment at the end of the school stage or were not admitted to the full time courses, the Commission dispelled the fear that these would lead to a deterioration in standards, especially if due care was taken to maintain personal contacts with the students receiving correspondence education by organising interactive academic programmes during vacations and holidays. In fact, the Commission saw a possibility that the standards in such courses might tend to be higher because of the more intensive motivation of students. It, therefore, suggested that by 1986, at least one third of the total enrolment in higher education might be provided through a system of correspondence courses and evening colleges.

The Education Commission suggested the concretisation of correspondence courses through the following recommendations:

i) Students taking correspondence courses should be provided opportunities to meet the teachers occasionally; they should be given the status of recognised students and, where possible, they should be attached to some colleges in order to enable them to make use of the library and other facilities.

ii) Correspondence courses should be supported by well co-ordinated radio and television programmes.

iii) Correspondence courses should not be confined to preparing students for the university degrees; these should also provide agricultural,
industrial and other workers, such special courses of instruction, as would help them improve their productivity.

iv) Correspondence courses should also be made available for those who desire to enrich their lives by studying subjects of cultural and aesthetic value.

v) Correspondence courses should be developed for teachers in schools to keep them abreast with new knowledge as well as with new methods and techniques of teaching.

vi) The Ministry of Education in collaboration with other Ministries should establish a National Council of Home Studies, for the purpose of accreditation and evaluation of agencies, which provide correspondence courses. This Council could undertake identification of areas in which different types of correspondence courses would be of benefit as well as the promotion of the creation of such courses through appropriate agencies, and also by conducting evaluation and research (NCERT, 1966:797-800).

The Education Commission took note of the fact that in certain states, particularly in the eastern parts of India, there was a large proportion of untrained teachers, and also the facilities for teacher training programmes in those areas were inadequate. It, therefore, recommended measures to expand facilities for providing professional orientation to all the untrained teachers. In this context, a strong recommendation was made for the establishment of at least one Centre for Correspondence Education, preferably in each of the State Institutes of Education, which could provide pre-service courses and in addition, offer in-service education for all the teachers. Depending upon the age and teaching experience of the untrained teachers, they could be allowed to offer short or part-time or full-time correspondence courses. The Commission was of the view that a flexible programme would facilitate early clearance of the backlog of the untrained teachers.
After widespread discussion on the report of the Education Commission, a general consensus emerged on major directions for educational reconstruction. One of the outcomes was that the four Regional Colleges of Education established under the auspices of the National Council of Educational Research and Training (NCERT) started correspondence courses in 1967, to provide professional orientation and clear the backlog of the untrained teachers. Thereafter, a very rapid expansion of correspondence courses was witnessed in Indian universities.

Between 1967 to 1971, when the correspondence courses were getting established in the Indian Universities, the UGC sent three delegations to the erstwhile USSR to study their system of evening courses and correspondence courses. The first delegation was sent in March-April, 1967 (Government of India, 1968) and recommended its adoption on a restricted scale for clearing the backlog of untrained teachers already in regular service and also for improving the level of education of trained teachers with varying qualifications.

In 1970, the International Education Year, the Ministry of Information & Broadcasting, the University Grants Commission and the Indian National Commission for Co-operation with UNESCO, organised a seminar on “Open University”, in December. The seminar recommended the establishment of an Open University in India on an experimental basis. The term “Open University” was used for the first time in such a forum while discussing “Distance Learning”, for which the common usage in academic literature hitherto had been the Institute or the Directorate or School of Correspondence Courses. The open university was conceived or designed as a quality institution, with the object of making higher education available to those who have the capacity and motivation for it, but are unable to avail of the existing facilities for the same. Moreover, the seminar made several suggestions relating to the organisation, finances and modes of functioning of
an open university and recommended the constitution of a committee to work out the details of an open university in India (Sahoo, 1985).

The fifth Five Year Plan envisaged the expansion of the facilities for higher education through correspondence courses (Government of India, 1976). According to the plan proposals, about 25 per cent of the total university enrolment was expected to be served by correspondence courses, which would mean about 600 to 700 thousand students joining such courses.

One major organisational reform that had been voiced often for improving the correspondence courses, has been in the form of a need to have a National Institute of Correspondence Courses or a Council of Correspondence Courses or an Open University. It has been argued at several places in the form of recommendations, such an institute or organisation could make the system more effective and self-sufficient pedagogically and operationally.

1.5.2 Idea of an Open University

The 1970 Seminar on Open University, inter-alia, recommended that a committee be appointed by the Government of India, to examine the question whether the objectives outlined could be achieved through the open university for the whole country or more than one, and other problems related to the costs involved, formation of methods & media, the categories of students to be served, etc. Subsequently, the Union Education Minister constituted a Working Group in 1971, under the Chairmanship of Shri G. Parthasarthy, to consider the question of establishing an Open University in the country.

Both, the National Seminar of 1970 and 1982, UGC decision were heavily influenced by the establishment of the first Open University in the world, in Britain, in 1969. It may be incidentally noted that such an influence has even continued up to now, shaping the development and consolidation of open university system in this country.
On the basis of recommendations of the Expert Committee, the Government of Andhra Pradesh established the Andhra Pradesh Open University through an act of the Legislature in August, 1982 (Government of Andhra Pradesh, 1982). With the establishment of this university, a new experiment in the Distance Education got started for the first time in the country. The University (renamed as Dr. B.R. Ambedkar Open University, in 1991) has now a network of 100 study centres spread over the length and breadth of the entire state, with a cumulative student enrolment of 180 thousand. As many as 15,356 graduates received their degrees in the first five convocations. The university has instituted courses of several categories, viz. Bachelor’s and Postgraduate Degree Programmes, Postgraduate Diploma and Certificate Programmes, M.Phil and Ph.D. Programmes in Development Studies etc. The university has published more than 250 volumes of course material covering 30 disciplines. There is an Evaluation Bench in the university, which functions as a monitoring and evaluation agency for assessing the effectiveness of instruction offered through various media to the students, which includes investigations of the students’ receptivity and maintenance of the desired academic standards. Also established in the university is the Audio-Visual Production and Research Centre. Through this centre’s collaboration with the All India Radio, the university has been broadcasting syllabus oriented educational lessons with a state wide coverage for three hours a week, in English, Telugu, Urdu and Hindi. Besides the broadcast mode, the university also prepares some lessons of half an hour duration with the extensive coverage of topics in the shape of audio lessons and sends them to the study centres spread all over the state. The Public Relations Branch deals with enquiries, maintains liaison with different branches of the university and outside organisations, releases information through a newsletter and other notifications from time to time (BRAOU, 1992). The IGNOU was established as an instrument to democratise and widen access to higher education for large sections of the population.
Distance Education in India began in the form of correspondence courses in the field of higher education during the post-independence period. Immediately after the country attained independence, especially during the fifties, the demand for higher education increased rapidly, chiefly because people perceived it as a means of actualising their social aspirations and enhancing their economic status.

As such, Distance Education is capable of taking in a vast and varied clientele:

- In-service persons, who, for economic or other reasons, had to take up jobs at an early age but are on the look out for an opportunity to improve their educational qualifications.
- Drop-outs, who later become motivated to resume their education.
- Persons in geographically remote rural areas where there are no institutions of higher education.
- Socially and economically backward sections of society.
- Overflow from colleges/university teaching departments where admissions are made on merit and for a fixed number of seats.
- Retired personnel, who want to take up studies to keep themselves occupied.
- Persons, who want to learn and earn simultaneously.
- Persons, who want to study a subject just for the love of it, or to satisfy their curiosity.
- Handicapped persons.
- Persons, who need some additional training in their vocation for updating their knowledge.
- Persons (in affluent societies) having plenty of leisure time, who want to pursue some hobbies and other spare time activities.
- Those students, who are not able to fulfil the criteria for entry in the formal stream of higher education.
The added advantages of Distance Education System may be summarised as follows:

- It is very economical. After a critical stage, more the students, the more economical it is.
- There is no fixed student-teacher ratio.
- The achievement of limited number of excellent teachers can reach thousands of students.
- Very few full time academic staff are needed. Part time teachers of the conventional institutions often fill the bill.
- There is no need of academic buildings, students’ residence halls etc.
- Students are not concentrated in the campuses and there is little chance of student unrest.
- In-service personnel, housewives, disabled persons, underprivileged people residing in remote areas, school dropouts etc., all can avail of the courses offered.

There should be adequate provision in the courses to pay individual attention to the participants. The courses will include brain-storming, buzz sessions, discussions, group-work, demonstrations, practicals and a few lectures and peer group discussions. Along with academic activities, these centres will cater to the personal problems of the students. The group being heterogeneous, the problems of learning will be varied in nature. Especially, here the entry being open, many will not be exposed to the formal university system. In the present set up of 10+2, those students who could not pass +2 stage, will like to join Distance Education System. These learners will have special characteristics and their needs will be different. They may need counselling. Here, the national level centres will have to appoint qualified counsellors, who can understand the problems of these learners.
1.5.3 Distance Education Systems and Computers

Development of computers is an important contribution of the Bionics Science, where methods of creating mechanical systems are investigated and computers are going to be common market products in our technologically advanced society. With the changing socio-economic structure and increasing consciousness for quality of education, there comes an era of automation and computers in education (Sharma and Garg, 1979). It has been observed that Computer Assisted Instruction (CAI) permits many pupils to interact on an individual basis with teaching material stored in the computer. It is possible that students may have teaching and advice and designed schedule, while solving problems or working through practical task. Even it is possible to design strategy based on inquiry guided discovery or laboratory mode. Various peripheral devices like slides, film projectors, tape recorders can be easily controlled by computer.

Distance Education Systems can use computer centre for professional development, educational administration functions involving data analysis relating to admissions, examinations, facilities, inventory (Shankar, 1979-1982). Computerised Management System could be developed for the effective planning and management of Distance Education Systems. Management Information System, thus, developed should be useful for group members as well as group leaders which would be helping them to take appropriate decisions for the various problems they come across in context of policy framing situations and routine matters. Proper communication channels should be developed to provide up-to-date and exact information to the group members (policy makers, top managers, middle managers, etc.). This requires flow of information about resources (time, finance, manpower), rules, regulations, job performance and various types of records (Darji and Sharma, 1983). Computerised Management System will be a great asset for
Distance Education System to be used effectively, to maintain managerial harmony.

1.5.4 **Satellite Communication and Distance Education System**

Distance Education System can work efficiently with the help of the satellite communication. This was suggested by late Dr. Vikram Sarabhai, who realised the importance of satellite television as a means of communication and education, relevant to India’s developmental needs. It is a well known fact that hundreds of crores of rupees are needed for space programme. It is possible to justify the accountability aspect of this considerable amount, if we consider educational, public awareness and social consciousness programmes by this noble means for social and economic development of our country, keeping in view its size, population and area.

The Satellite Instructional Television Experiment (SITE) was launched during August 1975 - July 1976, using the American Satellite ATS-6. The success of the SITE project inspired the space scientists to build INSAT-TV broadcast system. For the same purpose INSAT-1A (launched from USA on 10\(^{th}\) April, 1982 by NASA) and INSAT-1B (launched from USA on 30\(^{th}\) August, 1983) were launched in the orbit. On the basis of the various tests INSAT-1B could be called operational on 15\(^{th}\) October, 1983. Now the space communication has become a billion dollar (per year) industry and still growing. The direct broadcast satellites have proved to be cheaper than the present conventional system for communication (Ramnath, 1983).

- Distance Education System can make use of the television for providing education to the masses. This requires careful planning and management. It is better to have preliminary survey of the needs of the society on the basis of region and their socio-economic conditions. Social set up of the people living on high altitudes is quite different from the people living in plains or coastal belts of the country. Of course, certain programmes may be useful to whole of the society. Teams of planners for these types of programmes will...
consist of educationists, psychologists, sociologists and communication experts, who have wider outlook about the regions of this country and their problems. Interested educational and research organisations could be invited for this noble task. Unplanned and ill-organised programmes selected randomly may damage the whole cause. Unfortunately, the present T.V. programmes regarding information and education are not attracting the masses and day by day motion pictures made for commercial purposes are becoming sole basis to justify Doordarshan. The whole T.V. system should be reorganised so that Distance Education Systems can work efficiently.

Space Application Centre (SAC), Ahmedabad is one of the important agencies working under the setup of Indian Space Research Organisation (ISRO) for telecommunication and T.V. broadcasting. SAC should take pioneering steps for Distance Education activities in collaboration with various universities and good institutions. It should work for effective planning and implementation of Distance Education Programmes. It can also be a co-ordinating machinery for different agencies working in this direction. Important organisations working for the cause of expansion of education and having much workload in their respective fields are expected to co-ordinate and provide co-operation for developing Distance Education Systems. It is better to start a National Institute of Research and Training for Distance Education. This institute will be doing research work for Distance Education along with training the human resources for Distance Education Systems, UGC, SAC Ahmedabad, Department of Science and Technology (DST) and the Association of Indian Universities (AIU) can provide assistance to this national body in various ways. It will provide guidance to various Distance Education Systems of tomorrow.
Distance Education Systems of the future are expected to cater to the needs and aspirations of various categories of learners with varying attitudes, aptitudes and interests on a reasonable cost with appropriate time adjustment strategies. They should be in a position to produce quality and excellence in our human resource development programmes. Careful planning and effective management strategies are required to design workable Distance Education Systems for the future.

1.5.5 Media for Distance Education

CONVENTIONAL

Print materials - structured lectures, pamphlets, handbooks, manuals and books.

MODERN (Involving use of new communication technologies)

i) Teacher-made and Self-operated
- Slides, synchronised slides and tapes, slide commentary workbooks;
- Transparencies;
- Audio cassettes; and Telephone teaching.
- Radio broadcasts, motion pictures, televised broadcasts;
- Video cassettes;
- Electronic books; and
- Self-structured programmed materials aided by computers, if possible.

The IGNOU offers a variety of academic programmes (58 programmes, counted separately for English, Hindi and other Indian languages, which together account for 372 courses) (Takwale, 1995). Many more are being worked out. These are offered by its various Schools of Studies: Humanities, Social Sciences, Education, Sciences, Engineering and Technology, Continuing Education, Computer and Information Sciences, and Health Sciences. This is a large academic organisation spread over the entire range of the country with 17 Regional Centres and 244 Study Centres. IGNOU has developed a multimedia approach to instruction: self-instructional
print material, video and audio programmes, and academic counselling sessions are the major components of this system. The self-instructional print material consists of course materials, assignments, programme guides and supplementary reading material. Some courses have project work as part of the learning requirements. The electronic media components include audio and video cassettes, which are available at the study centres, and sold through agencies, and television programmes telecast in the national network. The study centres are provided with viewing and listening facilities. As on January 1995, there was a total of about 242 thousand students in all the courses offered (Takwale, 1995).

Besides offering academic programmes, as a nodal agency in the Distance Education System, IGNOU has set up the Distance Education Council as a statutory body to perform the following roles:
- promotion of an open and Distance Education System;
- co-ordination and maintenance of standards in Distance Education; and
- financial support to the DE institutions.

1.6 JUSTIFICATION OF THE STUDY

For the present investigation, variables of Cognitive Styles, Self-Concept and Personality Types have been selected to study their effect on the Academic Achievement of Postgraduate Students studying through Distance Education, for the following considerations:

Voluminous literature comprising research studies of Mackie (1979), Letteri (1980), Graffin (1982), Yore (1986), Rogers (1990), Behal (1992), Ganihar (1993), Gupta (1995) found that there was significant relationship between Cognitive Styles and Academic Achievement. However, studies of Witkin et al (1977), Mrosla (1984), Krank (1993), Kumar (1995), Ram Mehar (1997) reported that field-dependent/independent students did not differ significantly on Academic Achievement.

Another variable considered significant for the present study pertains to the Personality Types of the students.

Broadbent (1958), Lynnard, Gordon (1961), Child (1966), Maden (1967), Goh, Davids, Moorie and Charles (1978), Upmanyu (1980), Upmanyu, Sushma and Deva (1980), found that Academic Achievement of Introverts was better than that of Extroverts. However, Mohan and Gulati (1988), Nisha (1990) found significant correlation between Extroversion and Academic Achievement.

Review of related studies, which have been conducted in this field, do not lead to a clear cut trend. The results of these studies present various types of relationships among these variables. The studies showing the effect of variables of Self-Concept, Cognitive Styles and Personality Types taken up singly are there, but studies pertaining to the conjoint effect of all the variables on Academic Achievement are not available. The variable-wise rationale of the problem leaves wide scope for investigating the combined impact of independent variables on the dependent variable in different combinations in a factorial frame of reference. It may be concluded that the variables of Self-Concept, Cognitive Styles and Personality Types are interrelated factors and if investigated together in the light of Academic Achievement of the students, the study may throw much light on an individual and combined impact of these variables, which may be used effectively for the educational significance of its consumers.
No study has been conducted on the variables of Self-Concept, Cognitive Styles and Personality Types taken together with Distance Education as mode of teaching.

1.7 STATEMENT OF THE PROBLEM
The title of the present study may be stated as follows:

ACADEMIC ACHIEVEMENT OF POST GRADUATE STUDENTS THROUGH DISTANCE EDUCATION IN RELATION TO COGNITIVE STYLES, SELF-CONCEPT AND PERSONALITY TYPES.

1.8 OBJECTIVES
The following objectives have been formulated for the present study:

1. To find out the effect of Cognitive Styles on Academic Achievement of Male, Female and Total of Male & Female students studying through Distance Education.
2. To investigate the effect of Self-Concept on Academic Achievement of Male, Female and Total of Male & Female Students studying through Distance Education.
3. To study the effect of Personality Types on Academic Achievement of Male, Female and Total of Male & Female Students studying through Distance Education.
4. To workout the Interaction Effect of Cognitive Styles, Self-Concept and Personality Types on Academic Achievement of Male, Female and Total of Male & Female Students studying through Distance Education.
5. To compute the correlation indices for the variables under study separately for Personality Types of Male, Female and Total of Male & Female Students.
1.9 HYPOTHESES

The hypotheses formulated for the present study are as follows:

1. Field-Independent students (Male, Female and Total) will show significantly better Academic Achievement than that of Field-dependent students studying through Distance Education.

2. The Male, Female and Total sample of Male and Female students with high Self-Concept will show significantly higher achievement than the corresponding students with low Self-Concept studying through Distance Education.

3. The Extroverts (Male, Female and Total) will show higher Academic Achievement than Introverts (Male, Female and Total) studying through Distance Education.

4. The two-way interaction effects of two levels of Self-Concept, Cognitive Styles and Personality Types on Academic Achievement of Post Graduate Students (Male, Female and Total) studying through Distance Education, will be significant.

5. The triple interaction of Cognitive Styles, Self-Concept and Personality Types of Male, Female and Total will have significant effect on the Academic Achievement of the Post Graduate Students studying through Distance Education.

6. The inter-correlations among the variables of study will be positive and significant for Male, Female and Total sample of students.

1.10 DELIMITATION OF THE STUDY

The present study has been delimited with respect to the variables of the study, sample, tools & techniques.

The independent variables of the study are Cognitive Styles, Self-Concept and Personality Types. All the three variables are studied at two levels each.
The sample is drawn from the M.Ed. students of Himachal Pradesh University receiving their education through the Distance Education Mode. Academic Achievement of these students is measured by the University Examination results of the year 1997.

The study has been delimited with regard to sample as well. Random sample has been taken. The size of the sample is 1500, drawn from the various states of India.

The various tools used for the present study are:

- Group Embedded Figures Test by Witkin, Oltman and Ruskin (1971) to test Cognitive Styles.
- Personality Word List by Pratibha Deo (1971) to test Self-Concept
- Eysenck’s Moundsley Personality Inventory by Jalota & Kapoor (1966) to test Personality Types.