3.1 INTRODUCTION

Inclusion of children with special educational needs is the priority of twenty-first century schooling. The policies and practices of an inclusive school involve everyone and ensure that all are involved and valued. The emphasis on an inclusive approach to learning has replaced a previous focus on integration. With integration the focus was on place and learning through assimilation into mainstream, whereas inclusion is about acceptance and supporting all learners to achieve their maximum potential within a context where they are equally valued and their individual rights and freedoms are respected. The term learners include those learners at all levels of attainment, of all ages, of whichever gender, culture or social group, from ethnic minority groups, with disabilities, sensory impairment or ill health, with communication, language or language difficulties. Schools have the responsibility to provide a broad and balanced curriculum for all learners which caters for the specific needs of individuals and groups of students.

A growing body of research indicates that there are many benefits of inclusion for children with diverse abilities. McGregor and Volgelsberg (1998), in a comprehensive review of the literature in this area, list these as:

- Children with disabilities demonstrate high levels of social interaction with non-disabled peers in inclusive settings when compared with segregated settings.
- Social competence and communication skills of children with diverse abilities are improved in inclusive settings.
- Children with disabilities in inclusive settings often have a more rigorous educational program, resulting in improved skill acquisition and academic gains.
- Social acceptance of children with diverse abilities is enhanced by the frequent small group work, nature of their instruction in inclusive classrooms. Children get to see beyond the disability when working in small groups, and begin to realize that they have much in common with children with disabilities.
3.2 DEFINING DISABILITIES

A person has a disability if he/she has a physical or mental impairment that substantially limits one or more major life activities, a record of such impairment, or is regarded as having such impairment (EEOC, 1992). Three categories of definitions of disabilities have been used in education, namely, functional limitation, medical and socio-political (Bernell, 2003). Each definition has a different emphasis and type of policy, therefore each has different financial and support implications for those with disabilities. Functional limitation definitions emphasise the limitations or inability of the person to perform a particular activity or activities. Medical definitions emphasise the person’s condition, involves an assessment of their medical condition and describes each disability in a separate category, e.g. cerebral palsy, spinal cord injury. Medical definitions of disabilities have implications for increased expenditure for health care and research and are often supported by philanthropic groups with an interest in particular disabilities (Bernell, 2003). Socio-political definitions emphasise the failure of the environment to adapt to persons with disabilities. Persons with disability do not face discrimination as these perspective policy attempts to affect their external environment (Jeon and Haider- Markel 2001).

Under the individuals with Disabilities Education Act (IDEA, 1997), the term ‘child with a disability’ is taken to mean a child with mental retardation, hearing impairments including deafness, speech or language impairments, visual impairments including blindness, serious emotional disturbance, orthopaedic impairments, autism, traumatic brain injury, other health impairments or specific learning disabilities; and who by reason thereof, needs special education and related services. Further ‘Disability is the functional consequence of an impairment or change in body or human functioning. The extent to which disability affects a person’s life depends very much upon the environments in which a person lives: social, cultural, psychological and physical (IDEA, 1997). Inclusive educational policies are consistent with the socio-political definitions of disabilities i.e. a student with disability should be viewed not differently to any other student with different physical attributes including race, gender, size etc.
In the present study of all the disabilities the investigator concentrated only on self perception of learning disabilities in children. The following sections will give brief descriptions on learning disabilities and its types.

3.3 LEARNING DISABILITY IN CHILDREN

No field of special education or probably all of education for that matter has experienced as much rapid growth, extreme interest and frantic activity as learning disabilities. The number of children identified as learning disabled has increased greatly in recent years and the category is now the largest in special education. Learning disability is a generic term that refers to a heterogeneous group of disorders due to identifiable or inferred central nervous system dysfunction. Such disorders may be manifested by delays in early development and/or difficulties in any of the following areas: attention, memory, reasoning, coordination, communication, reading, writing, spelling, calculations, social competence and emotional maturation. Learning disabilities are intrinsic to the individual and may affect learning and behaviour in any individual, including those with potentially average, average or above average intelligence.

Under the Individuals with Disabilities Education Act ‘Specific learning disability’ means a disorder in one or more basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. An important part of the definition of learning disabilities under the Individuals with Disabilities Education Act (IDEA, 1997) is the exclusionary language: learning disabilities cannot be attributed primarily to mental retardation, emotional disturbance, cultural difference, or environmental or economic disadvantage. Thus, the concept of learning disabilities embedded in federal law focuses on the notion of a discrepancy between a child's academic achievement and his or her apparent capacity and opportunity to learn. More succinctly, Zigmond (2003) notes that ‘learning disabilities reflect unexpected learning problems in a seemingly capable child.’
According to the National Institute of Neurological Disorders and Stroke (2007), learning disabilities are disorders that affect the ability to understand or use spoken or written language, do mathematical calculations, coordinate movements, or direct attention. Although learning disabilities occur in very young children, the disorders are usually not recognized until the child reaches school age. Learning disabilities are a lifelong condition; they are not outgrown or cured, though many people develop coping techniques through special education, tutoring, medication, therapy, personal development, or adaptation of learning skills. Approximately 15 million children, adolescents, and adults have learning disabilities in the United States (National Centre for Learning, 2006b).

Learning disabilities are not due to primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance or environmental disadvantage, although they may occur concurrently with any of these. Learning disabilities may arise from genetic variations, biochemical factors, events in the pre to peri-natal period or any other subsequent events resulting in neurological impairment. Learning disability is not a single disorder, but is a general category of special education composed of disabilities in any of seven specific areas: receptive language (listening), expressive language (speaking), basic reading skills, reading comprehension, written expression, mathematics calculation, and mathematical reasoning. These separate types of learning disabilities frequently co-occur with one another and also with certain social skill deficits and emotional or behavioural disorders such as attention deficit disorder.

Learning disability is one among the group of neurological disorders that affect the brain’s ability to receive, process, store, and respond to information. Learning disabilities can affect a person’s ability in the areas of listening, speaking, reading, writing, and mathematics. People with learning disabilities have at least average intelligence but have difficulty in acquiring the basic academic skills that are essential for success at school and work, and for coping with life in general. These individuals show a distinct gap between the level of achievement that is expected and what is actually being achieved. Learning disabilities can be lifelong conditions that in some cases affect many
parts of a person’s life. In some people, many overlapping learning disabilities may be apparent. Other people may have a single, isolated learning problem that has little impact on other areas of their lives.

3.3.1 Historical Influences

The study of learning disabilities was initiated in response to the need (1) to understand individual differences among children and adults who displayed specified deficits in spoken or written language while maintaining integrity in general intellectual functioning and (2) to provide services to these students, who were not being adequately served by the general educational system. Overall, the field of learning disabilities emerged primarily from a social and educational need and currently remains a diagnostic practice that is more rooted in clinical practice, law, and policy than in science. Advocates for children with learning disabilities have successfully negotiated a special education category as a means to educational protection, at the same time that the schools have seen an increase in the identification of Learning Disability.

The unexpected pattern of general strengths and specific weaknesses in learning was first noted and studied by physicians during the early twentieth century, thus giving the field its historical biomedical orientation. Doctors noted that children with learning disabilities were similar to adults and children with focal brain damage in that specific impairment in some areas of learning could occur without diminishing strengths in general cognitive ability. Although the clinical work conducted during the first half of the twentieth century recognized the existence of learning disabilities, such information had little influence on public school policies until the mid-1960s. At this time, behavioural scientists, educators, and parents expressed concern that some children had learning handicaps that were not being served effectively by general educational practices. At the same time, these children were ineligible for special education services because their characteristics did not correspond to any recognized categories of disability. This disenfranchisement stimulated an advocacy movement to provide special educational services to students with learning disabilities leading many states to establish a special education category for LD during the late 1960s and 1970s.
3.3.2 What Causes Learning Disabilities?

Evidence seems to show that most learning disabilities do not stem from a single, specific area of the brain, but from difficulties in bringing together information from various brain regions (National Institutes of Mental Health). Some factors that may cause these difficulties include:

- Genetics – many people with LD have parents or other relatives with similar difficulties. However, parent’s learning disability may take a different form in the child. For this reason, it seems unlikely that a specific learning disorder is inherited directly.

- Problems during pregnancy or birth – e.g. drug or alcohol use, low birth weight, lack of oxygen, premature or long labour.

- Incidents after birth – head injuries, poor nutrition, toxic substances such as lead.

- Factors in early childhood—neonatal seizures, developmental or relational trauma, parental stress, poor nutrition, inadequate learning environment, or toxins such as cadmium, lead, or chemotherapy.

- Brain trauma or tumours.

Learning disabilities are not caused by poverty, environmental factors, or cultural differences. In most cases, there is no apparent cause for a learning disability. There is a great diversity across people with learning disability. This diversity exists because an individual can have one specific disability or several of them. Moreover, learning disabilities do not manifest themselves in individuals in exactly the same way. Some learning disabilities can be mild, while others can be quite severe.

3.3.3 Learning disability in Psychological Perspectives

Although people generally believe that learning disabilities are an academic problem, in actual fact it is not so. To illustrate a hyperactive child may engage in a fatiguing activity or engage in socially inappropriate behaviour. Learning disability may have social and emotional concomitance. Constant experience of failure, the learning disabled child may give up, withdraw or try to overcompensate. Lack of friends may
lower his/her self-esteem, which even in the absence of learning disability may reduce his/her academic achievement. Problems of learning disability and social issues are so inter-coined that it is not easy to separate them.

Often learning disabled child faces rejection from parents, peers and teachers, this rejection may give rise to serious negative emotional reactions from the child, influencing his/her academic career and social relationships. Parents and teachers need to separate, recognise and deal with the academic, social, emotional and behavioural problems of the child adequately and competently. Only then the holistic remedial programme for the child can be developed. The social and emotional problems manifested by learning disabled children are hyperactivity, distractibility, poor self-concept, social skills deficits, impulsivity, disruptive behaviour, withdrawal, dependency, and perseveration. These social, emotional and behavioural problems may be the consequence of the manifestation of academic deficits. The following section deals with learning disability types in cognitive perspectives.

3.3.4 Learning disabilities in cognitive perspectives

The types of learning disability can also be identified by the specific processing problem. They might relate to getting information into the brain (Input), making sense of this information (Organization), storing and later retrieving this information (Memory), or getting this information back out (Output). Thus, the specific types of processing problems that result in learning disability might be in one or more of these four areas.

**Input** - Information is primarily brought into the brain through the eyes (visual perception) and ears (auditory perception). An individual might have difficulty in one or both areas.

**Auditory Perception** - (Also called Receptive Language) The individual might have difficulty in distinguishing subtle differences in sound (phonemes) or might have difficulty in distinguishing individual phonemes as quickly as normal. Either problem can result in difficulty in processing and understanding what is said. Individuals might have difficulty with auditory figure ground. They have difficulty in identifying what sound(s) to listen to when there is more than one sound.
Visual Perception—One might have difficulty in distinguishing subtle differences in shapes (called graphemes). They might rotate or reverse letters or numbers (d, b, p, q, 6, 9); thus misreading the symbol. Some might have a figure-ground problem, confusing what figure(s) to focus on from the page covered with many words and lines. They might skip words, skip lines, or read the same line twice. Others might have difficulty in blending information from both eyes to have depth perception. They might misjudge depth or distance, bumping into things or having difficulty with tasks where this information is needed to tell the hands or body what to do. If there is difficulty with visual perception, there could be problems with tasks that require eye-hand coordination (visual motor skills) such as catching a ball, doing a puzzle, or picking up a glass.

Integration—Once information is recorded in the brain (input), three tasks must be carried out in order to make sense or integrate this information. First, the information must be placed in the right order or sequenced. Then, the information must be understood beyond the literal meaning, abstraction. Finally, each unit of information must be integrated into complete thoughts or concepts, organization.

Sequencing—The individual might have difficulty in learning information in the proper sequence. Thus, he/she might get mathematics sequences wrong, have difficulty in remembering sequences such as the months of the year, the alphabets, or the time table, or he/she might write a report with all the important facts but not in the proper order.

Abstraction—A person might have difficulty in inferring the meaning of individual words or concepts. Jokes, idioms, or puns are often not understood. He/she might have problems with words that might have different meanings depending on how they are used.

Organization—An individual might have difficulty in organizing materials, losing, forgetting, or misplacing papers, notebooks, or homework assignments. He / she might have difficulty in organizing his/her environment, such as school bag, study room, bedroom etc. Some might have problems in organizing time. They have difficulty with projects due at a certain time or with being on time. (Organization over time is referred to as Executive Function.)

Memory—Three types of memory are important to learning. ‘Working memory’ refers to the ability to hold on pieces of information until the pieces blend into a full thought or
concept. For example, reading each word until the end of a sentence or paragraph and then understanding the full content. ‘Short-term memory’ is the active process of storing and retaining information for a limited period of time. The information is temporarily available but not yet stored for long-term retention. ‘Long-term memory’ refers to information that has been stored and that is available over a long period of time. Individuals might have difficulty with auditory memory or visual memory. One reads a sentence and hold on to it. By the end of the paragraph, he/she pulls together the meaning of the full paragraph. This is working memory. He/she continues to read the full chapter and study it. Information is retained long enough to take a test and do well. This is short-term memory. But, unless the information is reviewed and studied over a longer period of time, it is not retained. With more effort over time, the information might become part of a general body of knowledge. It is long-term memory.

Output- The Information is communicated by means of words (language output) or though muscle activity such as writing, drawing, gesturing (motor output). An individual might have a language disability also called expressive language disability or a motor disability.

Language Disability- It is possible to think of language output as being spontaneous or on demand. Spontaneous means that the person initiates the conversation. Thoughts have been organized and words formed before speaking. In Demand language the person is asked a question or asked to explain something. Now, he/she must organize his/her thoughts, find the right words, and speak at the same time. Most people with a language disability have little difficulty with spontaneous language. However, in a demand situation, the same person might struggle to organize his/her thoughts or to find the right words.

Motor Disability- One might have difficulty in coordinating teams of small muscles, called a fine motor disability. He/she might have problems with coloring, cutting, writing, buttoning, or tying shoes. Others might have difficulty in coordinating teams of large muscles, called a gross motor disability. He/ she is awkward when running or jumping.

Each individual will have his or her unique pattern of learning disability. This pattern might cluster around specific common difficulties. For example, the pattern might primarily reflect a problem with language processing-auditory perception, auditory
sequencing/abstraction/organisation, auditory memory, and a language disability or the problem might be more in the visual input to motor output areas. Some people with learning disability will have a mixture of both.

3.3.5 The potential performance discrepancy

There is currently no universally accepted test, test battery, or standard for identifying children with Learning Disability. While a discrepancy between Intelligence Quotient (IQ) and achievement has been a widely accepted criterion for the identification of Learning Disability and still serves as the driving clinical force in the diagnosis of Learning Disability. There is considerable variation in how the discrepancy is derived and quantified. Federal regulations and extant clinical criteria do not specify particular formulas or numerical values to assess discrepancy objectively. The effect of this lack of specification on both clinical and research practices is substantial.

From a clinical standpoint, a child can be identified as having a learning disability in one school district but not in a neighbouring district because of differences in the measure of discrepancy used. From a research perspective, different approaches to the discrepancy measurement lead to substantially different sample characteristics and different prevalence estimates, which undermine the ability to replicate and generalize findings. For the individual child, use of the discrepancy standard clearly promotes a wait-to-fail policy because a significant discrepancy between IQ and achievement generally cannot be detected until about age eight or nine.

In fact, most school do not identify children with learning disabilities until the child is reading well below grade level, generally in third or fourth grade. By this time the child has already experienced at least a few years of school failure and probably has experienced the common attendant problems of low self-esteem, diminished motivation, and inadequate acquisition of the academic material covered by his classmates during the previous few years. It is clear that, the longer children with learning disabilities, at any level of severity, go without identification and intervention, the more difficult the task of remediation becomes and the harder it is for the children to respond. Specifically, the above data strongly suggest that children at risk for reading failure should be identified before the age of nine if successful intervention results are to be anticipated. For example,
a longitudinal investigation of 407 students' found that 74% of the children whose
disability in reading was first identified at nine years of age or older continued to read in
the lowest quintile throughout their middle and high school years. In addition, the longer
the learning disabled children, at all severity levels, are faced with failure in reading in
the classroom setting, the greater the probability that comorbid learning and behavioural
difficulties will arise, further complicating the remediation task.

Learning Disabled children have been characterized as passive or inactive learners
because of their failure to attend selectively, to organize material to be learned, to use
mnemonic and comprehend strategies, or to maintain on task behaviour. Nevertheless, the
evidence suggests that the learning disabled children can behave strategically if instructed
to do so (Wong and Jones, 1982). The presence of specific information processing deficits
among the learning disabled children (Torgesen, 1982; Vellutino, 1979) does not negate
the importance of strategic processing behaviours. On the contrary, the use of active
strategies may permit the learning disabled children to compensate for basic deficiencies.

Learning disabled children as a group have been characterized as heterogeneous
i.e. learning disabled children display quite varied academic profiles in terms of patterns
of strengths and weaknesses (McKinney et al., 1985). The one common characteristic
shared by the learning disabled children is the presence of a significant discrepancy
between their ‘expected’ achievement predicted by IQ and their ‘actual’ achievement
(Short et al., 1986). While federal and state guidelines mandate the presence of an IQ
achievement discrepancy for placement in learning disability services, this discrepancy is
not particularly informative for remediation of information processing deficits.
An analysis of the underlying causes for this discrepancy does offer some direction for
remediation effects.

3.3.6 Assessment / Identification of learning disabled children

In education the word assessment is synonymous with testing. Literally hundreds
of tests have been developed to measure virtually every motor, social, or academic
response children make (Buros, 1978). Unfortunately much of the testing in education
has been conducted primarily for the purpose of identifying children for certain special
education categories and placement. Certainly, assessment for identification is important.
As Mayers and Hammil (1982) points out, that at some point along the continuum of services provided by the school, there must be a cut-off that dictates which children will be served by special education and which will remain totally, the responsibility of the general education program. In any event, the type of assessment that deals with identification is of the utmost importance so that children are classified according to type of handicap before they can qualify for special services.

However, because of the complex way that learning disability is defined, the task of identifying the true learning disabled child guarantees that a battery of tests be administered. One study of 14 school districts of Michigan found that, on the average, three to five different tests were given to each student referred for learning disabilities (Perimutter and Parus, 1983). As a result of these assessment practices, learning disabled children have been called the ‘most diagnosed’ of all types of exceptional children (Lovitt, 1967). Even though identification and placement are appropriate and important functions of educational testing, assessment has a much more important purpose: to provide information for planning and implementing an instructional program for the child.

3.3.6 Identification of learning disabled children techniques and tests - The various techniques of identification of learning disabled children include observation, rating scale, check list, interview etc. By employing this we can identify the learning disabled in relation to their general personality and characteristics. For the identification of the degree of disability a list of these characteristics common with the Learning Disability is prepared and then weighed the child in relation to these for identification of the degree of disability. Also seek the opinion of teachers and other persons regarding the learning abilities, mental level, scholastic potential etc. The various testing devices include – standardized diagnostic tests and ability tests or process tests, achievement tests and daily assessment system. At least five different types of tests are commonly used in the assessment of learning disabilities namely: norm-referenced tests, process tests, informal reading inventories, criterion-referenced tests and direct daily measurement. Of these five types norm referenced tests and process tests are indirect assessment devices. Informal reading inventories, criterion referenced tests and direct daily measurement is classified as direct assessment techniques.
Norm referenced tests – These tests are designed such that child’s score can be compared with those of other children of the same age who have taken the same tests. Deficits in academic achievement are the major characteristic of learning disabled children; standardized achievement tests are commonly used. Achievement tests assess the degree of achievement of the children in various knowledge, skills and performance process areas. These may be two types namely standardized achievement tests and teacher made tests. While the former are structured by an outside agency and are readily available for administration, the latter are constructed by individual teachers in their respective subjects or areas for assessing the degree of the children’s achievement or diagnosing their learning difficulties and disabilities. The performance of the individual students in these tests may reveal the nature and extent of learning deficiencies and deficits related to various learning areas. Some standardized achievement tests are the Iowa tests of Basic skills (Hieronymus and Lindquist, 1978), the Peabody Individual Achievement Test (Dunn and Markwardt, 1970), Wide Range Achievement Test (Jastak and Jastak, 1965), Kaufman Assessment Battery for children (K-ABC) and Woodcock Johnson psycho educational Battery.

Informal reading Inventories - Informal reading inventory usually consists of a series of progressively more difficult sentences and paragraphs that the child is asked to read aloud. By directly observing and recording aspects of the child’s reading skills- such as mispronounced vowels or consonants, omissions, reversals, substitutions and comprehensions, the teachers can determine the level of reading material that is best suited for the child and the specific reading skills that require remediation.

Criterion Referenced Tests – In criterion referenced tests the child’s score on a criterion referenced test is compared to a predetermined criterion, or mastery level. The value of criterion referenced tests is that they identify the specific skills the child has already learned and the skills that require instruction. Criterion referenced tests are often informally developed by classroom teachers.

Daily assessment system-There can be a systematic, well planned regular daily assessment system in schools for recording the children’s achievements on various
specific knowledge, skill and performance areas. This process of continued information may bring to light the important things related with nature and the extent of learning deficiencies and deficits of individual learners.

Ability tests or process tests - Learning disabled suffer from the inability or incapacity in the process of learning and understanding. The ability tests or process tests are designed to assess the degree of their inability or poor ability to understand and learn. The learning of a child is processed through his abilities of visual perception, auditory perception, eye motor coordination, psycho-linguistic understanding etc. The ability tests or the process tests are designed to test the abilities of the children related to these areas. Two process tests most widely used in the diagnosis and assessment of learning disabilities: the Illinois Test of Psycholinguistic Abilities (ITPA) (Kirk et al., 1968) and the Marianne Frostig Development Test of Visual Perception (Frostig et al., 1964).

3.4 LEARNING, INTELLIGENCE AND INTELLIGENCE TESTING

Every development of the human being is the result of learning. In fact an individual is in the process of learning throughout his or her life. Each and every aspect of human life thus is related to learning. Development of the individual from infancy to maturity is a continuous process; and his or her adult characteristics depend on earlier growth and experience. ‘Learning is therefore, a key process in human behavior’. It is learning that influences one’s knowledge, skills, attitudes and even goals. The very central idea of the entire educational processes is learning. Throughout the course of recorded history it has been repeatedly observed that persons differ in their ability to learn, to adjust to novel situations and to manage things, people and ideas. This is true in case of a classroom setting where pupil differ in various aspects. It is seen that some learn with good speed but others linger too long; that is some are very bright and some are too dull. Though children are very much alike in several ways especially in the case of physiological characteristics the question that still exists is that why one individual is good in particular subject than the other and effective in his or her responses to a particular situation than other. There is no doubt that interest, attitude, desired knowledge and skill count towards this achievement. But still the important aspect that contributes significantly to these varying differences is intelligence, which the ancient Indian rishis named as ‘Viveka’.
Intelligence is the ability to adapt to and learn from life’s everyday experiences. Still others believe that it is the ability to think in the abstract (Sattler, 2001). The concept of intelligence has been discussed since the ancient Greeks. However, its scientific study started with the work of Alfred Binet (1916), who devised the first intelligence test, which yields an overall IQ a global index of people’s intelligence and individual scores on ability subtests. Binet’s (1916) work established the idea that intelligence is a general trait. Likewise, Charles Spearman (1927) believed that intelligence is a single trait that people have in varying degrees. Spearman called this trait as general intelligence, or ‘g’.

Although various intelligence tests yield somewhat different scores, research supports the single-trait theory of intelligence by showing that scores in all subtests tends to be correlated (Brody, 2007). However, Cattell (1987) found that general intelligence is better understood by distinguishing two components: fluid intelligence, the ability to reason and process information quickly, and crystallized intelligence, the knowledge and skills acquired by learning and experience. General intelligence test scores are strong predictors of academic achievement and moderately predict work performance. (Lubinski, 2000). More recently, theorists have developed multitrait theories of intelligence.

After analyzing people’s performance in several domains, Howard Gardner (1983) propounded a unique theory of intelligence called the “theory of multiple intelligence”. He asserted that human intelligence or cognitive competence can be better described as a set of an individual’s multiple abilities, talents and mental skills related to a multiple number of domains of knowledge in a particular cultural setting. Gardner said there are eight independent types of intelligence that grow and develop differently in different people, depending on their hereditary characteristics or environmental experiences. Each intelligence is relatively autonomous intellectual potential which is capable of functioning independently of the others. These different types of intelligence have been named by him as linguistic, logical-mathematical, spatial, musical, bodily-kinaesthetic, intrapersonal and interpersonal and naturalistic.

Sternberg (2003), another multitrait theorist, suggests that intelligence is made up of three dimensions—hence the name triarchic intelligence: An analytical dimension, which is the ability to think abstractly and process information, similar to more traditional
intelligence definitions, a creative dimension, which involves the ability to deal with novel situations effectively by turning new solutions into automatic processes that require little cognitive effort. A practical dimension, which is the ability to deal with everyday tasks, including adapting to the environment and/or changing the environment. Sternberg (2003) believes that people’s intelligence can be enhanced by providing them with opportunities to think analytically, creatively and practically.

The role of intelligence and intelligence testing in the learning disability field continues to be debated among researchers and practitioners. Some argue that intelligence and learning disabilities have no relation, whereas others claim that new measures of intelligence are needed to clarify the issue. Siegel (1989) asserted that IQ is irrelevant when defining learning disability, while Naglieri and Reardon (1993) maintained that different measures of intelligence may be more sensitive to measuring intellectual differences of those with learning disability thus contributing to better diagnostic process. The Das Naglieri: Cognitive Assessment System (Das and Naglieri, 1997) test of cognitive functioning was developed to expand the definition of intelligence. The test is based on the Planning, Attention, and Simultaneous and Successive (PASS) theory of cognitive functioning based on the work of Luria (Das and Naglieri, 1997).

3.5. THEORETICAL OVERVIEW OF PASS MODEL

PASS (Planning, Attention, Simultaneous and Successive) theory has been offered as an alternative to general intelligence, and is based on a description of neuropsychological processes. The PASS theory was developed through empirical and theoretical research over the past several decades. The PASS model of processing, first proposed in 1975 by Das, Kirby, and Jarman described as an information processing theory based on Luria’s work and later as information integration theory and most recently as PASS (Planning, Attention, Simultaneous and Successive) theory elaborated by Das et al. (1994) and Das et al. (1996) challenges general factor ‘g’ theory on the grounds that neuropsychological research has consistently demonstrated that brain is made up of interdependent, but separate, functional systems.

The theory was first described as an information processing theory based on Luria’s work (Das et al., 1975), later as the Information Integration theory (Das et al., 1979), and
most recently as the Planning, Attention, Simultaneous, Successive (PASS) theory (Das et al., 1994). The PASS theory of intelligence identifies three operational units that are important in understanding mental functioning: attention, simultaneous and successive processing, and planning (Das et al., 1994).

Based on the work of A.R. Luria, the PASS model is grounded in neuropsychology. The maintenance of attention and regulation of cortical tone, the processing and storing of information, and the management and direction of mental activity comprise the activities of the functional units that work together to produce cognitive processing (Luria, 1966, 1970, and 1980, cited in Das et al., 1994). From the ground work of Luria, Das and his colleagues have extensively researched the functional units and their role in cognition (Das, 1987; Kirby and Williams, 1998; Naglieri and Reardon, 1993).

3.5.1 The knowledge base

The PASS (Planning, Attention, Simultaneous and Successive) model of intelligence recognises the role of knowledge base in cognitive processing. Knowledge base, in the context of PASS is an interactive component of cognition (Wertsch and Tulviste, 1992). A grounded base of knowledge is required for cognitive processing, and the capacity for mental functioning depends on prior knowledge which is stored in long-term memory (Das et al., 1994). Thus, information is organised in memory and the processes involved in its retrieval are influenced by prior learning experiences. The resulting output performance occurs after consulting an internal world of knowledge (Broadbent, 1986). Thus, individual differences in how information is processed may be affected by the uniqueness of the knowledge base.

When exposure to new material occurs, it is likely that the individual relies on prior knowledge to assess incoming information. Prior knowledge, in effect, acts as a point of comparison from sensory input to final output. Mediated action occurs whereby the knowledge base shapes sensory input. Mediation entails the blending of new information with the individual’s historical experiences (Das et al., 1994). This ‘mediated action’ can be linked to cognitive processing. In the PASS theory of intelligence, knowledge base is an interactive component important to all aspects of mental functioning. The PASS theory of intelligence proposes that accumulated knowledge coordinates an individual’s cognitive processing (Das, 1987).
3.5.2 The planning, attention, simultaneous and successive processing

The four PASS process are presented in the context of PASS theory of intelligence. This theory identifies three operational units that are important for understanding mental functioning. Attention, Simultaneous and Successive processing, and Planning (Das et al., 1994). In the schematic diagram of the PASS model shown in Fig 3.1, there are three main divisions: input, processing and output. Input arrives through sense organs: eyes, ears, nose, tongue and skin as well as through muscles, joints, and internal organs, through which individual receive sensations of movement and pain. All this input must be sorted, analysed, stored and interpreted, which is broadly described as processing. Individual then use this information in performance, which is the output. Once received, the input is transformed by the sense organ into messages and sent to process. When cognitive tasks or problems in intelligence tests are concerned, the input is processed in three blocks or functional units.

Arousal-Attention is the first unit which comprises basic behaviours such as the orienting reflex (Pavlov, 1928), as well as instances of complex behaviour involved in discrimination learning and selective attention. Attention is considered to be much more complex than the simple orienting response in cognitive psychology. It is a basic component of intelligent behaviour involving allocation of resources and effort. Attention, Arousal, effort, and capacity are the concepts that have complex relationships which can be used to understand cognitive behaviour. Hyperactive behaviour is an example of complex disorder in arousal-attention.

The second functional unit includes Simultaneous and Successive coding of information. Simultaneous processing involves the arrangement of incoming information into a holistic pattern, or gestalt that can be “surveyed” in its entirety. For example, the sight recognition of whole word involves this kind of processing (Das, 1988). In geometry and to a certain extent in understanding maths problems, the child may be required to hold all elements of the task together in the mind, surveying the elements before solving the problem. Successive processing refers to coding information in discrete, serial order where the detection of one portion of the information depends on its temporal position relative to the other material.
It is used in skills such as spelling, where the child has to pay attention to the sequence or succession of letters in the word in order to spell it correctly. It may also be used in sequential tasks such as writing. An individual may use one or the other process, depending on the task requirement, such as in spelling and decoding words phonetically.
(use of successive processing) and the child’s habitual mode of information processing. The relationship between simultaneous – successive processing and school learning illustrates the usefulness of the process model and its advantage over a general ability measure (Das, 1988).

The last major function to evolve developmentally is Planning and Decision making. Luria (1966b) referred to planning as that which consists of programming, regulation, and verification of behaviour. Planning is viewed as a process that incorporates the non-routine selection of programs and that, in Shallice’s (1982) view, functions through a supervisory attentional system. The theoretical work on planning aside from Luria’s work, takes a variety of forms (Das et al., 1996) however, most views include the main elements stressed by Cicerone and Tupper (1986); the ability to formulate goals, to develop a plan to reach the goals, to execute the plans and the ability to monitor the execution and revision of plans as required.

As part of Luria’s systems approach, the interaction between planning and the other functions of the brain, particularly the attention functions is emphasized. Luria’s studies particularly stressed the fact that the physiological relationships between attention and planning are evident in the major ascending and descending cortical fibres that link the first and third functional unit areas of the human brain respectively, and that behavioural studies strongly confirm the interdependence between these units. These four processes contribute to cognitive performance. Output or performance, is the response or behaviour that alone can be measured. Individuals sometimes show a gap between what they know and what they can do, that is between knowledge and performance. Performance can thus be influenced by cognitive factors, such as the failure to come up with an appropriate motor program, or by motivational and personality factors.

As said before PASS theory stresses on the importance of knowledge base in addition to all these processes. Students can solve any problem only when they have an adequate base of knowledge for those tasks. The base is built by both formal and informal learning. The knowledge base is also increased through processing information as well as from the response or output. Prior knowledge influences all processing and output.
3.6 COGNITIVE PRINCIPLES OF TEACHING - LEARNING

Cognitive psychologists have identified some common principles underlying all cognitive views of learning (Bruning et al., 2004). Different cognitive principles of teaching learning are

Attract the students Attention- Attention is the starting point of learning. Effective teachers are aware of the relationship between attention and learning and regularly monitor and direct the student’s attention to what is important in the classroom. This can be done directly, by requesting the students to disregard irrelevant stimuli in the classroom environment, or indirectly by using methods to attract and maintain the students’ attention throughout the lesson.

Emphasize what the students already know- Prior knowledge is the basis on which new learning is built. Students who already know something about a topic are able to learn new information about the topic more effectively than those who do not (Alexander et al., 1994). Teachers should activate the students prior knowledge, to help them make connections with the new information; assess the quality of this prior knowledge before teaching new concepts.

Help the students become Active Meaning Makers-In view of most cognitive theories, meaningful learning is the products of the interaction among what the students know, the new information, and (how the students act)what the students do as they learn. An active learner engages in mental processes that result in meaningful understanding of the material (Simons, 1993). Teachers can improve the students learning by placing the students in the most active role as far as possible during learning. Cognitive views of active learning focuses on minds-on activities rather than hands-on activities (Moreno and Mayer, 2005).

3.7. PERCEPTION IN COGNITIVE LEARNING

Perception is described as a set of sensory-perceptual processes concerned with the pick-up, processing and analysing the information about sensory and motor events taking place in the immediate environment. It is evident from this that perception may be thought of as a part of an information-processing system that is primarily concerned with
the handling or processing of concrete or figural information. Thus perception and
cognition are making up two ends of a continuum of information processing, a continuum
that deals at one end with concrete or figural information and at the other end with more
abstract forms of information. If this is indeed the case, the distinction between perception
and cognition is a fine one-one that has more to do with the kind of information
processed than with how or at what level the information is processed. Thus perception
may indeed be a rudimentary form of intelligence or cognition and it might be thought of
as a “building block” for the development of the ability to process or use abstract
information- the kind of information more uniquely involved in human cognitive and
intellectual ability.

The figural base of letters, words and sentences needs to be adequately processed
before the words and sentences themselves can become meaningful abstractions.
Perception may overlap and or precede cognition. That is, the figural base for more abstract
meaning or interpretation of stimulus information occurs before the symbolic/semantic
meaning of information arises. Therefore perception may provide the foundations for
higher order, abstract, intellectual operations.

3.7.1 Nature and Importance of perception

Perception refers to the way a person try to understand the world around him or
her. He or She gather information through his/her five sense organs, but perception adds
meaning to these sensory inputs. The process of perception is essentially subjective in
nature, as it is never an exact recording of the event or the situation. Perception is the
process by which a person organize and interpret his sensory impressions in order to give
meaning to the environment. As pointed out, a situation may be the same but the
interpretation of that situation by two individuals may be immensely different.

Perception is the set of processes by which an individual becomes aware of and
interprets information about the environment. Two basic components have significant
bearing on what one perceives. First, Perception is selective. Some information is
processed, some is not. Second, information that is processed must be ordered and
categorized in some fashion that allows the individual to ascribe meaning to the selected
stimulus information. This phenomenon is called perceptual organization. When one
perceives complex forms of stimulation, the human organism automatically organizes their features in some way. Within the broad framework of selectivity and organization fall numerous general factors related to what one perceives.

3.7.2 The Perceptual Process

Perception is always based on earlier experience and is the process by which one becomes acquainted with his environment; it implies that the stimulus creating a sensation has been registered, however unconsciously on the brain. Perception simply implies recognition and interpretation. Perceiving means being aware of meaningful sensory input, and is dependent upon sensory data from the environment. But, perceiving is not only 'input,' it also involves the organism operating on the environment. This two-way traffic in perceiving has been referred to as the organism-environment transaction. The basic processes involved in human perception are selected stimuli in the form of visual or auditory are impinged on our sense organs, are selectively chosen and registered in the brain for interpretation and consequent action. For the registration, the attention and interest of the individual are essential. Perception depends not only on the physical stimuli, but also on the stimuli’s relation to the surrounding field and on conditions within the individual.

There are primarily two different ways to study the perceptual process. In the first, people study how the person’s perception is related to the stimulus in the environment. This is called psychophysical analysis of the perceptual process. Psychophysics focuses on relationship between stimulus and perception and refers to the quantitative methods for precisely measuring relationships between stimulus and perception. Here people do not consider the details of how this perception was really arrived at. The second way to study it is to consider how the person’s perception is related to the physiological processes that are occurring within the person’s sensors and/or brain. Receptors in the sensory organs like eye, ear, skin etc. transduce environmental energy (stimulus) into electrical signals. These signals are carried to different areas of the brain by nerves where they are processed to cause different perceptions. This is the broad basis of the physiological approach of studying the perceptual process. This is called physiological analysis of the perceptual process. In both
these, people will be concerned with the role of knowledge (includes also memories, expectations etc.) in perception. This is called cognitive influences. All these are intimately related and often people will take a more holistic approach of cross referencing these disciplines and forming a complete and consistent picture of the perceptual procedure. Perception can vary widely among individuals exposed to the same reality. There are a number of factors influencing perception. They are described below.

3.7.3 Factors Influencing Perception

A number of factors operate to shape and sometimes distort perception. These factors can reside in the perceiver in the object or target being perceived, or in the context of the situation in which the perception is made. The internal factors that influence perception are-

Sensory Limits and Thresholds: Our sensory organs have specialized nerves which respond differently to the various forms of energy they receive. For instance, our eyes receive and convert light waves into electrical energy which are transmitted to the visual cortex of the brain to create the sensation of vision and subsequently leading to perception. But each sense receptor requires a minimum level of energy to excite it before perception can take place. The minimum level is called the absolute threshold – a point below which people do not perceive energy. The differential threshold is the smallest amount by which two similar stimuli must be different in order to be perceived as different.

Factors in the perceiver-When an individual looks at a target and attempts to interpret what he or she sees, that interpretation is heavily influenced by the personal characteristics of the individual perceiver. Personal characteristics that affect perception included a person’s attitudes, personality, motives interest, past experiences, and expectations.

Psychological Factors: Psychological factors such as personality, past experiences, expectations, attitudes, interests and learning and motives affect an individual’s perceptual process to considerable extent. The internal set or the inclination to perceive certain stimuli in a particular way also influences one’s perception. These largely determine why people select and attend to a particular stimulus or situation over other. Things compatible to one’s learning, interest, attitude and personality are likely to get more attention than others. Likewise, one’s
expectancy can affect and even distort one’s perception. People hardly rely too much on pure sensory inputs and perceive the reality in their own subjective way. People past learning also affects the perceptual process and lends a typical orientation in what they perceive.

External Factors

Factors in the target-The characteristics of the target being observed affect what is perceived. The prerequisite of perception is attention. It has been found that there is a tendency to give more attention to stimuli which are large in size, moving, intense, loud, bright, contrasted, novel, repeated, stand out from the background, proximity and similarity. Loud voice people are more likely to be noticed in a group than quiet ones. So, too, are extremely attractive or unattractive individuals, because targets are not looked at in isolation. The relationship of a target to its background also influences perception, as does our tendency to group close things and similar things together.

Factors in the situation-The situation or the context in which people see objects or events are important to shape our perception. The time at which an object or event is seen can influence attention, as location, light, heat, or any number of situational factors.

3.8 PERCEPTION AND THE INDIVIDUAL

Perception is the process by which people obtain first hand information about the world. It involves more the distinctive effects of experience. Perception also has a responsive aspect; it entails discrimination, selective responses to the stimuli in the immediate environment. Gibson (1967) defines perceptual learning as an increase in the ability to extract information from the environment as a result of experiences with stimulation from the environment. As Combs (1962) states the position, all behaviour, without exception is completely determined by, and pertinent to, the perceptual field of the behaving organism. This concept is fundamental in understanding the organism.

Perceptual psychology focus on the individual’s inner core of feelings and beliefs and how these inner forces influence his/her view of the world about him/her and his/her relationship to that world. A person’s behaviour is the direct result of his/her total perceptual field at the moment he/she thinks and acts. More specifically at every moment his/her behaviour can be described as the result of how he/she sees himself/herself, how
he/she views the world about him/her and the interrelationship of these two (Combs, 1962). It is evident that the conditions under which children grow and develop are not so important in understanding their behaviour as is the way in which they react to or perceive these conditions. Of all the perceptions that exist for an individual, none is as important as that he/she has about himself/herself. The individual’s self is the centre of his/her entire thinking, feeling world and all his/her actions spring from his/her perceptions of self and the world.

Development of self-perception at the childhood largely depends on how people react to the child for eg., how parents and caregivers handle and care for them. As they grow older they broaden their outlook. Consciously or subconsciously, they weigh whether others’ thoughts, attitudes, actions, and reactions will work for them. At some point, then, they begin to see themselves in their own way. The way in which they see themselves is called self-perception. Self-perception comes from one’s experiences.

If the child has experiences that help him/her to achieve the things he/she wants, he/she will see himself/herself in a positive way. One’s state of mind about one self clearly impacts his/her ultimate performance. The self-perception plays a greater role as they get older. Older people have learned and practiced being open to the ideas of others; they are okay with being wrong; they are not attached to particular outcomes; and they have learned how to be good listeners (Boone, 2001). Since they have gained confidence through life experiences, reflected appraisals and social comparison are no longer very important. Instead, they look at themselves from the point of view of the experiences they have had.

### 3.9 SELF-PERCEPTION IN CHILDREN

Self-perception is an individual's awareness of his/her own identity. There are three aspects of this concept; self-image of what the person is, ideal self (what the person wants to be), and self-esteem (what the person feels about the discrepancy between what he/she is and what he/she would like to be) (Lawrence, 1996). Self-perception of the sense of identity is that part of the personality which enhances the social participation of the individual. The child acquires various images of itself via the reactions of its environment to its actions. Our self-image, and particularly our evaluation of ourselves, is influenced
by the way in which other people see us and evaluate us’ Combs (1962). The importance of the child, of the people around it and the way in which those people judge the child’s actions are crucial determinants of the value which the child attached to itself. Here as in other context, the child does not act haphazardly, one way or another, it strives to attain self-experience that is as possible and Snyge (1959) says that the most fundamental motive for human action is the desire to maintain and promote the experienced self. Thus the value a child experiences or the image, the child has acquired of itself does a great deal to determine the way in which it interprets and perceives different situations and also the way in which it acts in those situations.

In order for the child to be able to meet new situations actively and constructively and grow into them in several respects, it must be given the opportunity of acquiring a balanced knowledge of its own resources and those of other people. Moreover the child must also feel that it is accepted as a person by those in its immediate vicinity, in order itself to be able to accept others. Apart from often being crucial to learning, self-perception is probably the most important component of creative, independent and critical thought and also of the ability to feel solidarity, responsibility, and consideration, self-perception then is a focal point of concepts relating to both individual and collective capacities for action the two complementary sides of the individual personality.

The concept of self-perception also has to be viewed in a wider social context. Both the context and the form of the social psychological processes in which self perception is shaped have to be related to different objectives, conditions deriving from a given social structure. Economic, social, cultural and political conditions characteristic of our society impose restrictions on the shaping of social, psychological and pedagogical processes in school. The dimensions in which the identity and self-perception of the child are enabled to develop are thus to a great extent predetermined. Self-perception at school is affected by the image that other significant persons (teachers, parents, peers) have of the students (Harter, 1986) and by social comparison with others in the same setting (Rogers et al. 1978).

Children with Learning Disability have low self-perception in academic areas because of their basic difficulty in acquiring academic competence (Renick and
A more recent study reported that 70 per cent of middle school students with Learning Disability showed significantly lower academic self-perceptions than did their non-Learning Disabled peers (Hagborg, 1996). However, conflicting results have found that children with Learning Disability perceive themselves doing well academically as non-Learning Disability LD children (Bear and Minke, 1996; Stone, 1997). Renick and Harter (1989) found that students with LD showed different levels of academic self-perception in different educational settings: higher in the special education classroom but lower in the regular class. The difference may be due to the variation in the comparison group. In the special education class, the comparison group consists of peers with similar learning difficulties, whereas in the regular class, the comparison group is drawn from generally higher-achieving peers.

There is much research that shows that children who have learning disabilities are at risk for having lower self-esteem and self-worth than that of their peers. From an early age, children compare themselves with others in areas such as academics, the ability to make and keep friends, and athletic power. For younger children the comparisons and subsequent self-judgment can be rather simplistic or ‘black and white’. Children with learning disabilities may judge themselves as ‘slow’ or ‘dumb’ based on academic comparisons with other children. These self-judgments are often global in nature such that a child who is having difficulty at school may perceive themselves negatively in all areas of their development.

Children who are diagnosed with learning disabilities have been having difficulty in school for many years before the actual diagnosis, because the diagnosis of a learning disability is often based on a discrepancy between a child’s academic competence and their measured IQ score. It is more difficult to diagnose children before 1st or 2nd grade because expectations for academic achievement are not that high. Subsequently, children with learning disabilities may have endured many years of negatively comparing themselves to their peers and developing lowered self-esteem and self-worth before being formally diagnosed.

Professionals who work with learning disabled children, have important roles in helping these children recognize both their areas of difficulty and their areas of strength.
They also need to educate children and families about the nature of learning disabilities. Families need to be educated that children with learning disabilities are bright; they just have a deficit in a particular area of learning. The message that learning disabled children have average or even above average IQ is one that bears emphasis often, to children as well as families.

3.10 SELF-PERCEPTION AND ACHIEVEMENT

Psychologists and motivation theorists have long believed that students’ positive attitude toward learning and positive self-perception of their competence have great impact on their motivation thus enhancing their academic achievement (Bandura, 1994). Many empirical studies have tested these assumptions and generally support this hypothesized feedback loop among people’s self-evaluation, or self-efficacy beliefs, intrinsic interest, motivation, and accomplishment (Zimmerman and Bandura, 1994).

Students who hold positive self-perceptions usually try harder and persist longer when faced with difficult or challenging tasks. On the other hand, students who feel relatively worthless and ineffectual tend to reduce their effort or give up altogether when work is difficult (Bandura 1982; Covington, 1984). These negative findings are consistent with claims that self-perceptions among students with Learning Disability, as among people in general, depend mainly on the targets with whom they compare themselves (Grolnick and Ryan, 1990). In this case, one would indeed expect children with Learning Disability who attend self-contained frameworks, where their salient reference group consists of other students with disabilities, to feel more positive about themselves than students who attend regular classes, and to compare themselves primarily with more competent others. Inclusive education is one such setting where the children with special needs are placed with normal group of children to bring in independent feelings and encourage social interaction in the disabled group.

3.11 NEED AND SIGNIFICANCE OF THE STUDY

Education as human rights has been recognized and affirmed in various national and international conferences including Universal Declaration of Human Rights (Article 26), Convention on the Rights of the Child (Article 28), World Conference on Education for All (1990), the Salamanca Conference (1994) and World Education Forum (2000) where
UNESCO, UNDP, UNICEF, UNFPA, World Bank, etc. and agencies and representatives from all over the world gathered to review and analyse their efforts towards the goal of "Education for All". Consequently, Inclusive education is regarded as the only means to achieve the goal of "Education for All".

In Salamanca, Spain, 1994 more than 300 participants representing 92 governments and 25 international organizations met to further the objectives of "Education for All" by considering the fundamental policy shift required to promote the approach of 'Inclusive Education', mainly to enable schools to serve all children, particularly those with special educational needs. The Conference adopted the Salamanca Statement on Principles, Policy and Practice in Special Needs Education and a Framework for Action. The Salamanca Conference marked a turning point for millions of children who had long been deprived of education. It provided a unique opportunity to place special education within the wider framework of the "Education for All" (EFA) movement. The goal is nothing less than the inclusion of the world's children in schools and the reform of the school system. This has led to the concept of "Inclusive School". The challenge confronting the concept of "Inclusive School" is that of developing a child-centred pedagogy capable of successfully educating all children, including those who have serious disadvantages and disabilities.

To provide quality basic education to all children is now a globally accepted reality (World Declaration on Education for All, 1990; Delhi Declaration, 1993). When developed countries are concentrating on enhancing standards of achievement, while the developing countries, the focus is on access and participation with a reasonable level of achievement. School systems in developed countries have historically operated a parallel system of ordinary and special schools and now they are moving from "mainstreaming" and "integration" towards the development of "Inclusive Schools" (Ainscow, 1993). For school system in developing countries, inclusive schooling is not an alternative choice but inevitability. The goal for both is to organize effective schools for all children, including those with special needs. Planning and implementing this qualitative change to the system is a challenging task (Jangira, 1995).
The goal of organizing effective schools for all is common to all countries and the magnitude and nature of the task would vary accordingly. The school system must be changed to enable it to respond to the educational needs of all children, including those with special needs. Each school has to accept that it must cater to all the children in its community. This fundamental shift in school policy is to be accompanied by: curriculum reform ensuring it accessibility to all children; teacher education reform to equip mainstream teachers with appropriate knowledge and skills; and the building of a support system (Jangira, 1995).

The National Policy on Education of India in 1986 had included children with moderate disabilities as far as possible in the mainstream schools. In practice children with multiple and severe disabilities have also been integrated into the UNICEF assisted "Project Integrated Education for the Disabled" (PIED). However, prior to any such integrated school programme, teachers training either as pre-service or in-service is highly recommended (Jangira 1995). In fact, the philosophy of "Education for All" or "Inclusive Education" implies improving the learning achievements of children through the effective schools for all initiatives. The District Primary Education Programme (DPEP) funded by the World Bank in India has been running effectively in most of the states that in-service training for teachers is regarded as crucial to its success (Jangira, 1995).

Integration of disabled children with normal children provides least restrictive environment for the disabled children. This approach helps the disabled children to grow and develop like normal children. It promotes healthy social relationship between normal and disabled children and provides equal educational opportunity. It enhances disabled children’s growth and development on par with their normal peers. Integration also leads to acceptance of disabled children in the society and prepare them to live independently. It reduces psychological problems of the disabled. Regular school teachers require multi-talents and play diversified roles to handle these children. The integration of students with special needs into the regular classes involve inclusive curriculum. The type of classroom learning environment created by the teacher and the instructional approach used, both influence the development of self-management and independence in children. The teacher should use cognitive and metacognitive strategies in their instruction to deal children with learning disabilities and behaviour disorders (Jayapradha, 2003).
Recognizing the mechanisms of mutual functioning of the teachers on students' self perception and performance is extremely important for the success of mainstreaming of a student with special needs (Fulgosi-Masnjak, 2003). Enhancing the self-perception of students with special needs that are included in regular public secondary schools has a positive impact on their academic achievement as well as on their personal and social development. Factors that appear to influence the self-perception of students with special needs include the following: severity or degree of disability, age of onset of disability, acceptance of the disability by parents, type of schooling (education) in regular school or special school, and special support, labelling, and identification group adherences (Jambor and Elliott, 2005).

The importance of self-perception for the growth and development for children has been demonstrated in studies showing how self-efficacy can enhance or impair the level of cognitive functioning and performance (Bandura, 1989). A child’s expectations about his own capabilities determine his behaviour and influence his motivation, efforts, persistence regarding both the difficulty of the task and task efficacy.

It has been established by many researchers that self-perception is an important personality variables in the academic performance of the individual. The purpose of this study therefore was to examine the influence of self-perception on academic performance of students with special needs in inclusive elementary schools. Further in order to know the cognitive strengths and weaknesses of the normal as well as the special groups, the teacher’s should be aware of the different assessment strategies for intervention and remediation. This helps them to know each individual’s ability deficits and to train them accordingly. In view of the above discussion the statement of the problem is as follows.

3.12 STATEMENT OF THE PROBLEM

In the present study the investigator was mainly interested in knowing how the cognitive processing in children influences their achievement. Also how each student perceives his or her disabilities in basic skills like reading, writing, mathematics etc? Do their perception and their achievement go together? Considering the above discussion the statement of the problem is as follows--
“A STUDY ON COGNITIVE PROCESSING, SELF PERCEPTION OF DISABILITIES AND ITS EFFECT ON ACADEMIC ACHIEVEMENT AMONG THE CHILDREN OF INCLUSIVE SCHOOLS IN KERALA”

3.13 SUMMARY

With the background of the study, the review of related literature this chapter gives a brief description of the conceptual framework, and the need for this investigation which paved the way for the design of methodology of investigation.