1.0.0 Introduction

Students of today are the citizens of tomorrow and they are going to be the pillars of the country. Hence it is essential to ensure that each pillar is as strong as the other is. Moreover, one cannot think of bringing about optimum human resource development without uplifting all categories of backward students. There is every possibility that each classroom has a few of those students who come to school regularly, but they are likely to become dropouts if their educational needs are not adequately met. Although, these students have near normal, or above normal intelligence yet they continuously fails to maintain normal progress in school subjects as learning disabled students.

Does a child struggle in school, no matter how hard he or she tries? Does he or she dread reading out loud, writing an essay, or tackling a math problem? While every child has trouble with homework from time to time, if a certain area of learning is consistently problematic, it might indicate a learning disorder or disability.

There are still a number of misconceptions that are associated with the term ‘Learning Disabilities (LDs)’. The reasons for these misconceptions are manifold. Learning disabilities are heterogeneous with different manifestations. There are several myths about learning disabilities among people, and learning disabled students are understood as mentally retarded students. Before knowing about this concept one should know the facts and myths associated with ‘Learning Disabilities’ to understand it better.
<table>
<thead>
<tr>
<th>MYTHS</th>
<th>FACT</th>
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<tr>
<td>• All learning disabled students have brain damage or dysfunction.</td>
<td>• Although, generally learning disabled students are found to have central nervous system damage or dysfunction than normal students, it is possible to have a learning problem without any evidence of brain damage.</td>
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<tr>
<td>• A child who is mixed dominant (e.g. right-handed, left-eyed, and right-earred will have a learning disability.</td>
<td>• While there is a slight tendency for mixed dominance to occur more frequently in learning disabled students, many students who are mixed dominant learn normally.</td>
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<tr>
<td>• All learning disabled students have perceptual problems.</td>
<td>• While perceptual problems are more frequent in learning disabled students many do not show perceptual problems.</td>
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<td>• The diagnosis of brain injury is foolproof.</td>
<td>• Diagnosis of brain injury may be important for the medical professional; educators gain no useful information from such a diagnosis.</td>
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<td>• Hyperactive students’ most serious problem is excessive activity.</td>
<td>• Although hyperactive students do exhibit excessive motor activity, most authorities now believe that their most fundamental problems lie in the area of interaction.</td>
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<td>• Using drugs to control hyperactivity is simply a matter of the physician prescribing the right pill.</td>
<td>• To use drugs effectively is a highly complex affair. The parents, physician, teacher, and child must maintain close communication in order to monitor the drug’s effects.</td>
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<tr>
<td>• Learning disabled students exhibit disorders of language, reading and writing much more than they do problems in math.</td>
<td>• Math problems are more prevalent than was once thought. It has been estimated that two out of three instructions in math and one out of four receivers need special education services primarily because of math problems.</td>
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<td>• Perceptual and perceptual-motor training will automatically lead to academic gains (e.g. in reading)</td>
<td>• There is very little research to support the notion that such training will automatically lead to academic gains. The most that can be said and research is equivocal even on this, is that perceptual training may increase perceptual skills, which can then serve as the basis for academic remediation.</td>
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Learning disability (LD, sometimes called a Learning Difference, Learning Disorder, or Learning Difficulty) is a classification including several disorders in which a person has difficulty learning in a typical manner, usually caused by an unknown factor or factors. The unknown factor is the disorder that affects the brain’s ability to receive and process information. This disorder can make it problematic for a person to learn as quickly or in the same way as someone who is not affected by a learning disability.

The term ‘Learning Disabilities (LDs)’ emerged from a need to identify and serve learning disabled students. The term learning disability was first coined by Samuel Kirk in 1963 to describe students who have serious problems in schools but do not fall under other categories of handicap. What prompted the birth of this newest area in special education was the realization that many students with learning problems were simply not receiving needed educational services. By recognizing students as learning disabled, the teacher education program in USA and Europe started the identification, diagnosis and serve these students, but the developing countries like India who too have such group of students having learning problems are not still acquainted with this concept.

There is no universally accepted definition of learning disabilities. However, concept of definitions incorporates three criteria that must be met for a child to be labeled learning disabled: (a) Learning disabled students must have a significant discrepancy between their potential ability and actual achievement. (b) Learning disabled students must have learning problems that cannot be attributed to other handicapping conditions, such as blindness or mental retardation. (c) Learning disabled students must need special educational services to succeed, services that are not needed by their non-handicapped peers. Hallahan and Kauffman, (1976) define a learning disabled child as one who is not achieving his potential. Learning disability tends to take a chronic course. More severe the problem in childhood, the more likely it is to affect adult development. Students with learning disorders tend to perform poorly in school. They are often viewed as failures by their teachers and their families. Meir (1991) reported that it is not surprising that most of them develop low expectations and problems in self-esteem by the age of nine. Moreover, their academic and personal problems tend to worsen as time passes.
The National Joint Committee on Learning Disabilities (NJCLD, 2001) defines the term learning disability as: “A heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to Central Nervous System Dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g. sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g. cultural differences, insufficient/appropriate instruction, psychogenic factors) it is not the direct result of those conditions or influences.” The NJCLD used the term to indicate a discrepancy between a child’s apparent capacity to learn and his or her level of achievement.

Learning Disabilities are not the same as low intelligence: when given IQ tests, people with learning disabilities generally show average or above average intelligence. But there is typically a big gap between how smart they are? And what they are able to achieve, because the brain sets up roadblocks that keep them from processing and reproducing information consequently, hallmark of learning disabilities is that people who have them consistently learn and work below their intellectual capabilities.

Learning Disabilities fall within the class of neurological issues called “Developmental Disabilities”, in that they are chronic they limit success in one or more major life areas and they cannot be reversed by medication. This classification includes mental retardation, but most developmental disabilities, such as cerebral palsy and autism, do not by definition encompass low intellectual function. One of the most painful aspects of having a learning disability is to have brains inability to process information in certain ways mistaken for low intelligence. It can be understood by following concept of learning.

Learning involves four steps of information processing:

- **Input**: The brain takes in and records information relayed by the senses.
- **Integration**: The brain interprets the information.
- **Memory**: The brain stores the information in a way that it can be retrieved.
- **Output**: The learner reproduces the information through language or motor activity.
People with learning disabilities have trouble with one or more of these steps; they have difficulty taking in, organizing and acting on information their brains receive through the senses. That information can be non-verbal, but more commonly, the difficulty has to do with understanding or using writers or spoken language. The problems are based on brain structure and function: a case of poor wiring in one or more areas of the brain.

There were many questions raised in conducting research in the field of learning disability. How can one identify these students in the normal classroom? How theirs problem can be solved in normal classroom? What strategies can be used in classroom for fulfil their educational needs.

1.1.0 Factors and Causes related to Learning Disabilities

Although actual causes of learning disability can never be known. A variety of suspected causes for learning disabilities have been proposed. A brief review of the past studies revealed that etiological factors related to learning disabilities fall generally into three groups: organic & biological, genetic & environmental and socio-cultural.

1.1.1 Organic and Biological Factors

Some believe brain injury is at the root of learning disabilities. Because the learning problems were not severe and because the neurological evidence was far from convincing affected students were frequently referred to as “minimally brain injured” or minimally brain damaged.

Learning disabled students suffer from a malfunctioning brain is the notion that they exhibit a minimal brain dysfunction syndrome. Proponents of this position claim that a variety of behavioural (poor visual – motor coordination, hyperactivity) and neurological (abnormal EEG) indicators tend to cluster in these students. (Nichols and Chen, 1981; Routh and Robers, 1927).

Some evidences, however suggest biological factors as causal agents in some learning disabled students. Waldrop and Halverson (1971) have reported a series of studies that link the presence of minor physical to early anomalies with hyperactivity in students ranging in age from preschool to early elementary years. (It is likely that many
of these hyperactive students were also candidates for being identified as learning disabled because hyperactivity and learning problems often go together). These studies show hyperactive students tend to possess minor physical anomalies (fine “electric” hair, low–seated ears, abnormal head circumference and webbing of the two middle toes) more often than non handicapped students. Since such anomalies are often associated with congenital defects such as Down syndrome, Waldrop and Halverson suggest that some hyperactive students may have a subtle chromosomal irregularity or may have had an impediment to proper embryological development. However, the relationship between minor physical anomalies and learning disabilities has been questioned by others (Krouse and Kauffiman, 1982).

1.1.2 Genetic Factors

Today it is acknowledged that learning disabilities tend to “run in families” (Owen, Adams, Forrest, Stolz, and Fisher, 1971; Walker and Cole, 1965). Whether this is due to hereditary factors or similar learning environments is a matter to be resolved by further research. Studies of twins (Norrie, 1965) suggest that at least some cases of learning disabilities may be inherited. These studies generally showed that when one twin has a reading disability, the other one is more likely to also have a reading disability if he or she is an identical (monozygotic- from the same egg) twin rather than a fraternal (Dizygotic- two eggs) twin.

1.1.3 Environmental Factors

Environmental causes are difficult to document. There are many evidences showing that environmentally disadvantaged students are more prone to exhibit learning problems. It is still not certain if this is due strictly to inadequate learning experiences or to biological factors such as brain damage or nutritional deprivation (Cravioto and Delicardie, 1975; Hallahan and Cruickhank, 1973).

Another factor that has been named as a possible environmental cause of learning disabilities is poor teaching (Engelmann, 1977; Lovitt, 1977). Engelmann, in fact, has estimated that perhaps as many as 90 percent of learning disabled students are so identified because they have been mistaught.
Unfortunately there were no adequate data to determine the validity of Engelmann’s 90 percent figure. Although not all authorities agree with his high estimate, many do believe that if teachers were better prepared to handle the special learning problems of students in the early school years, many learning disabilities could be avoided.

Ongoing research told us more about which areas of the brain are involved in learning and, therefore, are vulnerable to the problems that result in learning disorders. The differences in brain structure and function that cause learning disabilities can stem from a number of factors as depicted in the following diagram:

![Diagram showing causes of learning disability](image-url)

**Fig.1.1: Causes of Learning Disability**
1.2.0 Characteristics of Learning Disabled Students

On the basis of above types of learning disabilities, following characteristics were given:

1.2.1 Delayed Spoken Language Development

The learning disabled students lag behind in spoken language development. They will not be able to cope up with their age mates or classmates. Their knowledge of vocabulary is limited. Usually they commit large number of grammatical errors. They experience immense difficulty in relating ideas in logical sequence and regular “grouping” for words.

1.2.2 Poor Spatial Orientation

Learning disabled students experience unusual difficulty in becoming oriented to new surroundings. They forget their way around a complex building. They experience difficulty in assembling a complex puzzle, executing complex mechanical tasks and remembering how others executed multifaceted tasks.

1.2.3 Inadequate Time Concepts

This includes regular lateness and lack of normal time concepts. There is confusion about their personal responsibility relating to time. They seldom notice how others block their time out, or what is involved in doing a task. They may be unaware that units of time such as a minute, hour or century are fixed or be unaware of what a century or millennium stand for what “19” means in 1993 (Crealock and Kronick 1993)

1.2.4 Difficulty in Judging Relationship

Learning disabled students lack judgment concerning what is important or where importance tends to occur. As a result, they study everything or fail to prioritize and reprioritize. These result in disorganization, inefficiency, failure to complete the tasks and feeling overwhelmed. They experience difficulty with meanings of big Vs little, light vs. heavy, close vs. far and others.
1.2.5  **Direction Related Confusion**

This includes difficulty in understanding of ability to utilize concepts of right, left, north, south, east, west, up, down and so on. They may not comprehend how the information of a map is translated into geographic space.

1.2.6  **Poor General Motor Coordination**

This may include general clumsiness, poor coordination, poor balance or a tendency to fall down a lot. They may be unable to do different tasks or movements with each hand simultaneously or different movements of hands and feet at the same time. They may be restless impatient, have a short attention span, be hyperactive or hypoactive, lethargic and much disorganized.

1.2.7  **Poor Manual Dexterity**

This includes inability to manipulate pencils, books or doorknobs. They also experience unusual difficulty in manipulating new equipments. In day to day life, learning disabled students lack a sense of how to judge their social, vocational and practical commitments.

1.2.8  **Social Imperceptions**

Learning disabled students have a limited repertoire of social behaviours, which bore people rather than adjusting behaviour to the context and adapting it, if it is not received as expected. Reddy, Ramar and Kusuma (1999) reveal that social skill deficits are common in students with learning disabilities and that these deficits have a negative effect on learning disabled students’ relationship with both peers and teachers as well as on their ability to function in the regular classroom environment.

1.2.9  **Inattention and Hyperactivity**

The learning disabled students find it very difficult to focus on, any one activity for the normal amount of time. Attention is the cognitive process that enables us to attend to selected features of environmental stimuli that are observed by sensory systems. Most of the learning disabled students are hyperactive unable to sit still, in fact, the great majority of students with attention deficits are also hyperactive. Hallahen and Karffman (1991) found in a study that many learning disabled students do not focus on and attend selectively to the central learning tasks.
1.2.10 Perceptual Disorders

Perceptual process includes discrimination, coordination and sequencing. Learning disabled students may experience difficulties in any of these areas of perceptual processing. The student with visual perceptual problem will find it very difficult to copy letters correctly or to perceive difference between the sound of the front door bell and the first ring of the telephone.

1.2.11 Memory Disorders

Memory is viewed as a dynamic process that enables us to take complex environmental information and to transform and organize it in a manner that permits storage and retrieval at a later time. Learning disabled students experience both auditory and visual memory disorders. They may not be able to remember where the window is or on which side of the room their bed is placed, even though it has been there for months. The learning disabled students are weak in short term memory, working memory and long term memory.

1.3.0 Types of Learning Disabilities

People with learning disorders show inadequate development in reading, mathematics or writing skills that impairs school performance and daily activities. There are several types of learning disabilities including arithmetic disorder, disorder of written expression and reading disorder.

1.3.1 Academic Skill disorders

1.3.1.1 Learning Disabilities in Reading (Dyslexia)

These students who have poorly developed skills, recognizing words and comprehending written text called dyslexic students. There are two types of learning disabilities in reading. Basic reading problems occur when there is difficulty understanding the relationship between sounds, letters and words. Reading comprehension problems occur when there is an inability to grasp the meaning of words, phrases, and paragraphs. Dyslexic students have trouble decoding letters. Blackslee (1991) reported that 4% to 5% of the U.S. population that is about 12 million people is affected by dyslexia. Signs of reading difficulty include problems with:
• letter and word recognition
• understanding words and ideas
• reading speed and fluency
• general vocabulary skills

1.3.1.2 Learning Disabilities in Writing (Dysgraphia)

Disorder of written expression refers to students with grossly deficient by error in spelling, grammar, punctuations, by difficulty in composing sentences and paragraphs. Learning disabilities in writing can involve the physical act of writing or the mental activity of comprehending and synthesizing information. Basic writing disorder refers to physical difficulty forming words and letters. Expressive writing disability indicates a struggle to organize thoughts on paper. Symptoms of a written language learning disability revolve around the act of writing. They include problems with:

• neatness and consistency of writing
• accurately copying letters and words
• spelling consistency
• writing organization and coherence

1.3.1.3 Learning Disabilities in Math (Dyscalculia)

Arithmetic disorder describes students with deficiencies in arithmetic skills. They may have problems understanding basic mathematical terms or operations such as addition, subtraction, learning multiplication table. Learning disabilities in math vary greatly depending on the child’s other strengths and weaknesses. A child’s ability to do math will be affected differently by a language learning disability, or a visual disorder or a difficulty with sequencing, memory or organization.

A child with a math–based learning disorder may struggle with memorization and organization of numbers, operation signs, and number “facts” (like 5+5=10 or 5x5=25). Students with math learning disorders might also have trouble with counting principles (such as counting by 2s or counting by 5s) or have difficulty telling time.
1.3.2 Other Types of Learning Disabilities and Disorders

Reading, writing, and math aren’t the only skills impacted by learning disorders. Other types of learning disabilities involve difficulties with motor skills (movement and coordination), understanding spoken language, distinguishing between sounds, and interpreting visual information.

1.3.2.1 Learning Disabilities in Motor Skills (Dyspraxia)

Motor difficulty refers to problems with movement and coordination whether it is with fine motor skills (cutting, writing, making diagram, stitching, embroidery) or gross motor skills (running, jumping). A motor disability is sometimes referred to as an “output” activity meaning that it relates to the output of information from the brain. In order to run, jump, write or cut something, the brain must be able to communicate with the necessary limbs to complete the action. Signs that your child might have a motor coordination disability include problems with physical abilities that require hand-eye coordination, like holding a pencil or buttoning a shirt.

1.3.2.2 Learning Disabilities in Language (Aphasia/Dysphasia)

Language and communication learning disabilities involve the ability to understand or produce spoken language. Language is also considered an output activity because it requires organizing thoughts in the brain and calling upon the right words to verbally explain something or communicate with someone else.

Signs of a language-based learning disorder involve problems with verbal language skills, such as the ability to retell a story and the fluency of speech, as well as the ability to understand the meaning of words, parts of speech, directions, etc.

1.3.3 Auditory and Visual Processing Problems: the Importance of the ears and eyes

The eyes and the ears are the primary means of delivering information to the brain, a process sometimes called “input.” If either the eyes or the ears aren’t working properly, learning can suffer.
1.3.3.1 **Auditory Processing Disorder**

Professionals may refer to the ability to hear well as “auditory processing skills” or “receptive language.” The ability to hear things correctly greatly impacts the ability to read, write and spell. An inability to distinguish subtle differences in sound, or hearing sounds at the wrong speed make it difficult to sound out words and understand the basic concepts of reading and writing.

1.3.3.2 **Visual Processing Disorder**

Problems in visual perception include missing subtle differences in shapes, reversing letters or numbers, skipping words, skipping lines, misperceiving depth or distance, or having problems with eye–hand coordination. Professionals may refer to the work of the eyes as “visual processing.” Visual perception can affect gross and fine motor skills, reading comprehension, and math.

Learning disabilities are often identified by school psychologists, clinical psychologists, and neuropsychologists through a combination of intelligence testing, academic achievement testing, classroom performance, and social interaction and aptitude. Other areas of assessment may include perception, cognition, memory, attention, and language abilities. The resulting information is used to determine whether a child's academic performance is commensurate with his or her cognitive ability. Recent research has provided little evidence that a discrepancy between formally measured IQ and achievement is a clear indicator of LD.

Furthermore, diagnosing on the basis of a discrepancy does not predict the effectiveness of treatment. Low academic achievers who do not have a discrepancy with IQ (i.e. their IQ scores are also low) appear to benefit from treatment just as much as low academic achievers who do have a discrepancy with IQ (i.e. their IQ scores are higher than their academic performance would suggest).

Much current research has focused on a treatment-oriented diagnostic process known as response to intervention (RTI). Researcher recommendations for implementing such a model include early screening for all students, placing those students who are having difficulty into research-based early intervention programs, rather than waiting until they meet diagnostic criteria. Their performance can be closely monitored to
determine whether increasingly intense intervention results in adequate progress. Lastly, RTI is considered a regular education initiative and is not driven by psychologists, reading specialists, or special educators.

However, over the last decade or so there has been an increase in the identification of students with learning disabilities and a constant demand for services. In any school the proportion of students of learning disabilities is significantly high. About 10 percent students are identified in Indian schools with learning disability. The exact numbers of people with learning disorders are unknown but it has been estimated that as many 10% of the general population are dyslexic to some degree. (Meir, 1971)

If a child might have a learning disability, it’s important to face the problem early on. One can start by studying up on learning disabilities and pinpointing the specific learning challenges child faces. With the right support and training, students with learning disabilities can tackle the obstacles they face in the classroom and thrive in all areas of life. For this, one should know about the sign and symptoms for diagnosing the students with learning disabilities.

1.4.0 Symptoms of Learning Disabilities

Parents often are surprised to find out that a child they think of as bright and imaginative is struggling in school. They may be surprised by unexpectedly low scores on a standardized test, or a teacher might report that the child “underachieving” or “not working up to his potential”. Not all such problems are the result of learning disabilities. There is certain tip offs that a child might be experiencing a cognitive roadblock:

- Have difficulty pronouncing words, reversing letters or transposing syllabus.
- Has difficulty carrying out sequences of directions.
- Doesn’t hear five differences in words; e.g. writes ‘pin’ for “pen”.
- Have problems stating thoughts in an organized way or describing math problems in words.
- Doesn’t recognize words previously learned.
- Confuses the order of letter in words or numbers in math problem.
- Spells a word several different ways; doesn’t recognize the correct version.
Learning disabled students have unique educational and psychological characteristics therefore inventories, strategies and instructions based programmed based teaching learning material are helpful in enhancing the academic achievement and competence of LD students.

The students whose achievement lag behind their intellectual potential present a serious problem to the parents, society and finally to the nation: instead of being the contributing members, they turn out to be social problems and get involved in the most common social malaise-student unrest. Educational provision has treatment of these students through remedial teaching, individual counselling, systematic work and innovative strategies. People with a learning disability have trouble performing specific types of skills or completing tasks if left to figure things out by themselves or if taught in conventional ways. Pandit, R. P. (2000) conducted a study on factors affecting learning disabilities in mathematics in central region of Nepal and concluded that the factors related to the students with learning disabilities in mathematics were the poor instruction, parents’ adverse behaviour to them, teacher’s negligence in the class. It was suggested that the quality of teaching strategies and quality of instruction in the schools must be improved. Learning disabled students are important part of our common classroom, school and society; therefore these students should never be negotiated due to their learning disabilities. In view of its importance, researcher is ventured to develop instructional material for learning disabled students.

1.5.0 Instructional Material

These are kinds of tools or equipments that can help effectively the instructor in theory teaching or in practical assessment. The instruction materials include lessons based on programmed learning. These materials keep the students active and help to improve their cognitive skills. Any device with instructional content or function used for teaching purposes e.g., books, textbooks, booklet, supplementary reading materials, audio visual and other sensory materials, programs for computer managed instruction, instruction sheets and packaged sets of materials for construction or manipulations.
1.5.1 Characteristics of Instructional Material

An instructional material is that content which serves to students to provide systematic knowledge in an easy form to students. A student can learn himself or little guidance of a teacher or instructor. Any instructional material should have characteristics like self – explanatory, self-contained, self directed, and self-motivating also.

1.5.1.1 Element of Instruction

Teaching a learner through instructional text is different from any kind of teaching that a teacher does. The kind of writing required for such materials is quite different from writing a lecture or an article for a journal. Instructional material consists of material along with many instructions.

- For whom is the instruction being developed?
- What should the learner be able to do after completion the instruction?
- How these objectives are best acquired? What teaching/learning methods, activities, and resources should one use?
- How will one know if the objectives have been mastered? Or that learning has happened?
- Before designing the instruction, the following essential elements need to be evaluated:

Objectives of the Instruction

Objectives are necessary to:

- Facilitate effective learning by designing appropriate instruction.
- Provide a framework for evaluating learning
- Prepare and guide the learner
- Objectives can address the – cognitive domain, psychomotor domain, affective domain.
- Evaluate the instruction.
- Defining the content needed to address the instructional problem or need is important to instructional design principles.
Sequence the content to help the learner achieve the objectives.

Deliver the instruction in one of three patterns: whole group presentations, small group interactions, individualized.

Learning from reading a text is not easy. The reader must put considerable effort into the task. But that is not all; the quality of the text itself is also important. Some texts are more effective teachers than others. There are three categories of factors which contribute to effectiveness: (i) the organization of the content, (ii) the presentation of the content, (iii) the level and clarity of language.

Besides being dull, poorly presented materials are actually more difficult to learn from. Research on typography has led to a number of guidelines for making text legible. If these guidelines are not adhered to, text becomes difficult to read and the content consequently more difficult to understand. How can such differences be catered for? How can the material be made accessible to everyone? The three features of text—legibility, attractiveness and accessibility related are presented below:

1.5.1.2 Legibility

The main factors in legibility are the type face, and its arrangement on the paper. The type consists of arranging the type, paper size, paper color and quality, legible graphics, illustrations, diagrams and charts, achieving usability.

1.5.1.3 Attractiveness

The question of attractiveness ultimately depends on the eye of the beholder. Perhaps, the serious student is indifferent to the look of his text: as long as it is readable, he will accept it. A boring unattractive text could be the last straw.

1.5.1.4 Accessibility

A number of devices are used to improve the usability of texts. Statements of objectives, headings, summaries and the division of a unit come into section. All these devices make the material more accessible to different student need of student.

The above mentioned features of instructional material have great significance for all students in general and learning disabled students particular.
1.6.0 Emergence and Justification of the Problem

The word ‘prevalence’ of learning disabilities usually means the estimated population of people who are managing learning disabilities at any given time. (i.e. people with learning disabilities). It is only recently that awareness has developed about the widespread prevalence of learning disabilities in India, both in urban and rural settings. It is interesting to note that the prevalence of learning disabilities is quite high in countries like Great Britain (14%), France (12-14%), USA (10-15%) and Canada (10-16%).

The researchers generally depend for their work on the figures available. Unlike USA, where census figures are available, mainly in India, no national census of learning disabled has been undertaken so far. It is, therefore, impossible to assess the actual number. In India, the learning disabled students neither are identified using reliable tests nor are they given special support and services, while in the U.S.A. special education teachers are appointed to assist the content teachers to develop special programs for the learning disabled students. In the absence of reliable data in our country, there is a growing concern over how to meet the needs of the learning disabled students, whose data is unavailable.

Learning disability is an area that is a stumbling block for a nation’s development process. The learning disabled movement in India is of a recent origin and today is comparable with that of its western counterpart. Mathew (2003) reveals that reports of lower incidence of learning disability in the eastern world were attributed by western scholars to the general lack of awareness and sensitivity among educationists to the specific difficulties faced by students learning to read in overcrowded classrooms.

In India, the research on learning disability is in its infancy. Even approximates of the incidence of learning disabilities are lacking, indicating the magnitude of negligence to which these students are exposed. In the absence of a proper measure to be taken in diagnosing and remedy, most students with learning disabilities go unnoticed in the guise of low achievers, underachievers, truant or disinterested and they are denied special educational facilities.
The learning disabled students occupy no specific place in centrally sponsored scheme of integrated education for disabled students. This speaks of the extent to which learning disabilities are ignored and the problems not tackled. Sakhija (2004) specifies that ‘Education for all’ still remains a distant dream for disabled and is even worse in India. She reported in her study that in India around 13-14% of all school students suffer from learning disorders. Unfortunately, most schools fail to lend a sympathetic ear to their problems. As a result, these students are branded as failures. Tragically, it is painful for everyone to deprive our nation of the important contribution that learning disabled students would give, when they grow up. A recent survey of the National Center for Promotion of Employment for Disabled People (NCPEDP, 2007) revealed that only 1.2 percent of the disabled in India has had any form of education.

The schools are full of students, but these schools only focus on their objectives such as increasing the number of students, they do not want the quality in knowledge and education. These schools cannot fulfil the needs of students and they blame the students.

Unlike in many countries, in India, our teacher-training programs do not contain provision for practice in teaching and appointment of the special education teachers for co-teaching collaborations and consultation rather than for direct-teaching to the students with learning disabilities. They face several challenges related to selecting good models of instruction that can be most effectively and efficiently applied to students with learning disabilities.

Today, regular classroom teachers are not supposed to teach the students with learning disabilities with careful thought, planning and supervision. Generally, most of the teachers feel comfortable in the lecture method of explaining the lessons are presented in the prescribed text book. This kind of teaching could hardly provoke the students to learn actively. So the students confine their learning to the memory level only. Smith (1986) revealed that memory is a complex process and is not fully understood despite some researches establishing theories that seem to explain the various observable facts of memory. Learning and non disabled students embark on disabled passive learning. The teachers are unable to gauge the needs of individuals with learning disabilities and this adversely impacts the academic achievement of learning disabled
students. And the person is labelled as stupid, lazy etc and the person suffers in silence. But nobody wants to talk about a sustainable manner perhaps because of shame or rather out of ignorance of how the situation can be dealt with effectively. The numbers are hardly in our national discourse on education. Sharma (1999) showed that there are three main activities which are needed in education process- teaching, instruction and training. Once the pupil is identified the special help should begin. It will help him to benefit from the normal activities of the school, if the learning disability is mild. One of the widely accepted facts is that individualized instruction is of much use to the learning disabled.

In all schools, we come across a considerable number of students with either mild or moderate learning disabilities at all stages of education, pre-primary to higher education. Wong (1985) has pointed out the importance of promoting content for individuals with learning disabilities. Over the past 20 years, the research has been concentrating on developing instructional models for teaching within the content domains.

There are several possible orientations for planning treatment program considered as an important part of curriculum in a developed country for learning disabled students such as process training, multi-sensory approaches, structure and stimulus reduction, medication, cognitive training, behaviour modification, direct instruction etc. There have been some studies of the different disabilities in specific segment in India. These studies have mainly focused on physical disabilities (visual, speech, hearing, orthopaedic), intellectual retardation and psychiatric disturbance (Anand and Patel, 1983). This is also due to the fact that these difficulties are, as yet recognized by very few states in the country. There is an urgent need to pay attention to cognitive, social and emotional development of students with learning disabilities in common classrooms in India. Services have to be planned in a rational way, keeping in mind the needs of the local population. Feasible and cost-effective packages, curriculum services deliveries have to be explored (Rahman and Harrington 2000).

NCF (2011) promotes a clear focus in colleges and schools on meeting the needs of all learner through increased curriculum autonomy, improving the quality of education and raising the level of student achievement, a readiness to depart from traditional
curriculum structure and practices that may restrict learning, learning programs that empower teachers to implement innovative teaching learning strategies especially through use of e-learning, learning should active, personalized, relevant and purposeful, there should be support for all learners to achieve and succeed whatever their background, needs and aptitudes and technology ought to support teachers in adapting to different learning styles in order to address specific learning needs thus personalize learning. NCF also promotes subject should organized in modules in 2005

The Secondary Education Commission (1952-53) has rightly pointed out that the present day education does not conform to the objectives of general education, especially in the case of girls, and that education should be more closely connected with home and community. Therefore, they have urged that the teaching of Home Science in girls’ school is essential and home making should become an integral part of educational background for girls.

Moreover, there is a lack of expertise and training and few programs to support teachers to teach subjects like science, Home Science and literature that address the special needs of students. The Philosophy of Home Science education must be in harmony with the cultural background of Indian home life and be based on the highest ideals of Indian womanhood spiritual values in Indian homes a realistic approach to existing conditions and a desire for community service. The Philosophy of Home Science education is the philosophy of the ‘home and family’. The home is identified with the woman of the house Manu says, “That country in which women are respected and educated will indeed prosper”. Because of the multifarious values (intelligent, cultural, vocational, utilitarian, moral and aesthetic) to the individual as well as the society, Home Science deserves an important place in the curriculum at all stages of education.

Home Science students with learning disabilities may have problem related to different areas of Home Science e.g. Home Management, Clothing & Textile, Food & Nutrition, Human Physiology and Health & Hygiene. They may have following problems:

- Difficulty in sketching of diagram, labeling them and organizing whole process of human body organs,
• Problems related to motor functioning like sewing, cutting and drafting of clothes, having problems remembering the parts of equipments such as sewing machine and weighing machine etc.

• Difficulty in learning basic terminology which are used in Home Science and understanding the proportion, balance, rhythm and harmony in structuring the general design.

Home Science education is meaningful only when it is serviceable in different settings. So, Home Science education should be co-operatively planned, executed and evaluated. Home Science students with learning disabilities need to pay more attention. A very few researches have been done related to language, science and mathematics students with learning disabilities. From the review of the literature it is seen that most of the studies have been conducted in USA and Europe. The researcher has not come across any research done either in India or other countries related to Home Science students with learning disabilities. In the light of the above consideration, the investigator decided to undertake a study on identifying learning disabilities, development of effective instructional material that ameliorates by enhancing the academic achievement and for minimizes learning disabilities of Home Science student with learning disabilities in secondary schools who have a severe discrepancy between achievement and intellectual ability.

In view of the afore mentioned facts following questions came to the mind of researcher:

1) What strategies, activities should be included in General curriculum for LD students?

2) Can the instructional material enhance academic achievement of LD students?

3) How the instructional material can accommodate the learning characteristics of students with learning disabilities?

To seek the answer these research questions, the researcher has made her mental makeup to develop instructional material. The researcher also surveyed the related literature to find answers to these questions some of which mentioned here:

It was inferred from these studies that learning disabled students have unique educational and psychological characteristics therefore inventories, strategies and planning are necessary for lifting the LD students to enhance their academic achievement and competence to make them independent. From the review of related literature the researcher found that there was no instructional material on Learning Disabilities in
Home Science. Therefore the researcher embarked on this research work to fill the gap and facilitate Learning Disabled students of Home Science.

1.7.0 Statement of the Problem

The problem undertaken by the researcher is entitled as follows:

“Development of Instructional Material for Learning Disabled Students of Secondary School”

1.7.1 Operational Definition of the Terms

The statement of problem consisted of many terms which require operational definitions in relation to the present study. The definitions of different terminology occurring in the title of present study were given below:

1.7.1.1 Instructional Material

Any device with instructional content or function used for teaching purposes e.g., books, textbooks, booklet, supplementary reading materials, audio visual and other sensory materials, programs for computer managed instruction, instruction sheets and packaged sets of materials for construction or manipulation. In the present investigation instructional material included Self instructional material (SIM) based on programmed learning and instructions based power point presentation and video as audio visual material.

1.7.1.2 Learning Disabled Students

Bateman (1965) defined learning disabled students as “Students who manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance related to basic disorders in the learning process, which may or may not be accompanied by demonstrated central nervous system dysfunction and which are not secondary to generalized mental retardation, educational or cultural deprivation, severe emotional disturbances or sensory loss.”

There is no universally accepted definition of learning disability. It is a debatable issue. Nevertheless, an operational definition is necessary for the present study. Learning disabilities in Home Science has been defined as: “Students with learning
disabilities in Home Science are those whose academic performance is below average but their intellectual functioning as measured by general mental ability test is average or above average, and they have normal hearing and visual acuity, no history of chronic disease, regular attendance in the class and there is a significant discrepancy between their potential ability and actual achievement.”

1.7.1.3 Secondary School

A school is intermediate in level between elementary school and college that usually offers general technical, vocational or college preparatory curricula.

In other terms a school for students intermediate between elementary school and college, students of X grade were taken for study.

1.8.0 Objectives of the Study

The Objectives of the present study were laid down as following:

1. To identify the learning disability among the Home Science students.
2. To study the achievement of learning disabled in Home Science.
3. To develop instructional material in Home Science for learning disabled students of secondary schools.
4. To evaluate the efficacy of developed material in Home Science for learning disabled students of secondary schools.

1.9.0 Delimitation of the Study

The delimitation of the study was laid down as following:

1. The present study was confined to the city of Agra.
2. Only girl students were taken for this study.
3. Learning disabilities in respect of Home Science were studied.
4. Only the students of X were taken for study.