B.ED. SPL. EDUCATION

ASSESSMENT AND IDENTIFICATION OF NEEDS

SES LD 01

MADHYA PRADESH BHOJ (OPEN) UNIVERSITY

ASSESSMENT AND IDENTIFICATION OF NEEDS

B.Ed. Spl. Ed

(SES LD 01)

MADHYA PRADESH BHOJ (OPEN) UNIVERSITY,
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Further information on the Madhya Pradesh Bhoj (Open) University Special Education courses may be obtained from the University's office of the Department of Special Education at Raja Bhoj Marg (Kolar Raod) Bhopal - 462016. Tel: (0755) 2492095. Fax: (0755)-2424640.
email: bedsede@gmail.com website : http://www.bhojvirtualuniversity.com

Bachelor of Special Education

B.Ed. Spl. Ed.

A Collaborative Programme of

Madhya Pradesh Bhoj (Open) University

&

Rehabilitation Council of India

MADHYA PRADESH BHOJ (OPEN) UNIVERSITY

RAJA BHOJ MARG (Kolar Road), Bhopal (M.P.) - 462 016
Ph. 0755-2492095, Fax 0755-2424640

Email: bedsede@gmail.com

www.bhojvirtualuniversity.com

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BLOCK – 1 : INTRODUCTION TO LEARNING DISABILITY (LD)

INTRODUCTION

Learning disabilities (LD) are hidden disabilities that affect many individuals who usually have average or above average intelligence, but are unable to achieve at their potential. People from all economic and social levels may have unique learning differences. Estimates of the percentage of the school-age population who have specific learning disabilities as defined by the Education of the Handicapped Act of 1975 range from 5% to 20%. *U.S.C. 1412: Section 1401 (a) (15)* states: Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, or of environmental, cultural, or economic disadvantage." Individuals with learning disabilities can learn, but they learn differently. They need to be taught in a way that makes it possible for them to use their abilities to compensate for their weaknesses.

UNIT 1: LD: DEFINITION AND CONCEPT

STRUCTURE

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- **References / Further Readings**

- **Introduction**

Each individual with learning disabilities has a different combination and severity of problems. Specific learning disabilities are disorders in one or more of the basic learning processes involved in understanding or using language, spoken or written, or affecting the ability to listen, think, speak, read, write, spell, or do math.

For many, undetected learning disabilities create a lifelong pattern of frustration and failure. Unable to learn to read or write adequately or to handle simple numerical calculations, they are forced into a lifetime of underemployment or unemployment.

One of the serious consequences of learning disabilities is that young people who suffer from them do poorly in school unless they are helped. They tend to drop out of school and may fall into a range of antisocial behaviors. Independent studies show that adolescents with learning disabilities are more than twice as likely to wind up in juvenile courts as are their peers who do not have them. Research shows that about 40% of all juvenile offenders have learning disabilities and that most have never received any help for their disabilities.

Other possible outcomes for individuals with learning disabilities who have not received appropriate intervention or help are low self image, teenage pregnancy, suicide, family instability, substance abuse, depression, significant psychiatric problems, and unemployment. They may end up on welfare, homeless, or in prison.

- **Objectives**

There is no known "cure" for learning disabilities . . . not in the sense of eliminating the disorder. Children with learning

disabilities become adults with learning disabilities. With the proper testing and evaluations, every child's learning disabilities can be diagnosed and an individual education plan devised so she/he can learn. Individuals with learning disabilities can be taught to compensate and overcome their learning problems. They can lead happy, productive lives. Some have been, or are, famous people:

- Hans Christian Andersen
- Cher
- Sir Winston Churchill
- Thomas Edison
- Albert Einstein
- Whoopi Goldberg
- Nelson Rockefeller
- Charles Schwab
- Robin Williams

- **Definitions**

Learning disabilities are often referred to as "hidden handicaps" as they are difficult to identify. The kinds and severity of problems vary from individual to individual. Each individual with a learning disability shows a unique combination of problems. Individuals with learning disabilities may do well in some areas, but very poorly in others. They may learn what is seen, but not what is heard; they may remember by writing, but not by reciting orally; or vice versa.

Below are listed some signs that may indicate learning disabilities:

inconsistent school performance

difficulty remembering today what was learned yesterday, but may know it tomorrow

short attention span (restless, easily distracted)

letter and number reversals (sees "b" for "d" or "p", "6" for "9", "pots" for "stop" or "post")

poor reading (below age and grade level)

frequent confusion about directions and time (right-left, up-down, yesterday-tomorrow)

personal disorganization (difficulty in following simple directions/schedules; has trouble organizing, planning, and making best use of time; frequent loss or misplacement of homework, schoolbooks, or other items)

impulsive and/or inappropriate behavior (poor judgment in social situations, talks and acts before thinking)

failure on written tests but high scores on oral exams (or vice versa)

speech problems (immature language development, trouble expressing ideas, poor word recall)

difficulty understanding and following instructions unless they are broken down to one or two tasks at a time

seems immature and has difficulty making friends

trouble remembering what someone just told him or her

poor coordination (in gross motor activities such as walking or sports and/or in fine motor activities such as tying a shoelace, holding a pencil, or handwriting - inconsistent, slow, messy, or illegible)

difficulty interpreting body language, facial expression, or tone of voice

difficulty with development of sound/symbol correspondence

- **Summary**

Learning disability (LD) is a general term that describes specific kinds of learning problems. A learning disability can cause a person to have trouble learning and using certain skills. The skills most often affected are reading, writing, listening, speaking, reasoning, and doing math. Learning disabilities vary from person to person. One person with LD may not have the same kind of learning problems as another person with LD. One person may have trouble with reading and writing. Another person with LD may have problems understanding math. Still another person may have trouble in each of these areas, as well as with understanding what people are saying (National Dissemination Center for Children and Youth with Disabilities [NICHCY], 2004).

LD is a group of disorders that affects people's ability to either interpret what they see and hear or to link information from different parts of the brain. These limitations can show up in many ways: as specific difficulties with spoken and written language, coordination,

self-control, or attention. Such difficulties extend to schoolwork and can impede learning to read, write, or do math.

A learning disability is a neurological disorder that affects the brain's ability to receive, process, store, and respond to information. The term learning disability is used to describe the seemingly unexplained difficulty a person of at least average intelligence has in acquiring basic academic skills. These skills are essential for success at school and work, and for coping with life in general. "LD" does not stand for a single disorder. It is a term that refers to a group of disorders.

Interestingly, there is no clear and widely accepted definition of learning disabilities. Because of the multidisciplinary nature of the field, there is ongoing debate on the issue of definition, and currently at least twelve definitions appear in the professional literature. There are several technical definitions offered by various health and education sources. Overall, most experts agree on the following descriptions:

- **Revision**

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

- References / Further Readings

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UNIT 2: HISTORY OF LD

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- **References / Further Readings**

- **Introduction**

Learning disability (LD) is a general term that describes specific kinds of learning problems. A learning disability can cause a person to have trouble learning and using certain skills. The skills most often affected are reading, writing, listening, speaking, reasoning, and doing math. Learning disabilities vary from person to person. One person with LD may not have the same kind of learning problems as another person with LD. One person may have trouble with reading and writing. Another person with LD may have problems understanding math. Still another person may have trouble in each of these areas, as well as

with understanding what people are saying (National Dissemination Center for Children and Youth with Disabilities [NICHCY], 2004).

- **Objectives**

LD is a group of disorders that affects people's ability to either interpret what they see and hear or to link information from different parts of the brain. These limitations can show up in many ways: as specific difficulties with spoken and written language, coordination, self-control, or attention. Such difficulties extend to schoolwork and can impede learning to read, write, or do math.

A learning disability is a neurological disorder that affects the brain's ability to receive, process, store, and respond to information. The term learning disability is used to describe the seemingly unexplained difficulty a person of at least average intelligence has in acquiring basic academic skills. These skills are essential for success at school and work, and for coping with life in general. "LD" does not stand for a single disorder. It is a term that refers to a group of disorders.

Interestingly, there is no clear and widely accepted definition of learning disabilities. Because of the multidisciplinary nature of the field, there is ongoing debate on the issue of definition, and currently at least twelve definitions appear in the professional literature. There are several technical definitions offered by various health and education sources. Overall, most experts agree on the following descriptions:

- **Definitions**

Research suggests that learning disabilities are caused by differences in how a person's brain works and how it processes information. Children with LD are not stupid or lazy. In fact, they usually have average or above average intelligence, but their brains process information differently. \ A learning disability affects the way kids of average to above average intelligence receive, process, or express information. Even if the person learns to compensate and, in effect, overcomes the disorder, the difference in brain processing lasts throughout life.

- **Summary**

Myth 1. ***People with LD are not very smart.***
Reality. Kids with learning disabilities are just as smart as other kids. Intelligence has nothing to do with LD. In fact, people with LD have average to above average intelligence. Many have intellectual, artistic, or other abilities that permit them to be defined as gifted. Studies indicate that as many as 33% of students with LD are gifted.
Myth 2. ***LD is just an excuse for irre-sponsible, unmotivated, or lazy people.***
Reality. LD is caused by neurological impairments, not character flaws. For some people with LD, the effort required to get through a day can be exhausting in and of itself. The motivation required to do what others take for granted is enormous. Learning disabilities are problems in processing words or information, causing otherwise bright

and capable children to have difficulty learning. The disabilities involve language—reading, writing, speaking, and/or listening.

Myth 3. ***LD only affects children. Adults grow out of the disorders.***

Reality. It is now known that the effects of LD continue throughout the individual's lifespan and "may even intensify in adulthood as tasks and environmental demands change" (Michaels, 1994). Sadly, many adults, especially older adults, have never been formally diagnosed with LD. Learning disabilities cannot be outgrown, but they can be identified reliably in kindergarten or first-grade children, or even earlier. Research clearly demonstrates that the earlier a child is given appropriate help for a learning disability, the more successful the outcome.

Myth 4. ***The terms dyslexia and learning disability are the same thing.***

Reality. Dyslexia is a type of learning disability. It is not another term for learning disability. It is a specific language-based disorder affecting a person's ability to read, write, and verbally express him or herself. Unfortunately, careless use of the term dyslexia has expanded so that it has become, for some people, an equivalent for LD. Four out of five ch en identified with a learning disability are diagnosed with a reading disability (or dyslexia). They have trouble learning how spoken language translates into written text. Since every subject—including math—requires reading and writing, a reading disability affects all of a person's school-based learning.

Myth 5. ***Learning disabilities are only academic in nature. They do not affect other areas of a person's life.***
Reality. Some people with learning disabilities have isolated difficulties in reading, writing, or mathematics. However, most people with learning disabilities have more than one area of difficulty. Dr. Larry Silver asserts that "learning disabilities are life disabilities." He writes, "the same disabilities that interfere with reading, writing, and arithmetic also will interfere with sports and other activities, family life, and getting along with friends." (Silver, 1998) Some children have good verbal (language) skills but weaknesses in visual and spatial perception, motor skills and, most significantly, social skills—affecting their ability to grasp the main idea, "see the whole picture," or understand cause-and-effect relationships.

Many children with LD struggle with organization, attention, and memory. One-third of them may also have an attention deficit disorder—difficulty in regulating attention effectively, paying attention as needed, and shifting attention to another task, when required. Children with LD are creative and resourceful, and can frequently be characterized as gifted and as alternative thinkers. They are often very smart, and typically have strengths and talents that differ from the skills emphasized in school. With recognition of their difficulties, appropriate help, and the development of their interests and talents, children with LD can learn to succeed both in school and beyond.

Myth 6. ***Adults with LD cannot succeed in higher education.***
Reality. More and more adults with LD are going to college or university and succeeding. With the proper accommodations and support, adults with learning disabilities can be successful at higher education.

Myth 7. ***Children with LD are identified in kindergarten and first grade.***
Reality. Learning disabilities often go unrecognized for years; most are not identified until third grade. Bright children can "mask" their difficulties, and some kinds of learning problems may not surface until middle school, high school, or even college.

Myth 8. ***More boys than girls have learning disabilities.***
Reality. Although three times more boys than girls are identified by schools as having learning disabilities, research studies show that, in fact, equal numbers of boys and girls have the most common form of learning problem—difficulty with reading. Many girls'learning difficulties are neither identified nor treated.

- **Revision**

Definitions of learning disabilities have evolved over time. These definitions have been attempts at describing a condition that had been labeled, among other terms, aphasia, neurologically impaired, Strauss Syndrome, and minimal brain dysfunction.

History suggests that the term learning disabilities originated with and became popularized by Dr. Samuel Kirk based on his writings in the early 1960s and comments that were made at the April 6, 1963 Conference on Exploration into Problems of the Perceptually Handicapped Child. His proposed label was "enthusiastically received and helped to unite the participants into an organization known as the Association for Children with Learning Disabilities, the forerunner of today's Learning Disabilities Association" (Lerner, 2000).

I have used the term "learning disabilities" to describe "a group of children who have disorders in development in language, speech, reading, and associated communication skills needed for social interaction. In this group I do not include children who have sensory handicaps such as blindness or deafness, because we have methods of managing and training the deaf and the blind. I also exclude from this group children who have generalized mental retardation. (Kirk, 1963, p. 2)

During the latter part of the 1960s, there became greater awareness about learning disabilities, both from the general public and Congress. In response, the U.S. Office of Education was charged with creating a federal definition for what constituted a learning disability. Samuel Kirk chaired this committee. In 1968, the first annual report of the National Advisory Committee on Handicapped Children, headed by Dr. Kirk, wrote:

Children with special learning disabilities exhibit a disorder in one or more of the basic, psychological processes involved in understanding or in using spoken or written languages. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling, or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage. (Special Education for Handicapped Children, 1968)

By the end of 1968, "specific learning disability" (abbreviated SLD or LD) became a federally designated category of special education (U.S. Office of Education, 1968), and in 1969, the Specific Learning Disabilities Act was enacted, Public Law 91-230. In 1975, Congress enacted P.L. 94-142, the Education for All Handicapped Children's Act. Here, the definition of a learning disability was formalized for children in special education. Under P.L. 94-142, a specific learning disability was defined as follows.

. . . a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction,

dyslexia, and developmental aphasia. However, learning disabilities do not include, ". . . 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.

The continuance of the P.L. 94-142 definition in federal law prompted further analysis. In the 1980s, a coalition of parent and professional organizations, described as the National Joint Committee on Learning Disabilities (NJCLD), criticized the definition under P.L. 94-142 for including concepts that were unclear or difficult to use to identify children with learning disabilities. In response to the criticisms, the NJCLD proposed an alternative definition.

Learning disabilities is a general term that refers to 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, and may occur across the lifespan. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions or with extrinsic influences, they are not the direct result of those conditions or influences (NJCLD, 1994).

Today, children in special education are protected under Public Law 108-446, The Individuals with Disabilities Education Improvement Act (IDEA 2004). The defi¬nition under IDEA has not changed in its criteria and guidelines for what constitutes a learning disability. Under current federal law the following language was established.

IN GENERAL: The term "specific learning disability" means a disorder in 1 or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

DISORDERS INCLUDED. Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

DISORDERS NOT INCLUDED. Such term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

As can be seen when comparing the definitions set forth by P.L. 94-142 (now IDEA) and the NJCLD, both view central nervous system dysfunction as a potential cause; both specify that speaking, listening, reading, writing, and math can be affected; and both exclude learning problems due primarily to other conditions, such as mental retardation, emotional disturbance, and cultural differences (Hallahan & Kauffman, 2003).

As noted above, the current IDEA definition of LD remains the same as that incorporated in P.L. 94-142. The focus of IDEA is on student-age recipients of public education. However, nonacademic services to persons with developmental disabilities are provided by the Department of Developmental Disabilities (DDD) after high school. Because of DDD's requirement that a person demonstrate a "substantial disability" to qualify for services, caseworkers need to determine a substantial level of severity affecting daily living. Without a separate definition of learning disabilities, caseworkers must qualify adults for DDD services based on some criterion. Bender (1992) advises, "A practitioner in the developmental disabilities is well advised to use the definition provided by the state in which he or she practices. Generally, the state's Department of Education can provide a set of rules and regulations for special education services that includes the state definition of learning disability" (p. 82).

Finally, IDEA was reauthorized in 2004 (IDEA 2004), and its official name is the Individuals with Disabilities Education Improvement Act (Public Law 108-446). As stated by Bowe (2004),

. . . IDEA will no longer require local education agencies (school districts) to use discrepancy in determining whether or not a given child has a learning disability. You should check with your state's department of education to see if a discrepancy requirement continues to be in effect. The new amendments to IDEA also call for a process that determines if a child responds to "scientific, research-based

intervention." If a student does, the school district may rule that there is no specific learning disability, but rather a prior failure to provide adequate instruction. (p. 69)"Discrepancy" in Diagnosing a Learning Disability

According to Ortiz (2004).

Perhaps the most controversial aspect of the definition of LD is that the observed academic problems are greater than what might be expected based on the child's intellectual ability. This would appear to be an assumption that would be rarely questioned because it seems to make the most sense. As noted previously, LD is generally not diagnosed in individuals who have mental retardation because it is expected that people with low cognitive ability will have problems learning to read, write, or do math. On the other hand, there is an assumption implicit in most def¬ initions of LD that a child would be able to perform at a normal or average level consistent with his/her ability level were it not for the presence of LD. That is, children with LD are performing below their ability, intelligence, or potential.

Under the provisions of IDEA, decisions regarding the presence or absence of any disability, as well as the provision of special education services, are determined by a multidisciplinary team which, by law, must include the parents, a regular education teacher, an administrator, and all professional staff who have evaluated the child. The notion of discrepancy is reflected in IDEA, which states that "a team may determine that a child has a specific learning disability" if

two conditions are met: (1) "the child does not achieve commensurate with his or her age and ability levels . . . if provided with learning experiences appropriate for the child's age and ability levels"; and (2) "the team finds that a child has a severe discrepancy between achievement and intellectual ability" in one or more areas of academic skills. The real problem in using this approach involves defining exactly what it means to be below one's expected level of performance.

The definition of learning disability under IDEA also has what is referred to as an "exclusionary clause." The exclusionary clause states that a learning disability "does not include a learning problem that is primarily the result of visual, hearing or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage." The purpose of this exclusionary clause is to help prevent the improper labeling of children, especially those from distinct cultures who have acquired learning styles, language, or behaviors that are not compatible with academic requirements of schools in the dominant culture. However, the exclusionary clause has generated tremendous debate and controversy by experts in the field.

The wording of the exclusion clause in the federal definition of learning disabilities lends itself to the misinterpretation that individuals with LD cannot also have other disabilities or be from different cultural and

linguistic backgrounds. It is essential to understand and recognize the LD as they might occur within the varying disability categories as well as different cultural and linguistic groups. Individuals within these groups frequently have received inappropriate educational assessment, planning, and instruction because they could not be identified as learning disabled.

The NJCLD supports the idea that learning disabilities are not the primary and direct result of other disabilities and should not be so confused. However, the NJCLD notes specifically that learning disabilities may occur concomitantly with other disabilities. Although these individuals may be served educationally through different service modes, a denial of the existence of significant learning disabilities will result in inappropriate assessment and educational instruction and can result in the denial of direct or indirect professional services. According to Mercer (1997; cited in Gargiulio, 2004), the word "primarily" suggests that a learning disability can exist with other exceptionalities.

There is no single sign that shows a person has a learning disability. Experts look for a noticeable difference between how well a child does in school and how well he or she could do, given his or her intelligence or ability. There are also certain clues that may mean a child has a

learning disability. We've listed a few below. Most relate to elementary school tasks, because learning disabilities tend to be identified in elementary school. A child probably won't show all of these signs, or even most of them. However, if a child shows a number of these problems, then parents and the teacher should consider the possibility that the child has a learning disability.

When a child has a learning disability, he or she may exhibit the following characteristics:

- Have trouble learning the alphabet, rhyming words, or matching letters to their sounds
- Make many mistakes when reading aloud, and repeat and pause often
- Not understand what he or she reads
- Have real trouble with spelling
- Have very messy handwriting or hold a pencil awkwardly
- Struggle to express ideas in writing
- Learn language late and have a limited vocabulary

- Have trouble remembering the sounds that letters make, or in hearing slight differences between words
- Have trouble understanding jokes, comic strips, and sarcasm
- Have trouble following directions
- Mispronounce words or use a wrong word that sounds similar
- Have trouble organizing what he or she wants to say or not be able to think of the word needed for writing or conversation
- Not follow the social rules of conversation, such as taking turns, and may stand too close to the listener
- Confuse math symbols and misread numbers
- Not be able to retell a story in order (what happened first, second, third)
- Not know where to begin a task or how to go on from there

Conclusion

As should be evident, the debate surrounding what constitutes a learning disability continues on as strong as ever. Remember, this is a multidisciplinary field that embraces sometimes competing viewpoints as the very nature of the construct and its causes. It is perhaps best to

envision LD as "a family or syndrome of disabilities affecting a wide range of academic and/or behavioral performance (Gargiulio, 2004, p. 206). In particular, regardless of the definition used, children with learning disabilities have intellectual functioning within the normal range, there is a discrepancy between potential and achievement, the learning disability is not due to other causes, there is difficulty in learning, and there is a presumption of central nervous system dysfunction.

The field of special education is subject to the dynamic forces found in political and scientific arenas, as well as to the capacity of the special education workforce to be responsive to current and future changes. To the extent that the identification of individuals with learning disabilities serves those purposes, changes in definition and criteria are and should be part of the constant evolution in this field. To the consumer of information, a careful examination of the definition and criteria used to identify populations will allow the application of research to practice.

• Assignment/Activity

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

- References / Further Readings

UNIT 3: ETIOLOGY OF LD- MEDICAL AND SOCIAL

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- References / Further Readings

- **Introduction**

Understandably, one of the first questions parents ask when they learn their child has a learning disability is Why? What went wrong? Mental health professionals stress that since no one knows what causes learning disabilities, it doesn't help parents to look backward to search for possible reasons. There are too many possibilities to pin down the cause of the disability with certainty. It is far more important

for the family to move forward in finding ways to get the right help. Scientists, however, do need to study causes in an effort to identify ways to prevent learning disabilities. Once, scientists thought that all learning disabilities were caused by a single neurological problem. But research has helped us see that the causes are more diverse and complex. New 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. Therefore, causes of learning disabilities may be as diverse as the types of learning disabilities. Clearly, the causes of learning disabilities are a nebulous area of research. There is lack of explicit cause and effect relationships, and studies have not been able to indicate any single factor directly responsible for causing learning disabilities. The condition is better understood by considering associated factors rather than cause and effect relationships. Research and practice in the field of learning disabilities have primarily focused on diagnosis and remedial education. To this end, it is necessary to explore the root cause of learning disabilities to be able to prevent them.

- **Objectives**

The field of learning disabilities has been plagued, almost since its inception, by fads and unproven theories. Little is actually known about the causes of learning disabilities, but we can presume that the students who exhibit them are as diverse as the indicators of the condition (Deutsch-Smith, 2004). What is known about the etiology

(cause) of learning disabilities is that abnormal brain structure and function play a significant role. Different abnormalities cause different types of learning disabilities. These neurological abnormalities can result from a variety of sources. Genetic Links The genetic basis for learning disabilities has been researched through twin studies, sibling analysis, and family pedigree analysis (Raskind, 2001). Twin studies in the field of LD have indicated that if one twin has a reading disability, the probability of the other twin also having a reading disability is 68 percent for identical twins (monozygotic) and 40 percent for fraternal twins (dizygotic). The research evidence generally supports the hypothesis that certain types of learning problems, including reading disabilities, are more common among identical twins than fraternal twins (DeFries, Gills, & Wadsworth, 1993). Similar findings are also observed in twins with speech and language disorders (Lewis & Thompson, 1992). Familial transmission of learning disabilities has shown that if there is a family history (parents, siblings, and extended family) of reading disabilities, the probability of having a reading disability is significantly increased (Culbertson, 1998). Several modes of transmission have been investigated. Although there are, as yet, no definitive conclusions, a possible linkage to chromosomes 6 and 15 has been identified.

The fact that learning disabilities tend to run in families indicates that there may be a genetic link (Alarçon-Cazares, 1998). Researchers have found that about 35 to 45 percent of the first-degree relatives (parents and siblings) of persons with reading disabilities also have

reading disabilities (Pennington, 1990; cited in Hallahan & Kauffman, 2003). Children who lack some of the skills needed for reading, such as hearing the separate sounds of words, are likely to have a parent with a related problem. However, a parent's learning disability may take a slightly different form in the child. A parent who has a writing disorder may have a child with an expressive language disorder. For this reason, it seems unlikely that specific LD are inherited directly. Possibly, what is inherited is a subtle brain dysfunction that can in turn lead to a learning disability. Similar evidence has been found in the area of speech and language disorders (Castles, Datta, Gayan, & Olson, 1999) and spelling disabilities (Schulte-Korne, Deimel, Muller, Gutenbrunner, & Remschmidt, 1996). Note that there may be an alternative explanation for why learning disabilities might seem to run in families. Note that there may be an alternative explanation for why learning disabilities might seem to run in families. Family patterns do not clearly prove that heredity is a contributing factor. Some learning difficulties may actually stem from the family environment. For example, parents who have expressive language disorders might talk less to their children or the language they use may be distorted. In such cases, the child lacks a good model for acquiring language and, therefore, may seem to have learning disabilities.

- **Definitions**

Throughout pregnancy, the fetal brain develops from a few all-purpose cells into a complex organ made of billions of specialized, interconnected nerve cells called neurons. During this amazing evolution, things can go wrong that may alter how the neurons form or interconnect In the early stages of pregnancy, the brain stem forms. It controls basic life functions such as breathing and digestion. Later, a deep ridge divides the cerebrum—the thinking part of the brain—into two halves, a right and left hemisphere. Finally, the areas involved with processing sight, sound, and other senses develop, as well as the areas associated with attention, thinking, and emotion. As new cells form, they move into place to create various brain structures. Nerve cells rapidly grow to form networks with other parts of the brain. The networks enable information to be shared among various regions of the brain. Throughout pregnancy, brain development is vulnerable to disruptions. If the disruption occurs early, the fetus may die, or the infant may be born with widespread disabilities and possibly mental retardation. If the disruption occurs later, when the cells are becoming specialized and moving into place, the result may be errors in the cell makeup, location, or connections. Some scientists believe that these errors may later show up as learning disabilities.

In comparing people with and without learning disabilities, scientists have observed certain differences in the structure and functioning of the brain (Richards, 2001). For example, new research indicates that

there may be variations in the brain structure called the planum temporale, a language-related area found in both sides of the brain. In people with dyslexia, the two structures were found to be equal in size. In people without dyslexia, however, the left planum temporale was noticeably larger. Some scientists believe reading problems may be related to such differences (Leonard, 2001; Raskind, 2001). It is now widely accepted that the brain structure or function of a person with LD is different from that of a person who does not have learning disabilities. There is a view that the language area in the brain of an individual is well developed in the left hemisphere and is tiny, and hence, dysfunctional in the right hemisphere. So, in the normal course of information processing, the nerve impulses set up in the visual cortices travel for interpretation to the left hemisphere of the

- **Summary**

A variety of methods are now available to measure the physical structure as well as the function of the brain. Neuroanatomical techniques include autopsy studies; neuro-imaging techniques include CT scan, MRI, PET, rCBF, and SPECT; electrophysiological measures include EEG, ERP, and AEP; and neuropsychological assessments evaluate brain/behavior relationships. A number of studies of brain structure and function have been carried out on individuals with learning disabilities (Silver, 1999). One method of looking at structural differences in the brain is through postmortem or autopsy studies. Postmortem findings have indicated that the normal

brain has asymmetries: one side of the brain is not a perfect mirror image of the other. These asymmetries are expected and considered normal (just as it is quite ordinary or typical for one foot to be longer than the other). Important research efforts have focused on reading disabilities, since they represent the most common and frequently identified type of learning disability. Studies have shown that people with reading disabilities have symmetry in brain structures where there should be asymmetry. For example, in people without LD, the temporal lobe (planum temporale area) in the left hemisphere is often larger than the same area in the right hemisphere. However, in subjects with LD, this area in the left hemisphere has been found to be the same size as in the right hemisphere. Another technique for studying the brain is the CT scan (computed tomography (roentgen-ray)). With this technique, a beam of X rays is aimed through the brain, identifying bone, grey matter, and fluid. A computer then reconstructs an image of each slice or brain section, allowing abnormalities in structure to be detected. CT scans of the occipital lobe for example, have shown asymmetry of the occipital pole in subjects without LD and symmetry in subjects with LD. Magnetic resonance imaging (MRI) is a technique that involves detecting the electromagnetic energy of brain protons and constructing an image by superimposing magnetic fields. Recent advances in MRI technology have enabled researchers to discover that specific regions of the brains of some individuals with reading and language disabilities show activation patterns during phonological processing tasks that are different from the patterns found in the brains of persons without

disabilities (Simos et al., 2000). MRI research has shown that individuals without LD showed leftward asymmetry in the angular gyrus of the parietal lobe, whereas people with LD did not show the expected asymmetry. It has been demonstrated through autopsy, CT scan, and MRI studies that there are structural differences in the brains of subjects with LD in comparison to subjects without LD. It has also

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

- References / Further Readings

NASET – LD Report | Theoretical Perspectives on the Causes of Learning Disabilities

UNIT 4: CO-MORBIDITY WITH LD – ADHD

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- References / Further Readings

- **Introduction**

When making an ADHD diagnosis, it is important to exclude other disorders that might overlap with ADHD or mimic ADHD symptoms. The differential diagnosis for ADHD is lengthy and ADHD is a highly comorbid psychiatric disorder. Consider a second opinion or referral to an ADHD specialist if the patient has a clinical history that is complex or if you are contemplating medication treatment beyond those recommended in these Guidelines14. Most individuals with ADHD have co-occurring conditions which may complicate the clinical

presentation. Often these comorbid disorders need to be dealt with concomitantly. ■ 50-90% of children with ADHD have at least one comorbid condition10; ■ Approximately half of all children with ADHD have at least two comorbidities10; ■ 85% per cent of adults with ADHD meet criteria for a comorbid condition260. Comorbidity contributes to the failure to diagnose ADHD in adults and children. Follow-up studies of children with ADHD and comorbidity show they have a poorer outcome than children with ADHD alone, as evidenced by significantly greater social, emotional and psychological difficulties19. The most common comorbidities identified in the Multimodal Treatment Study of ADHD18 and in other comorbidity studies have been remarkably consistent. High rates of comorbidities with ADHD have been reported in both clinical samples and epidemiological studies. Many authors have indicated that comorbidity is generally higher for ADHD in both children and adults. Several competing hypothesis are proposed to account for this high rate of comorbidity. ADHD with a comorbid condition may be indicative of one disorder being an early manifestation of the other, or that development of one disorder increases the risk for the other. Another possibility is that one disorder is a subtype of the other (conduct disorder and ADHD may be a subtype of ADHD). Comorbid disorders may share common vulnerability factors or genetic and psychosocial factors. Each disorder might be an expression of phonotypic variability or, finally, each disorder is a separate entity. More research is needed to understand the validity of each hypothesis. Disorder-based Differentiation Differential diagnoses are disorders that mimic ADHD

while comorbid disorders are disorders that occur together with ADHD (either causally-related or independent and occur concurrent with ADHD). A careful assessment of other possible diagnoses should be undertaken at the time of evaluation. Common Differential Diagnosis for ADHD This table is modified from Clinician's Guide to ADHD with permission of the author, Dr. Joseph Sadek.

A thorough history and full functional review accompanied by a physical examination will often confirm underlying physical conditions. In certain instances, laboratory work up will be needed in order to eliminate a suspected pathology. However, most individuals with ADHD do not need laboratory investigations as part of their diagnostic assessment. Some special investigations may be relevant, including polysomnography, electroencephalogram or brain imaging. Psychological testing, like WISC-IV (in children) or the WAIS (in adults), is often useful as it addresses any learning issues and helps to ascertain specific components of cognitive functioning that have overlaps with executive functioning (e.g. working memory and processing speed). Other tests, like personality assessment or projective testing, might be helpful to establish personality traits and assessing contact with reality.

- **Objectives**

ADHD and Specific Learning Disorder It is important to recognize that the term "Learning Disorder" (LD) in DSM-IV6 has changed to Specific

Learning Disorders (SLD) in DSM-5246. SLD and ADHD are now placed in the neurodevelopmental disorders section in DSM-5. The DSM-5 uses a single overarching term, Specific Learning Disorders, rather than distinct Disorders such as Reading Disorder, Math Disorder, Written Expression Disorder and Not Otherwise Specified as used in the DSM-IV-TR. The DSM-5 allows for a single category of SLD with specifiers. That is, the clinician can specify manifestations of learning difficulties at the time of the assessment in three major academic domains such as reading, writing and mathematics (e.g. SLD with impairment in reading, which includes difficulties in word reading accuracy, reading rate or fluency, or reading comprehension). Given historical concerns about using the IQ-Achievement Discrepancy method, which was a prerequisite in the DSM-IV, this method is no longer required in the DSM-5. Rather, the four new criteria (A-D) for diagnosis state that there needs to be - A: persistence of symptoms (list of clinical symptoms provided) for at least six months despite focused intervention; B: low academic achievement causing significant impairment; C: age at onset in school age years (may manifest fully later); and D: not attributable to intellectual disorder, uncorrected visual or auditory acuity, other mental or neurological disorders, psychosocial adversity, lack of proficiency in the language of academic instruction, or inadequate instruction. The DSM-5 requires multiple measures including those that are individually administered and culturally appropriate before making the diagnosis (i.e., testing, school reports, curriculum-based assessments). Children/adolescents with ADHD frequency fall below

control groups on standardized achievement tests. Teachers and parent often express concerns about a child's level of productivity and may label this child/adolescent as "lazy" or "unmotivated". There are a number of trajectories that can culminate in underachievement. One of the possibilities is that the individual has comorbid disorders of ADHD and Specific Learning Disorders (SLD). Indeed, research indicates that the comorbidity of ADHD and learning disorders is high. Chapter 2 2.5 Comorbidity of SLD and ADHD The comorbidity range has been suggested to be between 31% and 45%. One out of every three children with ADHD also have an SLD 264. Comorbidity rates of SLD with ADHD can vary greatly depending on how SLD is diagnosed. However, ADHD and SLD can often present with similar behavioral symptoms. For example, children who are struggling in reading or writing may present with difficulties sustaining their attention to such arduous tasks. Thus, they may appear distractible with their inattention considered secondary to the presence of a SLD. It is recommended that a comprehensive assessment be completed in order to tease apart the primary diagnosis or whether the two disorders are comorbid. Even without comorbid learning disorders, children with ADHD may still have a great deal of difficulty, with performance deficits such as following instructions, listening in the classroom, or staying on task, which can result in significant underachieving compared to their potential. Additional individuals with ADHD often have executive function difficulties in the areas of initiation, organization, planning, selfdirected activity, and ability to complete multistep tasks. The degree of difficulty individuals

experience varies, with some individuals greatly impaired and their academic achievement subsequently falling well below their abilities. Learning disorders and executive function deficits are also developmental. That is, they may become more overt as cognitive demands in school increase. Implications in Diagnostic Assessment In terms of assessment, practitioners should always (a) screen for academic skills deficits among students with ADHD and for ADHD symptoms among students with SLD; (b) assess academic functioning across subject areas (e.g., reading, math, writing) when evaluating students with ADHD; and (c) carefully evaluate whether interventions for ADHD enhance academic functioning264. Given the relatively high comorbidity rate between ADHD and SLD, students who are evaluated for one of these disorders should always be screened for possible symptoms of the othe disorder. If the screening suggests the possibility of a learning disorder, then a referral should be made to the support staff and psychology practitioners at the child's school for consultation around school programming. When psychoeducational assessments are completed, it is important to assess for comorbid SLD as well as to rule out other disorders, such as auditory processing disorders or motor disorders, which negatively impact on written output. Children with ADHD often have speech and language difficulties. Children with evident speech and language disorders should also have a hearing screen which may include central auditory processing. It is important to differentiate between those academic difficulties that may be secondary to ADHD symptoms (i.e., performance deficits) and those academic difficulties that represent

actual skill deficits (i.e., SLD related). In adults, as in children, ADHD can occur along with specific problems in reading, math or with written expression. These can usually be identified by assessing whether these difficulties have caused previous problems in school and continue to cause more or less residual difficulty. What is more complex is the differential between a primary attention problem (ADHD-inattentive presentation) and various processing disorders, executive function problems secondary to organic conditions (e.g., head injury, exposure to toxins, drug abuse), or language deficits. The childhood history should reveal previous concerns of ADHD. It is additionally important to determine if the patient is inattentive only in the area in which learning 2.6 Version: November 2014. Refer to www.caddra.ca for latest updates. deficits present a challenge; if the attentional problems followed an accident involving a concussion or brain injury; or whether the problems with focus followed a period of heavy drug use. Implications for Management Academic skill deficits may require intensive, direct instruction and modification of antecedent events beyond medication and motivational (i.e., consequence-based) behaviour modification strategies264. The physician diagnosing the child or adolescent with ADHD has a responsibility to aid the individual in accessing appropriate classroom accommodations. If specific learning disorders are diagnosed, it is essential that accommodations be documented that will address the individual's learning impairments. It is likely that the individual will require accommodations to target both productivity and learning. It is also important for the individual's self-esteem to be able to

differentiate their overall level of intelligence from specific deficits that can be remediated. Templates that can be used as a guide for writing letters requesting school accommodations are found in Chapter 6, supporting document 6A. In recent years, schools have been much more willing and skilled in providing appropriate adaptations for children and adolescents with ADHD. These adaptations should be understood as giving the student with a disability equal access to the learning environment and not perceived as an indication of academic incompetence. This is true throughout the individual's academic years. Practice Point: The templates for requesting psychoeducational testing and accommodations can be downloaded from the CADDRA ADHD Assessment Toolkit and printed on your letterhead. You can personalize and adapt them to suit your needs. Educational accommodations are a right (recognized in the Ontario Human Rights document, "Guidelines in Accessible Education"28). Although some school boards across Canada do not currently recognize ADHD as qualifying a student as a 'special needs student', this perspective is changing. Both CADDRA, the national physician's ADHD alliance, and CADDAC, the national parent and patient support and advocacy network, will be advocating to the Ministries of Education for standardized educational accommodations across Canada. CADDRA and CADDAC believe that all neurobiological and mental health disorders need to be recognized by educational institutions in order for individuals to receive the necessary multimodal care. Comprehensive intervention services for students with comorbid ADHD and SLD will require empirically supported treatment strategies that address both

disorders and that are implemented across school and home settings246.

- **Definitions**

Behavioural problems (including ODD, aggression and delinquency) account for most of the comorbidity in children with ADHD. The presence of comorbid ODD with ADHD is likely to generate substantial impairment and would be expected to result in increased referrals for treatment29. Between 25-75% of adolescents with ADD may have concurrent ODD30. Distinguishing between normal adolescent self-assertion and ODD may not always be easy. Among adults with ADHD, there is some continuity of ODD in that population247. One of the most common reasons for ODD is parental vulnerability resulting in insecurity of the child who responds with a need to control. This manifests by active confrontation of authority they perceive as being weak. The treatment for psychosocial-based ODD is to reestablish the generational boundaries using positive parenting techniques. However, in patients with comorbid ODD with ADHD, it is advisable that Chapter 2 2.7 the first step is optimization of pharmacotherapy of ADHD followed by augmentation with psychosocial treatment, including parent and other behavioural treatments. It is important to distinguish ODD from CD. Children with ODD have recurring negativistic, defiant, hostile and disobedient behaviour, especially toward authority figures, whereas those with CD repeatedly violate the basic rights of others or age-appropriate societal norms, as defined by

a pattern of repeated aggression, lying, stealing, and truancy31. The onset of both disorders is usually prepubertal, thus making early identification, diagnosis, and treatment crucial. ODD is a prodromal to conduct disorder in some cases but an unlikely outcome in more than 50% of the cases. Many children with ADHD and ODD do not evolve into CD32. Summary: Some patients with ADHD and ODD may respond adequately to stimulant medication or non-stimulant (atomoxetine, guanfacine) but moderate to severe cases are likely to require augmentation with another medication or with behavioural treatment. Effective treatment may reduce the risk of more severe conditions in adolescent and adult years, such as conduct disorder, substance use disorder and depression. ADHD and Conduct Disorder (CD)/Aggression CD comorbid with ADHD is a severe, persistent condition that has an earlier age at onset and is frequently preceded by ODD, therefore it is important to distinguish between the two disorders32, 33. CD is not always pre-pubertal onset; another group of children have adolescent-limited CD. Co-occurence of ADHD and CD in adolescents is often a precursor of antisocial behaviours; nicotine use; substance use or abuse; anxiety or depression; and development of antisocial personality disorder as adults34, 35. Pharmacotherapy for patients with ADHD, CD and aggression may be useful (stimulant and non stimulant medication). Although medications are usually effective in reducing the symptoms of ADHD and impulsive aggression18, 36, these patients typically benefit from multimodal treatment37. Medications initially should treat the most severe underlying disorder, after which targeting specific symptoms is

appropriate. Some of these patients show aggression before and during the course of treatment, making it imperative to document their aggressive behaviours before the introduction of medications and to make these behaviours an explicit target of treatment. Clinicians should assess treatment tolerability and efficiency if patients show aggression after starting medication for ADHD. Conduct problems are generally reduced by all effective ADHD treatments (stimulant and non stimulant medication and psychosocial treatment36, 38). However, treatment of the ADHD may not be sufficient to resolve all symptoms. Optimization of medication with a multimodal treatment approach indicated psychosocial treatments including individual and family interventions are required. Specialists in this area may use mood stabilizers or an atypical anti-psychotic. Other treatments (besides optimizing ADHD medication and psychosocial treatments) are controversial and referral to a specialist is recommended30, 39. Research shows that ADHD and CD represent two complex and distinct entities that are often associated. Children with these conditions without comorbidity present with different core symptoms and perform differently on objective measures of ADHD symptoms. Children with these comorbidities show the poorest outcome within each individual group40. Researchers have attempted to understand the reasons for the high comorbidity between ADHD and CD. They have suggested several reasons for this: ■ that one disorder is a precursor to another; ■ one disorder is a risk factor for developmental of the other; ■ the disorders share the same related risk factors; or 2.8 Version: November 2014. Refer to www.caddra.ca for latest updates.

■ there is a common underlying symptomatic basis for one or more of these behaviours41,42. DSM 5 emphasizes that aspects such as early onset (before 10 years old), high level of comorbidities and limited prosocial emotions (lack of remorse or guilt; callous - lack of empathy; unconcerned about performance; shallow or deficient affect247) are all poor prognostic indicators and increase the risk for development of antisocial personality disorders in adulthood. Summary: The essential characteristic of conduct disorder is repetitive and persistent behaviour manifested by violation of others' fundamental rights or violation of social rules/norms. ■ Psychosocial treatment, parenting and problem-solving skills training, and family and/or individual therapy, is needed to improve patient outcomes. ■ Pharmacological treatment of comorbid ADHD/conduct disorder may require combination of an ADHD medication and a medication that targets aggression.

- **Summary**

ADHD and Borderline Personality Disorder (BPD)43 BPD may occur in either gender but is more prevalent in women. It is advised that the individual should be over 16 before a formal diagnosis of BPD is applied. While patients with BPD are often impulsive, labile and have difficulties with executive function, the presence of rage, chronic feelings of emptiness, identity disturbance, dissociative symptoms, primitive defence mechanisms, deliberate self-harm actions, abandonment anxiety and suicide threats differentiate the two

disorders. While patients with BPD may have ADHD, the BPD is the more severe disorder and more likely to impact outcome. Therefore it should be treated and stabilized before ADHD treatment is undertaken. Some caution needs to be exercises with the use of pharmacological treatment due to potential misuse, abuse, overdose, diversion, activation and mood dysregulation. However, effective treatment of underlying ADHD can improve active participation in psychosocial treatments. Patients with BPD who have clear evidence of ADHD in childhood often expect that treatment of the ADHD in adulthood will resolve the personality issues and they are frustrated that they continue to struggle. In these cases, it is important to explain the treatment limitations of ADHD medications. This will reduce the risk that patients will react with feelings of abandonment, rage, disappointment, devaluation or feel that they have been rejected. ADHD and Antisocial Personality Disorder (ASPD)43 Some children with ADHD and conduct disorder go on to have ASPD after the age of 18 (the age criterion is required), and show an absence of remorse, compassion and conscience. Since some patients with ASPD may be psychopathic and also drug-seeking, it is important to screen for cruelty, aggression, problems with the law and stealing. Treatment of ADHD in the context of ASPD may not lead to significant functional improvement in the patient's actual well-being but may improve the extent of their impulsivity45. Whether or not they are less impulsive, less hyperactive and more focused may or may not improve their functioning if symptomatic improvement is directed to antisocial activities rather than improved interpersonal relationships and life

skills. ADHD and Anxiety43 There are anxious patients in whom problems concentrating, restlessness and other aspects of dysregulation are caused by a primary anxiety disorder and not ADHD: ▫ Check for other signs of anxiety and family history of anxiety. ▫ Check to see if the patient has symptoms of ADHD not typical for anxiety, such as stimulus-seeking behaviour, disinhibition or difficulty with organization and time-management. Chapter 2 2.9 ▪ Determine if symptoms have developed de novo as a result of new onset anxiety or a particular stressor. The natural course of ADHD moves towards an internalization of the symptoms. As a result, the emergence of anxiety may be a natural extension of ADHD. Individuals with the inattentive presentation have a stronger propensity for anxiety as they typically have internalizing temperaments. This is particularly true in females who may be highly sensitive and have more inattentive symptoms. However, having ADHD also exposes the individual to considerable negative situations and anxiety may be a compensation for environmental insults (i.e. in order to avoid conflict situations due to their impulsiveness, they use anxiety to create excessive internal control). Once anxiety develops, attention can be severely compromised. As a result, there are patients with comorbid anxiety and inattention. This results in significant damage to their self esteem, lack of academic success and other types of impairment. There are many forms of anxiety within the DSM-5 but they all have some components in common: a) the cognitive message always begins with the words "what if..." which is a need to anticipate a negative outcome before it has happened b) a tendency to hold on to beliefs, thoughts,

belongings and emotions (i.e. not being able to easily "let go") c) is likely related to heightened noradrenaline activity, and d) the behaviour leads to impairment in functioning. As many as 33% of children18 with ADHD have comorbid anxiety and that number increases to as many as 50% of adults5 . Once the specific type of anxiety is identified the treatments are generally as follows: CB ■ Behavioural intervention: Relaxation therapy, yoga, meditation, exercise, simplifying their environment by throwing things out, delegating anxious activities, improved organization skills etc. are all useful interventions ■ Psychological therapy: Cognitive behavioural therapy (CBT) and individual therapy focusing on the specific anxiety disorder ■ Medical treatment: If ADHD exists with anxiety, treat the ADHD first. There may be a risk of increasing anxiety in the short term so it is important to start very slowly and increase the doses gradually. If the anxiety becomes too intense, then the ADHD medication should be reduced or withdrawn and the anxiety should be treated until the symptoms are tolerable. Then the ADHD medication should be restarted. Any of the ADHD medications can be successfully used when anxiety is comorbid although atomoxetine has been found to be specifically helpful in management of anxiety with attention disorder21, 22. Due to 2D6 inhibition, atomoxetine should be used with caution if combined with fluoxetine or paroxetine for example. ADHD and Major Depression43 (MD) There is considerable overlap between MD and ADHD. MD patients (without ADHD) may still have transitional inattention, short-term memory problems, irritability, impulsivity, trouble sleeping, trouble concentrating, restlessness and

being fidgety. However, the differential with ADHD is based on two factors. Primary MD typically has consistent depressed mood or anhedonia. Typically bouts of depression are episodic whereas the attentional deficits associated with ADHD are ongoing. A drop in mood is qualitatively different from the lifelong deficits in maintaining focus or motivation that are typical in ADHD. There is a difference between poor concentration in the presence of depression and deficits in organization, impulsivity and lifelong difficulty with forced effort and listening even when happy. In the context of poor self-esteem or possible depression, a careful assessment of suicide risk needs to be conducted. 2.10 Version: November 2014. Refer to www.caddra.ca for latest updates. Patients with primary ADHD often have to deal with failure and may become demoralized, depressed or dysthymic as a result. In that case, they will present with both disorders. Patients with ADHD may look like they have a mood disorder when they do not. Lack of motivation may mimic anhedonia, chronic difficulty going to sleep and restless sleep may mimic insomnia secondary to MD. Patients with ADHD typically have dysregulated mood, are reactive and sometimes irritable, but it is not typical for ADHD in the absence of a mood disorder to be associated with entrenched, depressed affect. On the contrary, many individuals with ADHD maintain reasonable mood despite chronic rejection and difficulties with relationships and life skills. Some patients with ADHD are negative or chronically irritable ("life is a bore" or "I've never felt well") in the absence of major neurovegatative features. The most appropriate designation for this particular attribute would be a persistent

depressive disorder (dysthymia) since these symptoms are not included in the diagnostic criteria for ADHD itself. Antidepressants can be helpful in some cases. It is not uncommon for ADHD and depression to coexist. It may be helpful to try to determine if the patient is depressed secondary to ADHD or vice-versa. Depression or more commonly dysphoric symptoms are also possible due to the withdrawal effects of the medications used to treat ADHD CB . Different guidelines differ on sequence of treatment, but clinically the "primary" disorder - meaning the more severe, early onset and pervasive disorder - is usually treated first. When initiating treatment with stimulants in a patient with untreated melancholic depression, worsening of already impaired sleep and appetite issues may be a problem. When the depression is associated with problems in the psychosocial environment, treatment strategies including individual (e.g. CBT) and family therapy are primarily indicated5 . However, pharmacological treatment is a useful intervention in the adolescent and adult age group. The evidence for successful treatment of childhood depression with medications is mixed. Stimulant medications may produce a dysphoric look in 30% of patients, even though the patient is not clinically depressed or reports depression. Adjustment of dose may improve the dysphoric symptoms; failing that, switching to a different ADHD medication may be successful. Treatment of the most disabling condition should be undertaken first. This is particularly true in the presence of suicide risk. If the MD continues to be impairing or worsens, referral is recommended. All of the drugs used to treat ADHD have potential antidepressant effect or

can cause mood symptoms particularly in the rebound of their use ... If suicide risk is imminent, an immediate referral or intervention must be carried out. Suicide risk should be assessed in the follow-up visits as well. Summary: ■ Risk of suicide in ADHD derives mostly from comorbidity and not from stimulants. ■ Treat the most disabling condition with the most effective treatment for that condition first, ■ then treat the other condition. ■ Some evidence suggests that ADHD treatments may be less effective in patients with active depression and may lead to an exacerbation of dysphoria, poor sleep and decreased appetite. ■ If a patient presents with chronic persistent depression and ADHD, or mild depression and ADHD, then ADHD should be the priority since its treatment may lead to amelioration of the mood symptoms. ■ Moderate to severe depression should be managed as a priority, then ADHD treatment should take place. ADHD and Bipolar Spectrum Disorder The risk of bipolar disorder in the general population, when considering the spectrum of bipolar presentations (BP I, II, NOS) is about 4%. In the adult ADHD patient population, the risk increases. Most children with ADHD do not go on to have BD, but a high index of suspicion should be maintained, particularly when a child or adolescent presents with depression symptoms. Any patient who experiences Chapter 2 2.11 a new and acute onset of increased energy, irritability, grandiosity and decreased need to sleep is, by definition, suffering a hypomanic/manic episode. Children and adolescents diagnosed with ADHD may also be diagnosed with bipolar disorder but this comorbid diagnosis is controversial in young children44. A sample of patients with ADHD

and comorbid bipolar disorder were compared to a sample of BP patients with no ADHD. Those ADHD patients with BP were found to have an earlier age of onset and short periods of wellness. They also had more irritability, violence, legal problems and less education. That sample exhibited more mania and depression and more suicide attempts, and those patients with ADHD and bipolar disorder had a greater number of other comorbidities on Axis 145. Treatment should usually start with managing the bipolar disorder symptoms first. The management of ADHD with bipolar disorder is usually more complicated and often requires the use of mood stabilizers and/or atypical antipsychotics. There is a very small risk of switching from euthymia or depression to mania when a bipolar patient is prescribed stimulant medication. If this occurs, the stimulant should be discontinued and treatment of bipolar disorder should commence. Once the patient's mood is stabilized, stimulant medication may cautiously be re-instituted (start low and go slow)248, 43. Some patients have an early onset form of BD characterized by severe mood swings, anger outbursts, irritability, distractibility, hyperactivity and impulsive, self-destructive behaviour. Differentiating features include symptoms of grandiosity, euphoria and periodicity. Family history of BD is an important risk factor. However, children of bipolar parents are more likely to have ADHD (8-10%), rather than BD (5%)45. Other differentiating features include: discrete cyclical symptoms of emotional lability in BD as opposed to continuous symptoms in ADHD; psychosis or grandiose perceptions in BD are not present in ADHD; and possible depression and sleepiness after rage

episodes in BD as opposed to baseline recovery in ADHDbased rages. CB In adolescence and adulthood, BD should be considered as the primary diagnosis if there are prominent, episodic, distinct, cycling mood symptoms, grandiosity and hypersexuality. Mood stabilizers (lithium carbonate, anticonvulsants) and atypical antipsychotics are the treatment of choice for bipolar disorder46. Treatment of BD or BD + ADHD should be referred to a specialist.

ADHD and Disruptive Mood Dysregulation Disorder The diagnostic criteria for Disruptive Mood Dysregulation Disorder (DMDD) includes: severe recurrent disproportional temper outbursts (verbal and/or physical) occurring three or more times a week in at least two different settings for 12 months or more. Diagnoses are generally made between the ages of 6 and 10 and cannot first be made before the age of 6 years or after the age of 18 years. Mood generally between temper outbursts appears to be irritable. This diagnosis was created to address concerns about the potential for the overdiagnosis of, and treatment for, bipolar disorder in children246. A study by Copeland et al.249 of some 3,258 participants aged 3 to 17 showed a prevalence rate of 0.8% to 3.3% with the highest rate in preschoolers. Disruptive Mood Dysregulation Disorder was also found to be very comorbid (62% to 92% of the time). The highest rate of comorbidity occurred with depressive disorder (odds ratio 9.9 to 23.5) and oppositional defiance disorder (52.9 to 103.0). Rate of co-occurrence with ADHD had odds ratios which ranged from 2.9 to 12.6. The condition was associated with significant social impairment, school suspension,

substance use and poverty. Thus the possibility of disruptive mood dysregulation disorder needs to be considered in patients with frequent temper outbursts and irritable mood, both as a differential or comorbid condition 2.12 Version: November 2014. Refer to www.caddra.ca for latest updates. with regards to ADHD. A combination of medications and psychosocial interventions is needed to treat this comorbid combination. ADHD and Autistic Spectrum Disorder According to the literature: ■ Until recently, ADHD was not recognized in persons with autism spectrum disorder but researchers and clinicians have now recognized the importance of attending to both syndromes when both are present and clinically impairing; ■ up to 58% of the individuals diagnosed with autism and 85% of those diagnosed on the continuum of autistic spectrum disorders (previously referred to as Asperger's syndrome) tend to meet full criteria for ADHD as well24; ■ attentional impairments in autism tend to be more of the "not listening" and "difficulty shifting focus" type than of "the short attention span" and "excessive distractibility" type; ■ medications used to treat ADHD can help alleviate ADHD impairments in the majority of patients with comorbid ADHD and autism spectrum disorder, though the effect is somewhat less than in those presenting with ADHD alone; ■ in people presenting with ADHD and ASD, side effects such as dysphoria are more common51 4 dosage titration in this population should be done at a slower rate to minimize adverse effects. ADHD and Addictions Substance Use Disorder (SUD)24, 52-56 Comorbidity of Substance Use Disorder and ADHD is high. Literature suggests that one-quarter of adults with SUD and one-half

of adolescents with SUD have ADHD. Adults with SUD also show a higher risk for ADHD, as well as earlier onset and more severe SUD associated with ADHD. Several authors suggest a higher rate of SUD is recorded in adults with ADHD than in the general population, and ADHD itself is a risk factor for SUD. Patients with conduct or bipolar disorders co-occuring with ADHD have the greatest likelihood of developing SUD and major comorbidity. ADHD was related to SUD, but the main effect was related to conduct disorder. ADHD can be a significant predictor of early initiation of cigarette smokng. Individuals start using with cigarettes, alcohol and other drugs of addiction. Some controversy exists about the relationship between ADHD treatment and substance use. Some researchers suggest that ADHD and SUD-related craving share neurobiological similarities, and that treatment of ADHD may reduce craving for substances and subsequently reduce the risk for relapse to substance use. An aggregate of the literature seems to suggest that early stimulant treatment reduces or delays the onset of SUDs and perhaps cigarette smoking into adolescence; however, the protective effect is lost in adulthood. The self-medication hypothesis is plausible in ADHD. Moreover, the accompanying poor self-judgement and impulsivity associated with ADHD may be conductive to the development of SUD. Cocaine and stimulant abuse is not overrepresented in ADHD; in fact, marijuana continues to be the most commonly abused agent. Methylphenidate does not have the same abuse liability as cocaine does due to slower dissociation from the site of action, slower uptake into the striatum, and slower binding and dissociation with the dopamine transporter protein relative to

cocaine. The ADHD group that is at highest risk for diversion and misuse is those people with substance abuse and conduct disorder. Both immediate-release and, to a lesser degree, extended-release were diverted or misused. Chapter 2 2.13 The treatment needs of individuals with SUD and ADHD need to be considered simultaneously; however, if possible, the SUD should be addressed initially. If the SUD is active, immediate attention needs to be paid to the stabilization of the addiction. Depending on the severity and duration of the SUD, individuals may require inpatient treatment. Self-help groups and CBT can also be helpful. SUD individuals with ADHD require intervention(s) for ADHD (and, if applicable, for comorbid psychiatric disorders). Patients with ADHD and SUD require multimodal intervention incorporating both addiction and mental help treatment52, 54-57, 43, 250-252. Patients with ADHD are at significant risk of using illicit substances, particularly nicotine, cocaine and cannabis, and of starting at an earlier age than the general population54. Concurrent disorders with ADHD, like CD and BD, increase the likelihood of SUD55. While patients with ADHD do self-medicate with substances, it is important to dispel their belief that the use of illicit substances has a positive therapeutic benefit. SUD is a diagnosis in its own right, and data to date does not demonstrate that treatment of ADHD in this population will elimate the substance abuse56. A history of substance abuse should be explored with the individual in private.

ADHD and Enuresis Enuresis treatment may be improved with medication initiation, particularly for daytime events. Nocturnal enuresis often requires separate management. The most effective intervention for the motivated child and family is the alarm-based training system. Medical treatment options may include the use of Desmopressin, DDAVP, imipramine and (recently determined) atomoxetine58-60. ADHD and Tic Disorders61-64 The most common tic is blinking. Tics present as either phonic or physical movements. Research on tic disorders and ADHD is complex and this may be a disorder where the population statistics do not always reflect the risk to the individual CB . While stimulants do not cause tics, they may be implicated in uncovering a patient's propensity for them. There is some evidence that while atomoxetine may be associated with improvement in tics, it may also cause tic emergence. Some recent research studies suggest: ■ patients with Tourette Syndrome (TS) co-occurring with ADHD may suffer from more impairment related to ADHD than tics; ■ treatment interventions for TS include education about tics and related disorders, clinical monitoring, pharmacological or psychological treatments and school interventions for kids as needed; ■ some studies indicate that stimulants are a safe and effective treatment for ADHD in most children with comorbid tic disorder; ■ the alpha-2-adrenergic agonists, clonidine and guanfacine XR (Intuniv), have shown promise in the treatment of tics, particularly in combination with ADHD. ADHD and Epilepsy Some studies have suggested a higher incidence of symptoms of ADHD in children with epilepsy. The five common epilepsy comorbid conditions are reduced

bone health and fractures, stroke, depression, migraine and ADHD65, 253. There is a strong trend towards a higher incidence of epilepsy among children with ADHD than among children without ADHD66 and epilepsy in children with ADHD appears to be more severe than in those without66. There appears to be a reluctance to diagnose and initiate treatment for ADHD in children with epilepsy67. Older data suggests that stimulant medications could lower seizure threshold, though current data supports the use of stimulants and non-stimulants in most cases. Adult epilepsy patients who received relief from treatment with methylphenidate showed an improved quality of life without significant alteration of seizure control in the presence of antiepileptic medication68, 254. New onset seizures can be managed with the addition of an antiepileptic medication. Some studies suggest drug interactions between methylphenidate and antiepileptic drugs inhibit metabolism and increase the level of antiepileptic medications (AE)69 CB . A conservative approach is still indicated when treating patients with comorbid ADHD and seizure disorder. However, ADHD can be treated in the majority of patients with seizure disorder69.

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

UNIT 5: LD ACROSS THE LIFE SPAN

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- References / Further Readings

- **Introduction**

This module will provide a contemporary overview of the needs of people with a learning disability. We will briefly consider definitions, terms and prevalence and historical perspectives before exploring in more depth the changing picture of needs, models of care and the principles on which care is based. A number of concepts introduced in

this module will be returned to throughout the learning resource such as person centred approaches to care, interprofessional working and maximising opportunities for people with learning disabilities and complex needs. On completion of this module you should be able to: • Explore your understanding of what it means to have a learning disability and complex needs • Demonstrate an understanding of the development of services for people with a learning disability and the key issues for contemporary practice • Critically reflect on the changing picture of needs and how this may impact on your role, knowledge and skills development • Demonstrate understanding of a range of principles of care and how your practices can be developed to maximise opportunities for people with a learning disability to direct their care and enable social inclusion

- **Objectives**

Although there is no general consensus it is clear that whatever term is used should be positive and inclusive (BILD, 2011). For the purpose of this learning resource we shall use the term learning disability and the definition used within 'The Same as You' (Scottish Executive, 2000, p. 15). 'People with learning disabilities have a significant, lifelong condition that started before adulthood, that affected their development and which means they need help to understand information, learn skills and cope independently'. This learning resource is designed for staff who support people with a learning disability and complex needs. Complex needs can also mean different

things to different people and for the purpose of clarity, when we use the term complex needs we mean a person who has a range of 'layered' issues. 'Needs arising from both learning disability and from other difficulties such as physical and sensory impairment, mental health problems or behavioural difficulties'. (Scottish Executive, 2000, p.15). Another term you will come across in this learning resource is 'profound and multiple learning disability'. People with profound and multiple learning disabilities are among the most disabled within our community and this term refers to people with: 'A profound intellectual disability, which means that their intelligence quotient is estimated to be under 20 and therefore they have severely limited understanding. In addition, they have multiple disabilities, which may include impairments of vision, hearing and movement as well as other problems like epilepsy and autism'.

Prevalence is the estimation of the number of people with a condition as a proportion of the general population. The number of people with a learning disability in Scotland is unknown; estimates are in the region of 20 people in every 1,000 with mild or moderate learning disabilities and 3 to 4 people in every 1,000 with severe or profound learning disabilities. About 27,671 adults with a learning disability are known to Local Authorities across Scotland

- **Definitions**

There are a number of different ways of defining and classifying learning disability and they are all open to different interpretations. The term learning disability itself can be confusing. In the USA, it means a disorder of the basic processes involved in understanding or using language, such as dyslexia. The current accepted international terms are Intellectual Disability or Developmental Disability. Other terms such as Mental Handicap, Learning Difficulty and Mental Retardation have been used in the past and still are acceptable in some places.

There are a number of different ways of defining and classifying learning disability and they are all open to different interpretations. The term learning disability itself can be confusing. In the USA, it means a disorder of the basic processes involved in understanding or using language, such as dyslexia. The current accepted international terms are Intellectual Disability or Developmental Disability. Other terms such as Mental Handicap, Learning Difficulty and Mental Retardation have been used in the past and still are acceptable in some places.

- **Summary**

A wide number of philosophical and legislative shifts in ideology have impacted on the lives of people with a learning disability and their carers over the years. Changes in ideology over the years have seen

perceptions move from people with learning disabilities being feared and dehumanised, to being seen as in need of care and protection, to a welcome and significant emphasis on people being seen as capable citizens with rights. Within the last 40 years we have moved from institutional models of care, with the closure of longstay institutions to models of care which promote social inclusion and ordinary living. These shifts in perspectives should be celebrated and embraced as they give opportunity, choice and the potential for further positive developments. However despite major shifts forward many people with a learning disability continue to face difficulties in living what Johnson, Whalmsley and Wofle (2010) describe as 'a good life'. Some people with a learning disability still do not have: • the sense of belonging to their community that they would like • the relationships they would like • the meaningful occupation/activity they would like or • the choice and control over their life they would like This learning resource has a focus on people with a learning disability and complex needs and it is worth noting that Emerson (2005) states that people with more severe learning disabilities are likely to experience a poorer quality of life than people with less severe learning disabilities. It is important to promote a good life for all people with a learning disability, to do this we need to develop in staff the knowledge, values and attitudes that reduce You may have mentioned that having an understanding of the numbers of people with a learning disability can help us plan appropriate service provision. This is important along with an understanding of what it means to have a learning disability, as this information helps services predict need and design services that are

responsive to those needs. Having information about incidence and prevalence can also help us identify if patterns are changing and this too can be important in ensuring we have the best service provision and skills sets, required to appropriately provide person centred and holistic support.

The population of people with a learning disability is changing. We have a growing population due to a number of factors. Advances in care mean that prenatal survival rates are increasing and improvements in health and social care services mean that people with a learning disability are living longer. The incidence of children and adults with a learning disability is increasing. The evidence base also indicates increases in substance abuse, foetal alcohol spectrum disorder, attention deficit disorder, and autistic spectrum disorder (Blackburn et al. 2010; MacKay et al. 2010). We have a growing population of children and young adults with profound learning and multiple disabilities (Mansell, 2010; Parrott et al. 2008). We also have a growing number of adults with a learning disability living into older age and experiencing the associated health needs of ageing (Torr & Davis, 2007). This in turn leads to an increasing population with more complex needs than previously seen, commonly comprising of multiple coexisting conditions. We have a robust evidence base illustrating high and unmet health needs experienced by people with a learning disability (Cooper et al, 2004; NHS health Scotland, 2004;

Disability Rights Commission, 2006). We know that compared to the general population people with a learning disability experience a different pattern and higher frequency of health disorders (Cooper et al. 2004), including respiratory disease, cardiovascular, gastric, neurological, haematological, musculoskeletal disorders, sensory impairment and mental illness (NHS Health Scotland, 2004). It is common for people with a learning disability to present with multiple complex physical and mental health needs, coupled with communication challenges this leads to a particularly vulnerable group in terms of accessing and receiving care and support (RCN, 2011). In addition life expectancy is significantly lower than the general population, with mortality rates reported as three times higher than the general population (Tyler et al. 2007). People with a learning disability are frequent users of health services (Brown et al. 2010) however there is significant evidence suggesting their needs are often poorly met and many experience significant barriers to accessing appropriate health care (NHS Health Scotland, 2004; Melville et al. 2006; Noncon et al. 2008; Curtice et al, 2001). Access to both health and social care services is an increasing problem for many people with a learning disability and their families, with reports that people face prejudice, discrimination and low expectations when trying to access appropriate services

- **Revision**
- **Assignment/Activity**

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

- References / Further Readings

BLOCK 2: TYPES OF LD

UNIT 1: SPECIFIC LD IN READING

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- References / Further Readings

- **Introduction**

Learning disabilities are neurologically-based processing problems. These processing problems can interfere with learning basic skills such as reading, writing and/or math. They can also interfere with higher level skills such as organization, time planning, abstract reasoning, long or short term memory and attention. It is important to realize that learning disabilities can affect an individual's life beyond academics and can impact relationships with family, friends and in the workplace.

Since difficulties with reading, writing and/or math are recognizable problems during the school years, the signs and symptoms of learning disabilities are most often diagnosed during that time. However, some individuals do not receive an evaluation until they are in post-secondary education or adults in the workforce. Other individuals with learning disabilities may never receive an evaluation and go through life, never knowing why they have difficulties with academics and why they may be having problems in their jobs or in relationships with family and friends.

Learning disabilities should not be confused with learning problems which are primarily the result of visual, hearing, or motor handicaps; of mental retardation; of emotional disturbance; or of environmental, cultural or economic disadvantages.

Generally speaking, people with learning disabilities are of average or above average intelligence. There often appears to be a gap between the individual's potential and actual achievement. This is why learning disabilities are referred to as "hidden disabilities": the person looks perfectly "normal" and seems to be a very bright and intelligent person, yet may be unable to demonstrate the skill level expected from someone of a similar age.

A learning disability cannot be cured or fixed; it is a lifelong challenge. However, with appropriate support and intervention, people with

learning disabilities can achieve success in school, at work, in relationships, and in the community.

In Federal law, under the Individuals with Disabilities Education Act (IDEA), the term is "specific learning disability," one of 13 categories of disability under that law.

- **Objectives**

A disorder that includes difficulty staying focused and paying attention, difficulty controlling behavior and hyperactivity. Although ADHD is not considered a learning disability, research indicates that from 30-50 percent of children with ADHD also have a specific learning disability, and that the two conditions can interact to make learning extremely challenging.

A disorder that includes difficulty staying focused and paying attention, difficulty controlling behavior and hyperactivity. Although ADHD is not considered a learning disability, research indicates that from 30-50 percent of children with ADHD also have a specific learning disability, and that the two conditions can interact to make learning extremely challenging.

Attention Deficit Hyperactivity Disorder is a condition that becomes apparent in some children in the preschool and early school years. It is hard for these children to control their behavior and/or pay attention. It is estimated that between 3 and 5 percent of children have attention deficit hyperactivity disorder (ADHD), or approximately 2 million children in the United States. This means that in a classroom of 24 to 30 children, it is likely that at least one will have ADHD.

ADHD is not considered to be a learning disability. It can be determined to be a disability under the Individuals with Disabilities Education Act (IDEA), making a student eligible to receive special education services. However, ADHD falls under the category "Other Health Impaired" and not under "Specific Learning Disabilities."

Many children with ADHD Ã¢â‚¬â€œ approximately 20 to 30 percent Ã¢â‚¬â€œ also have a specific learning disability.

- **Definitions**

The principle characteristics of ADHD are inattention, hyperactivity, and impulsivity. There are three subtypes of ADHD recognized by professionals. These are the predominantly hyperactive/impulsive type (that does not show significant inattention); The predominantly inattentive type (that does not show significant hyperactive-impulsive behavior) sometimes called ADD; and the combined type (that displays both inattentive and hyperactive-impulsive symptoms).

Other disorders that sometimes accompany ADHD are Tourette Syndrome (affecting a very small proportion of people with ADHD); oppositional defiant disorder (affecting as many as one-third to one-half of all children with ADHD); conduct disorder (about 20 to 40% of ADHD children); anxiety and depression; and bipolar disorder.

- **Assignment/Activity**

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

- References / Further Readings

UNIT 2: SPECIFIC LD IN WRITING

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- **References / Further Readings**

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

- References / Further Readings

UNIT 3: SPECIFIC LD IN MATHEMATICS

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- References / Further Readings

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**

- **Revision**
- **Assignment/Activity**

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

- References / Further Readings

UNIT 4: DYSPRAXIA

- **Introduction**
- **Objectives**
- **Definitions**
- **Summary**
- **Revision**
- **Assignment/Activity**
- **Points For Discussion And Clarification**
- References / Further Readings

- **Introduction**

This article discusses the literature on children in research, pupil participation and the voice of the child. The need for individual experience and children's voice in research is explored, with the focus placed on children with dyspraxia in UK schools. The article addresses previous literature in the area which shows that teachers' knowledge and understanding of the disorder is generally poor, such that these children remain an 'educational underclass'. It is suggested that this can have some very significant outcomes for these children, such as low self-esteem and confidence, increased delinquency and

increased unemployment. This paper argues that by gaining more knowledge and understanding by listening to the voices and lived experiences of children with dyspraxia, teachers will be better placed to provide an educational environment that is enriching and inclusive for all children, one in which those with dyspraxia will be actively able to participate and no longer remain an educational underclass. Keywords: Dyspraxia; Lived Experience; Voice; Developmental Coordination Disorder (DCD). Introduction Dyspraxia (also known as developmental coordination disorder (DCD) in the US and Europe) is known to be a neurologically based developmental disorder (Portwood 2000). It affects the ability to perform skilled and coordinated movements, and causes to difficulties with cognitive and perceptual processes. It is classified (referred to as DCD) in the Diagnostic and statistical manual of mental disorders (DSM-IV) as a developmental disorder in which the 'performance in daily activities that require motor co-ordination is substantially below that expected for the person's chronological age and measured intelligence' (DSMIV 2000, p. 58). The contention surrounding the terminology of dyspraxia is evident both in labelling the disorder and in defining it as a disorder (Henderson & Barnett 1998; Missiuna & Polatajko 1995; Polatajko 1999). The debate surrounding both of these issues is beyond the remit of this article; however, upon consideration of the debate, this paper will use the term dyspraxia as opposed to DCD. This decision has resulted from the suggestion that in the United Kingdom dyspraxia is the term preferred by teenagers (Dyspraxia Foundation 2011). As this paper is discussing the importance of listening to the voices of

children it would be inexcusable to not use the terminology they prefer. The prevalence rate of dyspraxia is relatively high, with 5–18% of the population being affected (Dixon 2003; Portwood 1996); however, it is also suggested that it remains an under-diagnosed and at times misdiagnosed disorder, and the prevalence rate could be even higher. As with many other developmental disorders, males have been found to account for a higher percentage of diagnoses, 70–80% according to Missiuna & Polatajko (1995). Co-morbidity levels are high, with dyspraxia being associated with dyslexia (Kaplan et al. 1998), autistic spectrum disorders and ADHD (Fliers et al. 2011; Portwood 1999; Ramussen & Gillberg 2000). The literature on dyspraxia, while relatively extensive (Kirby & Drew, 2003; Kirby et al., 2008; Polatajko & Cantin, 2005;), has largely been associated with its medicalisation as a disorder and thus has been focused on symptomology, health, parental and professional views, etc. (Gibbs et al. 2007; Pless et al. 2001; Visser, 2003).The literature on dyspraxia in relation to education has remained sparse compared to that on other developmental disorders, particularly autism (Simpson 2005; Wing 1966; Zager 1999) and dyslexia (Farmer et al. 2002; Gabrieli 2009; Mortimore & Crozier 2006;). Furthermore there is a significant paucity of research that elicits the experiences of the child with dyspraxia and gives them a voice (Edmonds 2012).

This article therefore will draw on the available literature to highlight why it is so important that the lived experiences of these children are sought and why it is that teachers, in particular, need to hear their

voices. Immediately following the writing of this article the researcher will be conducting qualitative research with children with dyspraxia in UK secondary schools in order to begin this much needed research. The child in research The vast body of social scientific literature and empirical research on children has historically tended to view children predominantly as objects of research (Green & Hogan 2005). Children's views and experiences appear to be seldom assessed and given weight in the literature due to the large array of perceived limitations of such data (Alderson & Morrow 2004; Harden et al. 2000;). Such issues include the assumption that the best interests of the child can best be served by decisions made by adults, particularly in arenas such as family courts; these assumptions may at times be referred to without eliciting the views of the child concerned or their particular needs (Piper 2000). When relative weight is given to what children want, particularly in certain arenas, again such as family courts, further issues present themselves such as issues of age and maturity. Generally, the younger the child, the less relative weight is given to their views and opinions; moreover, even if their views and opinions are taken into account, they are considered alongside the views and opinions of the adults in their lives which may be attributed greater weight, such that children remain largely marginalised. This risk is highlighted by Narvanen & Nasman (2007, p. 237) when they state that the reservation regarding age and maturity becomes 'part of a circular reasoning in which whatever children say that is not in line with adult views will be judged as coming from individuals too young or too immature to be listened to'. It is clear that children's rights and

views, however well recognised they are, are still largely constrained by adult expectations, acceptances and power. Pupil participation and the voice of the child It is clear from the literature that the participation of pupils has recently become a major focus in research and policy (Clark et al. 2003; Hulme et al. 2011; Kirby et al. 2003; Morgan, 2011; Rudduck & Flutter 2000, 2003). This focus has also been increased in the area of special educational needs (SEN) both in SEN legislation, such as the SEN Toolkit, section 4 enabling pupil participation (DfES 2001a) and the Special Educational Needs Code of Practice (DfES 2001b) and in research (Gersch 2001; Kelly et al. 2003; Norwich 1997). However, as described above, the possibilities for interpreting these policies and therefore the limitations placed upon the views of the child are potentially more powerful in the area of SEN. For example, taking age and maturity, as discussed above, the legislation promotes the issue of age by affording rights to young children as well as older children; however, maturity and understanding are also highlighted and as such remain open to interpretation by practitioners. Worryingly, those with SEN may be perceived to have less maturity or understanding, such that their participation may be refuted (May 2004). The benefits of pupils' participation in their education have been cited as including increased participation, motivation, self-esteem and skills (Warwick 2007), while active participation and empowerment of individuals is deemed to be a key component in wellbeing and mental health (WHO 1986). The need for individual experience and children's experiences According to William James, 'individual experience defines the scope of psychology' (1990 [1890]:

p. 361). Historically, mainstream psychology historically has been largely rooted in empirical data and as such defined as a science in the traditional sense of the word. Recently, there has been a very gradually growing interest in using psychology to examine the experiences of participants, and the importance of this is increasingly recognised (Smith 2004, 2011). However, there remains a significant paucity of literature that aims to develop a more in-depth understanding of what children experience, how they experience and how they make sense of their experiences, particularly in relation to dyspraxia and education. The emphasis in conducting such research would be to afford agency to the individual child through researching something of great significance to their lives and as such could contribute to mainstream psychological and educational knowledge surrounding children, in this case with dyspraxia, by adding a new dimension to developmental analysis. In eliciting the experiences of children we are reflecting their positions as people rather than objects of scrutiny. The importance of the experience of a person in a given phenomenon was highlighted by Jerome Kagan when he commented that 'the person's interpretation of experience is simultaneously the most significant product of an encounter and the spur to the next' (Kagan 1984, p. 279) and that knowledge, even a scientific perspective could be deemed incomplete. Research focusing on the experiences of individuals has largely focused on adults, providing a more comprehensive and holistic picture in many areas, but as noted previously children have not been afforded such importance in the area of scientific knowledge, so our understanding and knowledge

surrounding their experiences, particularly in dyspraxia and education, remains at the level of the scientific and experiences or reflections of adults in their lives. Furthermore, the importance of researching children's experiences can be considered a children's rights issue in which a moral perspective is sought 'on the role and status of children which respects and promotes their entitlement to being considered as persons of value and persons with rights' (Green & Hogan 2005, p. 3). It also provides children with their value in the present rather than looking to their potential value in the future. The voice of the child and current SEN policy The principle that children have rights to express themselves, express their views and be involved in decisions regarding their education has become an integral and significant part of UK SEN policy (Special Educational Needs Code of Practice (DfES 2001b)), and this position of children having rights is underpinned by policies such as the United Nations Convention on the Rights of the Child (1989) and the Children Act (1989). Research has looked at the issue of inclusion and whether children are being afforded such rights as set out in the legislation in the UK, but these again are largely from a parental perspective (Palmer et al. 2001) while inclusion in educational settings is portrayed largely from teachers' perspectives (Avramidis & Norwich 2002; Pearson 2007). Recently there has appeared to be increased interest in research eliciting the views and experiences of those who are termed 'disabled' or as having 'special educational needs'; however, this has been a relatively recent and slowly progressing phenomenon which has been limited to the more well-known disabilities or disorders such as autism. Why the voice of

the child with dyspraxia? There is a significant paucity of literature that elicits the voice of the child with dyspraxia, and, as Dixon (2003) highlights in her study, the child's views may well differ greatly from the views of the parents and the professionals who support them. While the literature surrounding dyspraxia in education is not extensive, it does allow us to infer that there are many educational challenges for those who live with it. The associated difficulties appear to affect all areas of school life and the ability to participate (Mancinni et al. 2000) and have been recognised as including handwriting, recreational, social and physical activities as well as school work and self-care (Dunford et al. 2005; Sugden 2006; Summers et al. 2008). Stordy & Nicholl (2000) highlighted a further challenge for these children, identifying that teachers' knowledge and understanding of dyspraxia was very low and at times non-existent. This raises issues around their ability to provide support for the children they teach who have dyspraxia (Peterset al. 2004). Furthermore, Kadesjo & Gillberg (1998) identified that children with dyspraxia had the same expectations placed upon them as their peers did. This lack of knowledge and understanding can be conceptualised by the hidden nature of the disorder (Kirby 1999) coupled with the discrepancy between intelligence that is average or above and the associated difficulties dyspraxia presents in an educational setting (Kirby 1999). Teachers have been reported as perceiving children with motor difficulties as being much less competent than their peers and as having more behavioural problems (Losse et al. 1991), while Portwood (1996) conceptualised this lack of knowledge and

understanding as these children representing a 'significant educational underclass, largely misjudged, frequently maligned and extensively ignored' (Portwood 1996, p. 81). Research has suggested that the experiences of these children may lead to negative effects for the child due to persistent feelings of failing to meet expectations and, as a result, increased levels of educational disengagement and frustration (Parmenter & Knox 1991). Dixon (2003), while not specifically looking at education, found that the areas considered important by the children themselves included some which would be relevant in the education setting such as behavioural problems, participation in physical activities, low self-esteem and the need for early recognition. For children in the UK aged between 5 and 16 (this age soon to rise to 18) the vast majority of their waking day during the week is spent at school. This is considered here to be a major life experience and one in which teachers and peers play a significant role: as Selikowitz (1992, p. 101) suggests, 'other children, teachers, relatives and society in general, play an important part in determining how a child sees himself and how well he copes'. Additionally research has identified that there is a potential risk of victimisation and resulting low self-worth for children with dyspraxia (Kalverboer et al. 1990; Roseet al.

- **Objectives**

Clearly, in the performance of everyday physical activities, there will be a spectrum of "normality" and some children with dyspraxia may lie at one end of the normal spectrum. Determining what constitutes "normal" may be difficult. One criterion that may be used to determine whether the child's motor skills fall outside the spectrum or range of normality is whether the difficulties have any functional effect and intrude on school and leisure activities. Unfortunately, this may prove difficult because a child's functional abilities may be interpreted differently depending on their family background, culture and expectations—as well as the expectations of their school and peer group, so that two children with the same profile of motor difficulties may be labelled differently. This raises the issue as to whether there may be an inappropriate medicalisation of the child who is simply at one end of the normal distribution and this has led to a suggestion that dyspraxia could be regarded more as a social disorder rather than medical condition.3 The term is being increasingly used by health and educational professionals to label a child's awkwardness or clumsiness and, in part, this is media□driven. Consequently, dyspraxia is likely to be regarded as a medical rather than social disorder, although it should be considered a descriptive term for a syndrome, in a similar way to the term "cerebral palsy", rather than a specific medical diagnosis. It is often used as a catch□all term to describe symptoms of poor coordination, clumsiness or awkwardness

and as such has the potential for not considering the possibility that the child's difficulties in planning and executing physical actions may be due to a definite neurological (or other physical) condition. This will be discussed later.

- **Definitions**

Dyspraxia has been defined as "a breakdown of praxis [action]" and "the inability to utilise voluntary motor abilities effectively in all aspects of life from play to structured skilled tasks" (Chu S and Milloy NR cited in Bowens and Smith).1 An alternative, psychology□based definition is "motor difficulties caused by perceptual problems, especially visual□motor and kinaesthetic motor difficulties".2 Within the medical and scientific communities dyspraxia is generally considered to mean an impairment of, or difficulties with, the organisation, planning and execution of physical movement with a developmental rather than acquired origin. Most individuals with dyspraxia manifest a combination of both ideational or planning dyspraxia and ideomotor or executive dyspraxia; ideational or planning dyspraxia affects the planning and coordination, and ideomotor or executive dyspraxia affects the fluency and speed of motor activities.

- **Summary**

The paediatrician (hospital and community) or paediatric neurologist is likely to turn to the physiotherapist and occupational therapist to help in the diagnosis of DCD, and also to involve educational, clinical or

neuropsychologists in the assessment of associated difficulties. Unfortunately, these professionals are in limited supply and while their contribution may be invaluable in those with DCD, paediatricians and paediatric neurologists have a clear responsibility for deciding which children need to be referred for such assessments. It is not appropriate to refer every child who is reported to be "clumsy" or "awkward" and, historically, too many children suspected of having DCD have been referred to occupational therapists when their motor skills are actually within the normal range.16 Consequently, many referrals to occupational therapists are inappropriate, representing a considerable waste of resources and a clear illustration of one of the inefficiencies within the National Health Service.27 A recent survey of 134 paediatric occupational therapists in the UK showed that children with DCD comprised 30.4% of the total caseload of children receiving occupational therapy services, but 61.7% of the total number of children who were waiting for assessment.28

Rather than expecting occupational therapists and physiotherapists to assess all those with suspected coordination difficulties, a useful approach is to seek information from health visitors, nursery or primary school staff. It is important to identify those more severely affected children who exhibit significant coordination difficulties in the late preschool and early school years to enable referral to occupational or physiotherapy for further assessment and therapy. Those less□severely affected tend to present at a later age and can

often be identified and managed without the need for referral to scarce and overstretched occupational and physiotherapy services.

School doctors (school medical officers) are ideally placed to assist in identifying school□age children and should be encouraged to undertake the assessment of children with suspected DCD. Also, when considering these children's motor performance, information should be sought from school staff on whether the child has attention□control problems or any generalised or specific learning difficulties, and also how the children relate to and mix with their peers. A report from any educational psychologist already involved with a child is extremely helpful. Most children being assessed for coordination difficulties probably will not be supported by an educational psychologist, but the assessment may indicate the need for such support in some of these children.

Portwood has produced a screening instrument, the Motor Skills Screening Test, which is appropriate for teachers to use and takes approximately 20 min to administer. The educational psychologist can augment this screening test with the more formal, and longer, Weschler Intelligence Scale for Children□Revised and, in conjunction with the developmental background, will be able to advise and support the child in the classroom setting. Preliminary data have certainly suggested that teacher and parental intervention may help some children with DCD.29

Standardised questionnaires could be used, such as the Perceived Efficacy and Goal Setting System tool which includes a care giver and teacher questionnaire.30,31 A child's right to express its views is enshrined in the United Nations Convention on the Rights of the Child,32 and attempts are being made by clinicians to include the views of the child with coordination difficulties.33 Research indicates that using tools such as the Perceived Efficacy and Goal Setting System,34 which assesses quality of life issues, enables the child to express its concerns regarding the effect of coordination difficulties on self□care and leisure activities. This is in contrast with the focus of parents and teachers, which tends to be on academic performance.33 A 17□item questionnaire has been developed to identify young children with DCD. Although it performs well in children suspected of having this condition, it is not sensitive in detecting cases when applied to a general paediatric population.35

The initial assessment, supplemented by school reports, should have identified any coordination difficulties and their effect, as well as the presence of learning difficulties, attention□control problems and abnormal neurological signs. Relevant investigations need to be undertaken if there are abnormal neurological signs or definite regression, and subsequent management will depend on the identification of any specific diagnosis. In those with DCD, poor coordination and mild hypotonia may be the only signs and investigations will be unnecessary.

The assessment may indicate that the functional effect of coordination difficulties is minor compared with any associated attention deficits, learning difficulties or behaviour problems. These other problems should be managed primarily unless the poor coordination is causing particular concern to the child or young person. Referral should be made to occupational and physiotherapy for further assessment and treatment when coordination difficulties are having a significant functional effect. Occupational therapists and physiotherapists should also be involved when there is uncertainty over the effect of coordination difficulties. Additional help will be required if there are appreciable coexisting behavioural or learning problems.

Therapeutic interventions

There are very few well□designed trials of therapy in DCD.36 In general, therapists use two main methods of treatment: task orientated and process orientated. The task□orientated approach aims to improve specific tasks through practice. Process□orientated therapy concentrates on developing sensory modalities involved in motor performance, such as the sensory integration approach,37 or kinaesthetic (movement perception) training.38One of the few studies limited to the task□orientated approach showed significant improvements in motor skills, but only in those tasks that were specifically targeted.39 The reported benefit of process□orientated therapy has varied, being similar to a general stimulation programme,40 or superior to alternative treatments.41

More recently, other approaches have focused on improving aspects of self□esteem rather than the core problems of coordination,42 and some clinics offer transitional programmes to help children meet the increasing educational and physical demands when moving from primary to secondary education. Although children with DCD generally benefit from physical therapies, many will probably obtain as much benefit from psychological support, perhaps in groups, to help them cope with their motor impairment and loss of self□esteem and develop compensatory strategies.

Few UK therapists are fully trained in the assessment and treatment approach of sensory integration. Therapists with considerable expertise in this area use a range of non□standardised activities to assess the child's level of ability in areas including motor skills, cerebral integration, limb girdle stability, body awareness and kinaesthetic awareness.

POINTS FOR DISCUSSIONS / CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification. Note down those points:-

Points for Discussion

Points for Clarification

- References / Further Readings

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UNIT 5: NON-VERBAL LD

STRUCTURE

5.1 Introduction
5.2 Objective
5.3 Procedure
5.4 Outline of Report
5.5 Assignment
5.5.1 Assignment 1 (Group Work)
5.5.2 Assignment 2 ((Individual Work)

5.1 INTRODUCTION

A candidate preparing for the Foundation Course on Education of Children with Disabilities (FC-DE) should have a clear perception of the Status of Disability in the community as well as about the intervention measures undertaken for Community Based Rehabilitation / Community Based Education (CBR/CBE) implemented in the country for the disabled sector of population. For this he/she has to carry out a Project Work on Disability Status in the local community. This will enable him/her to understand the needs of the disabled children and will be in a position to sensitise the peers, parents and the community to overcome attitudinal barrier as well as to meet the specific educational needs of the children with disability in inclusive classroom and school..

During the First Contact Session the teacher-trainees will carry out a Community Contact Programme under the supervision of a Counselor and

learn the art of community survey. and develop a perspective and skill how to identify and assess status of disability in a Community.

5.2 OBJECTIVE

After going through this Unit the trainee will be able to

- perceive the concept of CBR/CBE
- have an understanding of CBR services and the education for the all disabled children
- conduct survey of a community to identify and assess status of disability in the community, record faithfully and prepare an authentic report of the specific programme undertaken on CBR/CBE,
- have a broad perspective on specific educational needs of the school going population in the community and formulate appropriate programme for effective curricular transaction in inclusive environment..

5.3 WHAT IS CBR/CBE

"Community based rehabilitation involves measures taken at the community level to use and build on the resources of the community, including the impaired, disabled and the handicapped persons themselves, their families and their community as a whole."-*World Health Organisation*

"Community based rehabilitation is a strategy within community development for the rehabilitation, equalization of opportunities and social integration of all people with disabilities. CBR is implemented through the combined efforts of disabled people themselves, their families and communities, and the appropriate health, education, vocational and social services." - Joint Position Paper, 1994 of *I.L.O., UNESCO and WHO*

Objectives of CBR/CBE

The main objectives of CBR programme are :

- **to make the home of the disabled person to become the rehabilitation centre;**
- **to make the community (village/slum) to become the training site.**

The specific objectives of CBR/CBE are :

- **to integrate the disabled persons into family and community with active participation;**
- to dissuade family members and community people from the deeply rooted and prevailing attitude that disabled people are idle and unproductive;
- to create awareness in the community regarding specialist and referral services when the need arises.
- to find out educated young people in the community who are willing to serve and undergo training as CBR workers;

5.4 PROCEDURE OF COMMUNITY CONTACT PROGRAMME

1. The Trainee-Students will be divided into groups of 4/5 trainees per group.
2. Each Group of trainees shall identify a village or a slum area, separate for each group, for CCP.
3. Collect data as per FORMAT 4.4.1 and FORMAT 4.4.2.
4. A complete report of the work will have to be submitted by each trainee separately as per FORMAT 4.4.3 :

5.4.1 FORMAT FOR COLLECTION OF DATA ON SELECTE *COMMUNITY / VILLAGE / SLUM AREA*

i. Name of the Community :

_____

and address

_____

_____

ii. Location:State District Block

_____ _____ _____

iii. Land Area (in Hectares) : Total Cropland Forest Grassland Others

_____

iv. Population : Male Female Children

Total :

_____

Disabled :

_____

v. Occupational Profile : Agriculture Industry Service

1. (a) Owner(Capital) :

_____

(b)Employee(Labour):

_____

2. (a) Professional :

(b)SkilledManpower :

(c) Unskilled Labour :

vi. Economic Profile : HIG MIG LIG
BPL

vii. Educational Profile : Graduate & + +2 10 Primary
Illiterate

:

viii. Housing conditions :

ix. Sanitation:

(a) Safe water :

(b) Disposal of Waste :

x. Health Facilities :

xi. Educational Facilities :

xii. Awareness about Disability :

xiii. Attitude towards disability, :

xiv. Rehabilitation facilities :

xv. Name of the Contact person in the slum / village :

xvi. Agency, if any, which work for the disabled :

(You may add more information if relevant to your case-study and the general report.)

5.4.2 FORMAT FOR CASE STUDY/ HISTORY (A SAMPLE)

Name :

_____

Date : _____

Age / D.O.B. : _____

Sex : M / F / MC / FC

Address : Permanent: Temporary :

_____

_____

_____

_____

_____

_____

Religion : _____

Aid User : Yes/No, If so, Model : _____

Nature and type of disability : _____

Degree of disability : _____

Father's / Guardian's Name

Mother's Name

_____

_____

Age : _____

Age : _____

Education : _____

Education : _____

Occupation : _____

Occupation : _____

Income : _____

Income : _____

Religion : _____

Religion : _____

Education : _____

Mother tongue : _____

Occupation : _____

Income : _____

Earlier investigation / treatment :

_____

Child's Educational History :

Attends school : Regular / Special,

Studies in class : _____

Age of Admission _____

Medium of Instruction : _____

Mode of Communication : _____

Failure, if any, Indicate level : _____

Prenatal History :

Problems during pregnancy, if any : Viral infection / Drug taken / Physical and emotional

Trauma / Rh incompatibility / Any other :

Perinatal History :

Delivery at : Home / Hospital, Full time / Premature / Post mature

Birth cry : Normal / Delayed / Feeble

Birth weight : _____

Blueness : Yes / No

Postnatal History : (Indicate the age of onset and duration of illness)

Viral infection / Drugs taken / Respiratory infection / Neurological Problems / Head Injury / Convulsions (with or without fever) / Exposure to noise / Any other : _____

Family History :

a. Nuclear family / Joint Family : b. Consanguinity : Yes / No

a) History of family deafness / other handicaps : _____

Social and behaviourial history :

Gross motor activity

:

Fine motor activity :

Social interaction :

Receptive language :

Expressive language :

Reading :

Writing :

Numbers :

_____

_____

Time :

_____

_____

Money :

_____

_____

Domestic activity :

_____

_____

Recreation / leisure time activity :

_____

Additional information for child / adult if any :

_____

_____

_____(You may add more information if relevant to your case-study and the general report.)

Name of Interviewer :

Signature

Date : / /

5.4.3 FORMAT OF THE REPORT ON CCP (All Disability Areas, M.R; H.I; L.I; V.I.)

1. **Project Title :** Assessment of Status Diability and CBR/CBE Services in a Community (mention the Name of the Community chosen).

2. **Introduction :** Briefly mention the perspective and nature of your project work, the need and reason for selection of the community, the nature of problems you encountered, your target group, statistics or previous studies/data if any.

3. **Objectives :** Mention the specific objectives of your project work, i.e., point out what you wanted to achieve .

4. **Profile of the Community :** (1)Describe the location of the community (village / slum / locality / area) chosen. (2) Briefly mention the demographic, social, economic, cultural, environmental status of the District/Block to which your selected community belongs. (3) Write on the basis of your survey data (See Annexure 1) : (a)the profile of the population, human resources, educational and health and social welfare services, socio-economic status and environmental resources and carrying capacity of the community and its location (geographical boundary, Block, District, State); (b) the existing profile of the disabled (VI/MR/HI/LI&CP) children and adults in the community (village/slum); (c) the CBR/CBE services available, (d) referral services available when the need arises.

5. **Plan of Action to meet Specific Educational Needs of the Children with Disability:** Make a critical analysis of your survey data. Study the Community profile and outline a Plan of Action that you will follow in meeting the specific educational needs in inclusive classroom and integrating children in the school, families and community.

6. **Methodology :** Give an outline of your approaches, materials used, mode of communication, cases identified, referral/management, linkages developed and so on.

7. **Outcome :** Give details of the outcome of your effort in quality and quantity.. Attach Charts , Illustration, Graphs, Tables, Photographs, any other Teaching Aids You have prepared/collected and used in your project..

8. **Experience :** You have made an attempt to apply your knowledge and skills you learnt to a practical situation. Describe what you experienced and what are your impression? What are the positive features of your project? What are the negative features of your project?

9. **Limitations :** What were the limitations of the project work?

10. **Follow up Work :** Give your recommendations on follow up work which can be undertaken in inclusive education in the school .

11. **References :** Give references of books and journals that you had consulted or referred .

12. **Annexures :**

    1. Data on demographic, social, economic, cultural, environmental status of the District/Block to which your selected community belongs (Collect from District statistical office).
    2. Data on the Disability status of the selected community
    3. Data of the Selected Community (See Format of Community Profile for CBR Project Work)
    4. Charts, Illustration, Graphs, Tables, Photographs, any other Teaching Aids, Clippings used for the Project Work.

5.5 REFERENCES

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BLOCK 3: ASSESSMENT OF LD

UNIT 1: CONCEPT OF SCREENING AND IDENTIFICATION

STRUCTURE

1.1 Introduction

1.2 Objectives

1.3 Factors affecting inclusive classroom

1.4 A Curricular View: Child-Centered Pedagogy

1.5 Inclusive methodology: Developing inclusive materials, physical environment and classroom management

1.6 Developing inclusive evaluation system

1.7 How to develop inclusive resource centres and accessible school environment

1.8 Unit Summary

1.9 Check Your Progress

1.10 Assignment

1.11 Points for Discussion and Clarification

1.12 References

1.1 INTRODUCTION

WHO Education For All policy decision (1991) requires member nations to take steps to provide *equal access to education to every category of disabled persons as an integral part of the educational system.* **The UN Standard Rules of the Equalization of Opportunities for persons with Disabilities (1993)** states *'Countries should recognize the principle of equal ...educational opportunities for children, youth and adults with disabilities, in* ***integral setting****. They should ensure the education of all children with*

disabilities to be the norm.' ***Every School has to become a Inclusive/Integrated School to meet Legal Provision*** The Salamanca Statement states that every child has a fundamental right to education and that the education systems should be designed and educational programs implemented to take into account the wide diversities of interests, abilities, and learning needs. Further it states that children with special educational needs must have access to regular schools which should accommodate them within a **child centered pedagogy** capable of meeting these needs. Thus, the Salamanca Statement clearly laid down the principles for Inclusive education in 1994.

The directive principle of Indian constitution, the National Policy of Education (1986, 1992), and the Sarva Shikshya Abhijan (SSA 2010) Project, as well as the international goal of EFA 2015 and HFA 2015 empowers the implementing agencies especially MHRD and SSA Authorities of States to ensure admission, retention and education of all children of the age group of 6 to 14 years including disabled children in the country. No normal school in the country can deny admission to a disabled child. In this context all schools are now inclusive/integrated schools. It has, therefore become obligatory for at least one teacher from every elementary school to be trained in FC-SEDE Programme to enable him/her to meet the specific educational requirement of the disabled child/children in the class.

Clear understanding of the principles of inclusive education is necessary to manage **inclusive classrooms**. In a classroom of 40-60 children (sometimes even more) we see children with diverse needs. Every child is ***unique*** *and* they learn at their ***own pace***. Their abilities are also quite ***diverse***. We are sure, you agree that diversity is so common in a classroom and uniformity in terms of abilities, aptitudes is rare.

Added to the above challenge we also find a majority of schools in India are **multi grade schools** (MGS). MGS have one teacher to help children in different grades .We also see schools in which single teacher teaching different subjects. So how do we really develop a classroom in which content, methodology, materials and evolution is friendly and address the needs of all children **including children with special needs?**

Integrated / Inclusive Education

Integrated Education follows the principle of providing equal opportunities to an integrated group of able bodied and differently abled children studying together

Inclusive Education makes provision for learning of all children in the classroom. The general teacher becomes the facilitator. The general school adapts to the needs of every child in the classroom

The principle of inclusive education states that the general teacher should be the facilitator for learning of ALL **children in the classroom. This responsibility does not limit only to the classroom but goes much beyond it. Inclusive education also envisages that the general school would adapt to the needs of every child in the classroom. The UNESCO Resource Pack was the first step in developing classroom strategies, which will benefit all children. Globally there is tremendous awareness about the importance of developing inclusive learning environments. We know that** those who learn together learn to live together.

1.2 OBJECTIVES

After studying this Unit, you will be able to:

- Understand better the individual and curricular factors that influence the learning process of all children and implications of sensory, intellectual, motor development, childhood illness and other factors that affect learning process.
- Identity the base lines/current levels of learning of every child and use this information for educational planning and evaluation.
- Understand the principles and application of child centered criterion referenced curriculum, methods and materials to enhance and enrich the learning process.
- Understand and develop the underlying principles of ongoing evaluation system.

- Understand and develop inclusive resource centers to enhance and enrich the learning process.

1.3 FACTORS AFFECTING INCLUSIVE CLASSROOMS

All classrooms have children with different abilities/aptitudes. It is important to recognize this diversity in classrooms. Each one of us have experienced some special need during our school/college years.

A special need is nothing but the need for additional help in order to understand a concept or perform an activity. No one is perfect. Any problem either social, intellectual, sensory, motor, or illness will manifest itself as a difficulty in learning.

1.3.1 Special Needs

Special needs could be for:

- Short term duration
- Long term duration

***Examples for short term special needs*:**

Thejus is studying in class 4. In the middle of the year he got typhoid fever. He could not attend school for two months. When he returned to the school he could not understand a word in mathematics and science. He had missed so many lessons. Other children in the class were using the applications taught during his illness. His parents requested the teacher to spare half an hour every day in the morning before school hours to help him learn the concepts, which he had missed. With the help of the teacher and his friends, Thejus has no difficulties now.

Example for long term special needs

Deepthi is studying in class 3. She cannot see a word written on the black board. She makes many mistakes while copying from the board. She also has a difficulty in reading the textbook. The teacher asked her to pay more attention. But her problem was that she was unable to see anything written on the board. Her parents got her vision tested. She has low vision. Parents requested the teacher to use anti glare board and give large print books and notes to Deepthi. The teacher got a different board which is not too smooth

and therefore does not reflect the light, on the other wall in the classroom. They also used jute bags to curtain the windows to ensure that direct sunlight did not fall on the board. Now Deepthi has no problem in learning.

1.3.2 Pace of learning

It is very important to recognize the fact that every child is unique and follows its own pace of learning. In a class of 40 we find each child following its own pace. **So whose pace should the teacher follow?** In teacher centered classroom the teacher tries to follow the pace of children but after a while she realizes every child has their own pace. Then she sets her own pace which may not match the individual child. This kind of teaching is frustrating both to the teacher as well as the child.

Therefore the best option is to create a **child centered environment.** Of course it needs some reforms in the classroom organization. The usual phrases that are used by the teachers such as 'covering portions' 'finishing the syllabus' 'taking class' need to be replaced with child centered phrases such as 'current learning levels of the child', 'achievements of the child in comparison to the baseline information', 'facilitating learning' rather than teaching or taking the class. As a facilitator a teacher is required to uncover the syllabus!

1.3.3 Different factors that affect learning

The figure-1 shows that we need to stop seeing the child as a problem for the educational failure or difficulties in learning. As long as we see child as the problem we will not be able to solve the problems that exists within the classroom practices, which is actually the main cause for the educational failures.

Therefore we need to understand the problems in the educational system and remove these **learning barriers** to ensure every child learns.

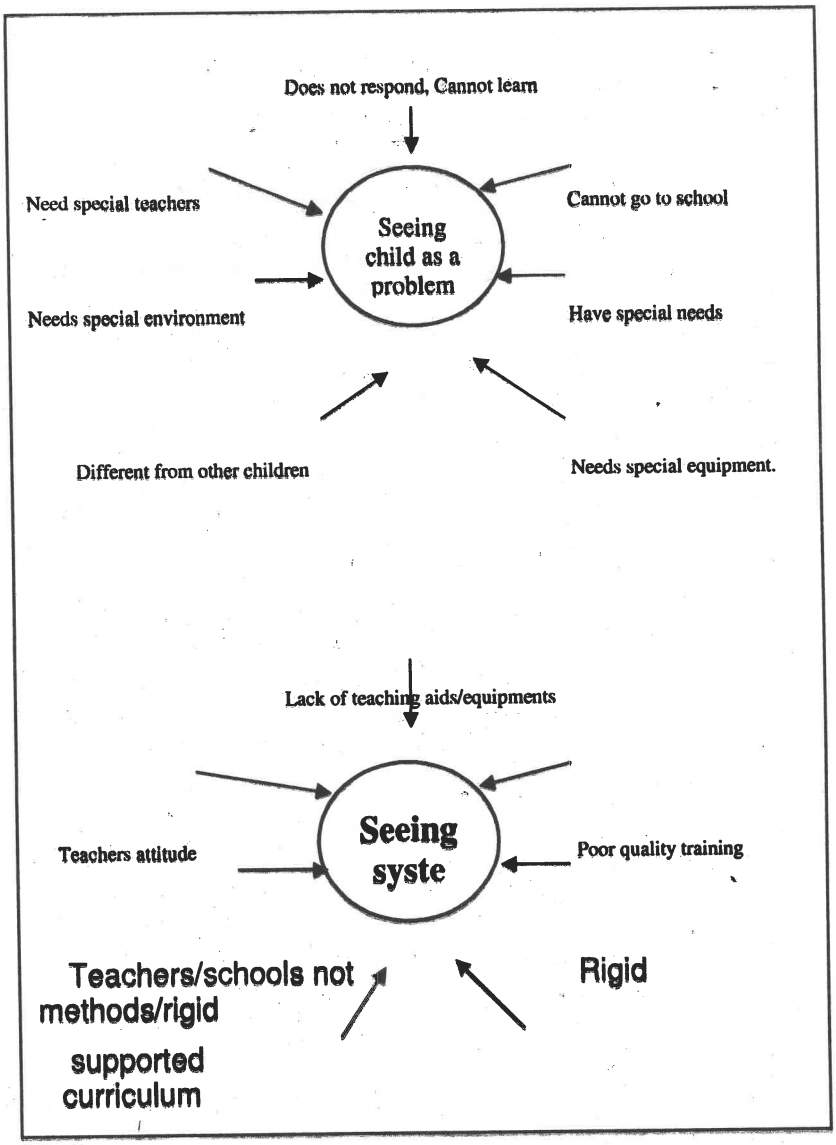


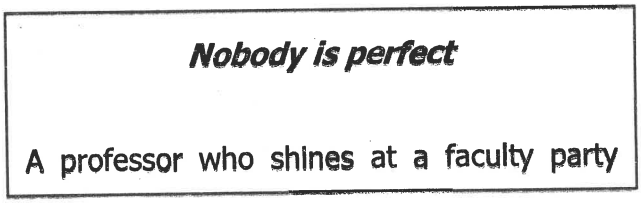
Fig-1-The causes for failure in learning in children with special needs

'Any child may experience a special need during school years'.

We all have experienced a special need in our school years. Do you remember how you felt when a friend sitting next to you solved a mathematical problem in seconds and you stretched your brains to do the same? There is no individual on this earth who hasn't experienced such difficulty during school years. None of us are perfect. Difficulties in Learning arise because of several factors. If a child has a disability such as difficulty in hearing, moving, communicating, learning, seeing, it does not mean that such a child will have special needs across the entire curriculum in all subjects. In reality there is very little awareness on the needs of people with disabilities. One gentleman who had difficulty in seeing traveled by airplane. To his amusement he saw a wheel chair waiting for him at the arrival gate!! When he asked why a wheel chair has been arranged the Air plane crew replied that they had information that a person with disability was traveling which means that he needs a wheel chair!!

All classrooms are heterogeneous. They have children with different abilities, socio cultural backgrounds. Every child is unique and special. There are no two children who are the same. Therefore if the uniqueness is 'normal order' why label children with disabilities as 'not normal?

In a class of 40-50 children we find every child is unique. Unless the teacher respects and recognizes this uniqueness, no learning can take place.



The figure 1 illustrates that any child may experience special need during the course of education years and it is incorrect to think only children with disabilities have special needs.

1.3.4 Difference between traditional and inclusive approaches

Traditional teaching practices hardly benefit children in classrooms with poor teachers and student ratio. The traditional teaching methods adversely benefit children with disabilities because they need child-centered approaches. The table shows the difference between child centered inclusive approach and traditional approach.

Table

Traditional Approach	Inclusive Approach
Education for some	Education for all
Static	Flexible
Collective Teaching	Individualized teaching
Learning in segregated settings	Learning in integrated settings
Emphasis on teaching	Emphasis on learning
Subject centered	Child centered
Diagnostic/prescriptive	Holistic
Opportunities limited by exclusion	Equalization of opportunities for all

1. Inclusive education by Ture Johnson. 2. UNESCO resource Pack.

1.4 A CURRICULAR VIEW – CHILD-CENTERED PEDAGOGY

Each country has its own policy on curriculum development. In India we have a curriculum framework that is developed centrally by NCERT, Based on NCERT curriculum for wider use of the materials it is necessary to develop CRD, which is used by different states. Of course states have responsibility to modify the curriculum to suit the individual state's needs. It is not sufficient to have such macro level modifications. **Curriculum has to be further modified at classroom level.** In inclusive education there is a tremendous focus on developing such curriculum, which is relevant to all children in the classroom.

Pedagogical issues in Inclusion

A curriculum for all means a curriculum that can be used by all children irrespective of their abilities. It is important to recognize the fact that every child is unique, which is manifested in terms of varying abilities. Every classroom has a group of children with different abilities. Different abilities come because of various contributing factors – home environment, difficulties in learning, seeing, communication, hearing, illness – all contribute to different ability levels.

A curriculum needs to be designed in ideal conditions, for every child taking into account i.e., social, cultural, and individual factors. As we have already mentioned, curriculum comes from life. Therefore the relevance to the individual child's life settings, gives the expected relevance and application of knowledge and skills.

SOMA features-Now let us understand what kind of modifications are required. Some of the important modifications that are required are as follows:

a. **S**pecific (Precision teaching)

b. **O**bservable (Learning is observable)

c. **M**easurable (Sequenced Learning outcomes are measurable in terms of numbers of competencies the child has achieved to perform with graded support)

d. **A**chievable[Each concept and sub concept is broken into small achievable steps. These allow teachers either to club the steps if the child finds it easy or further break into smaller steps if the child finds it difficult)

1.4.2 To develop CCRD

It is necessary to develop the general ***C**urriculum-based **C**riterion **R**eferenced **D**ata **(CCRD)*** which gives you a checklist of learning outcomes which has the SOMA features stated above.

Such a CCRD would give you the following information:

1. A list of concepts.
2. A list of corresponding sub concepts.
3. A list of corresponding sequential and graded learning outcomes.

*Please see annex A which gives an example of CCRD for class 1,2,3.

The concepts and sub-concepts are as it is stated in the NCERT curriculum. You will also find a CCRD for MLL based learning outcomes in the Annex 2.Using this as model, you can develop CCRD for the curriculum that you follow in your school.

The multipurpose uses of CCRD

CCRD is used for different purpose in a classroom. They are as follows:

1. To establish baselines to understand the current levels of learning (so that the child 's learning moves forward)
2. To develop individual educational plans-annual, half yearly, quarterly, monthly, weekly, daily.
3. To monitor the progress individual child has achieved.

4. To apply ongoing built in evaluation of the child

Why we need to use the curricular view in inclusive schools? Because:

1. Children with different needs are enrolled into schools either by 'default' or by 'design'
2. Unless individual child's needs are taken into account many children feel stagnated and eventually drop out as the education fails to meet their needs.
3. The above issues are applicable to all schools irrespective of their geographic location and section of children who attend the school.
4. In inclusive schools teacher 'facilitates' learning rather 'regulating' learning.
5. Every child has its own pace-follow the child's pace (not the other way round!!)

The curriculum for "ALL" needs to be:

1. **Child centred**: Children with disabilities need child-centred curriculum, which takes into account the individual needs of children. The curriculum needs to set specific, observable, measurable and achievable learning outcomes (SOMA).

2. **Flexible**: A flexible, locally relevant curriculum, teaching and learning strategies are intrinsically important for children with special needs to participate in the educational process.

3. **Participatory**: Children with special needs require a learning environment in which they can actively participate in learning in small groups learning settings.

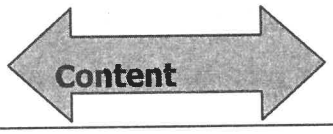
4. **Partnership with parents**: Partnership with parents is a key factor as children learn not only in the classrooms but also at home.

1.4.3 Establishing base line/current levels of learning

We have already learnt that every child learns at its own pace. We also know that the child does not learn only in the school. This means that when the child comes to school, he/she must have some knowledge. This could have been acquired at home, or at play, or by social activities within the community. Therefore it is important to establish the base line of learning for each child. How is this done? The general curriculum checklist is used for establishing the baseline. The learning outcomes of each concept are taken and the child is made to PERFORM the activity. The baseline may be established in 3 ways:

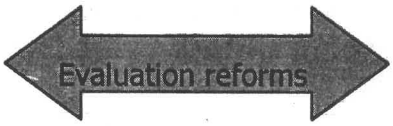
1. **Forward**: In this method, all the activities are performed in a sequential manner – that is from the first learning outcome onward.
2. **Backward**: In this the child is made to perform the last activity of the particular class first and then the activities are performed backward.
3. **Random**: In this the learning outcomes are randomly selected based on the class and the child is made to perform the relevant activity.

The child may be able to perform the activities up to a certain level and after that he may not have been able to perform. In all the above methods, the child arrives at a stage wherein he/she is unable to perform about 5 activities. This establishes that the child has learnt a few concepts and therefore needs to learn the rest. This is called the base line.



Problem	Solution
• Concepts too difficult or too easy	The task needs to be broken into small steps
Pre requisites absent	Prepare the child
Content not child friendly	Substitute
Activities, learning & teaching material, seating arrangements not friendly to the needs of	Develop teaching materials with SOMA features and multi sensory environments which will benefit all

individual child	children
Evaluation not child friendly	Introduce continuous evaluation system following child's pace of learning.



Idiosyncratic Development

The child may have gaps in development in all the subjects or in one particular subject. This could be due to socio-cultural factors, or could be due to the simple reason that those competencies were not taught in the school. The child may not have attended the school. The very fact that the child has accomplished the later competencies confirms that the child has the potential or capacity to learn. It is important to ensure that the child learns these activities first as any step or link missed out could lead to difficulties in learning at a later stage, because these steps become a pre-requisite to learning other competencies at a later stage.

Annex 'A' Examplar CCRD

CLASS 2 – MATHS

CONCEPT	SUB-CONCEPT	LEARNING OUTCOMES	SPECIFIC LEARNING OUTCOMES
NUMBERS AND NUMERATION		Indicates the position of an object in a line (from the front or back or any given position)	1. Understands that when objects are placed in a line, they will occupy a particular position. 2. Understands that the position of the object depends on where the object counting starts. 3. Is able to name the position of an object in a line from the front 4. Is able to name the position of the object in a line from the back 5. Is able to name the position of the object from any given position.
		Identifies the differences between an ordinal number and a cardinal number (five students in the class and the fifth student)	6. Can state that ordinal number is the total number of objects kept in any order i.e. from left to right/ from top to bottom /front to back etc.(up to 5 objects) 7. Can identify the objects corresponding to a given ordinal number.

			8. Can state the ordinal number of objects if there are 9 objects kept in any order. 9. Can understand that cardinal number corresponds to the position of object among a group of objects, arranged in order from left to right/from top to bottom/front to back etc. with respect to the initial point of reference. 10. Can identify the position of objects given in a line (five objects). 11. Can observe the relationship between cardinal numbers first, second, third, .ninth and the position of objects arranged in a line. 12. Can identify the position of objects given in a line (nine objects).
		1. Classifies collections (size up to 20) in terms of odd and even by pairing	13. Can count by 2 up to 10. 14. Can count by 2 up to 20 15. Can recognise that numbers like 2,4,6,8,10, ----- 20, when divided by 2 have '0' as the remainder. 16. Can identify that '0' is an even number. 17. Can recognise an even number from given set of numbers. 18. Can recognise that when numbers are divided by 2, if 1 is left as the remainder, then that is an odd number.

			19. Can observe that numbers like 1,3,5,7,9 etc. when divided by 2 have 1 as the remainder. 20. Can state that numbers which leave a remainder of 1 when divided by 2 are called odd numbers. 21. Can compare even numbers and odd numbers. 22. Can count odd numbers by 2, from 1 to 20. 23. Can count even numbers by 2, from 2 to 20.
		2. Makes groups of 2's, 3's, and 10's from a given collection of objects and counts up to a hundred by skipping	24. Given a collection of objects can take 2 objects from a given collection of objects and make a group. 25. Can count up to 100 by counting 2s, by skipping. 26. Can take 3 objects and make a group of 3 objects from a given collection of objects. 27. Can count up to 100 by counting 3s, by skipping.
		3. Compares and arranges numbers (up to 100) in ascending and descending orders	28. Can identify the numerals out of the given numerals, which indicate the greatest and smallest numbers. 29. Can understand the meaning of ascending order i.e., saying or writing numbers from smallest number to biggest number in the order, of any given set of numbers up to 100. 30. Can understand the meaning of descending order, i.e. from biggest number to smallest

			number in an order, of any given set of numbers up to 100. 31. Can rearrange the given numerals in ascending order. 32. Can rearrange the given numerals in descending order. 33. Can recognise the ascending order of numbers. 34. Can recognise the descending order of numbers.
		4. Writes numbers from 0 to 99 in a 10 x 100 grid.	35. Can write numbers from 0-30. 36. Can write numbers from 0 to 60.. 37. Can write numbers from 0-99. 38. Can write numbers from 0-99.in a 10x100 grid.
FOUR FUNDAMENTAL OPERATIONS		5. Understands the use of number ray (up to 20) to count on, add and subtract numbers along it.	39. Know how to draw the number line(up to 20) 40. Can identify the number on a number line given the starting and ending numbers. 41. Can recognise addition as movement in one direction along a number line. 42. Can count the numbers on a number ray (line) up to 20. 43. Can add the numbers along a number line (below 20) 44. Can subtract the numbers along a number line (below 20)

			45. Can add and subtract numbers along a number line.
		6. Uses the symbols +, -, =	46. Can recognise the sign "+" (plus) used in the operation of addition. 47. Can use the sign "+" while adding numbers. 48. Can recognise the sign "-" (minus) used in the operation of subtraction. 49. Can use the sign "-" while subtracting one number from another greater number. 50. Can recognise the sign "x" (into) used in the operation of multiplication. 51. Can use the sign "x" when multiplying numbers.
		7. Makes tables of addition, and subtraction, etc. 8. (1 + 1... 9+9, 1-1, etc.)	52. Can add numbers using addition sign. 53. Can make tables of addition. 1+1=2, 2+2=4,----9+9=18. 54. Can subtract one number from another number. 55. Can make tables of subtraction. 1-1=0, 2-1=1 ..... etc.
		9. Understands that 10. a number + 0 =the number 11. 0+ a number = the	56. Can add "0" to a 2-digit or 3-digit number. 57. Can identify that when "0" is added to a number, the sum will be the number itself. a number + 0 = the number.

		number 12. a number – 0= the number 13. a number – same number = 0	4+0=0. 58. Can subtract "0" from a 2-digit or 3-digit number. 59. Can identify that the difference between a number and zero is the number itself. a number - 0= the number, 5-0 =5. 60. Can identify that the difference between a number and the same number is "0". 7-7= 0.
		14. Adds and subtracts two digit numbers with the without regrouping (using forward counting, 10 by 10 grid and other learning aids)	61. Can add 2 numbers, with or without regrouping. using forward counting (sum not exceeding 19). 62. Can add 2 numbers using 10 by10 grid. 63. Can add 2 numbers using learning aids. 64. Can subtract 2 numbers with or without regrouping, using backward counting (difference not exceeding 19). 65. Can subtract 2 numbers using 10 by10 grid. 66. Can subtract 2 numbers using learning aids
		15. Adds and subtracts two digit numbers (column addition/subtraction) with the without regrouping using addition/subtraction	67. Can use the signs + and = to write an additional equation. 68. Can write all additional facts (only two digit numbers).

		facts	69. Can become aware of the commutative law of addition. Ex; 12 =10+2, 12 =6+6, 12 =9+3, 12=8+4 etc. 70. Can generalize that two given numbers when added in either order give the same sum. Ex: 14+3=17, 3+14=17. 71. Can add two numbers (two digit numerals) when their numerals are presented in a row or column form. 72. Can fill up the missing numerals in addition table using additional facts. 73. Can use the signs "-" and "=", to write an equation involving subtraction.. 74. Can recognise all subtraction facts of a given number (only two digit numbers). 75. Can construct subtraction table. 76. Can find the missing number in the subtraction equation by trial and error. 77. Can find the difference between two numbers in column. (2-digit numbers).

		16. Identifies the operation of addition or subtraction involved in the word problems orally.	78. Can read a statement. 79. Able to observe the relationship between words/phrases with regard to quantities being merged and the sum of the merging in the operation of addition. 80. Able to arrive at the total based on the statements of addition 81. Able to write statements in the form of equation. 82. Able to solve simple verbal problems in addition mentally and which does not involve changing. 83. Can identify the words or phrases "take away", "how many more" and "difference". 84. Can write verbal statements in the form of mathematical statements. 85. Can solve simple verbal problems on subtraction.
		17. Understands that multiplication is repeated addition and uses the symbol "x" for multiplication	86. Can memorise multiplication tables. 87. Can recognise that multiplication is repeated addition. 88. Can recognise that the symbol "x" represents multiplication. 89. Can use the symbol "x" for multiplication.
		18. Prepares multiplication	90. Can memorise multiplication tables of 2and 3.

		tables of 2, 3 and 10 using a grid, skip counting and number patterns	91. Can prepare multiplication tables of 2 and 3 using a grid. 92. Can prepare multiplication tables of 2,3,4 and 5 using a grid. 93. Can prepare multiplication tables of 2,3,4,5 and 6 using a grid. 94. Can prepare multiplication tables of 2,3,4,5,6,and 7 using a grid. 95. Can prepare multiplication tables of 2,3,4,5,6,7 and 8 using a grid. 96. Can prepare multiplication tables of 2,3,4,5,6,7, 8and 9 using a grid. 97. Can memorise multiplication tables of 2,3,4,5,6,7,8,9 and 10. 98. Can prepare multiplication tables of 2,3,4,5,6,7,8,9 and 10 using a grid.
GEOMETRICAL SHAPES		19. Develops and uses vocabulary of spatial relationships (top, bottom, over, under, inside, outside, etc.)	99. Can recognise space. 100. Can develop the concept of top and use the vocabulary. 101. Can develop the concept of bottom and use it in the relevant situation. 102. Can develop the concept over and use it

			relevantly. 103. Can develop the concept under and use it relevantly. 104. Know the concept of inside and use its vocabulary. 105. Know the concept of outside and use its vocabulary relevantly.
		20. Recognizes basic cuboid, sphere, rectangle, circle and triangle	106. Can recognise cuboid. 107. Can name the given object as cuboid. 108. Can recognise a sphere. 109. Can identify objects that have curved surfaces. 110. Can recognise sphere and name the given object as sphere. 111. Can identify objects having plane surfaces. 112. Can distinguish between plane and curved surfaces. 113. Can recognise a rectangle. 114. Can observe that a rectangle has four sides and the opposite sides are equal. 115. Can observe that there are four right angles at the corners. 116. Can identify the length and breadth of a

			rectangle. 117. Can identify that in a rectangle length is not equal to breadth. 118. Can recognise a circle. 119. Can name any plane figure having three sides as triangle. 120. Can recognise a triangle in a given set of figures. 121. Can recognise that a triangle has three sides, three vertices and three corners. 122. Can recognise solid figures such as cube, cuboid, 123. Can recognise solid figures such as cylinder, cone and sphere. 124. Can cite examples of objects in the surrounding which are cubical, cuboidal. 125. Can cite examples of objects in the surrounding which are cylindrical, conical and spherical.
		21. Sorts and classifies solids and place shapes	126. Have the concept of solid. 127. Can identify that different kinds of solids possess different shapes. 128. Can sort and classify solids.

			129. Can place solids of same shape together.
		22. Makes straight lines by folding, straight edged objects, stretched strings and with a ruler	130. Know the concept of straight line. 131. Can recognise a straight line. 132. Can make straight line by folding 133. Can draw a straight line using straight edged objects. 134. Can make straight line by stretching strings. 135. Can draw straight line by using a ruler.
		23. Draws horizontal, vertical and slant lines	136. Can identify a horizontal line. 137. Can draw a horizontal line 138. Can recognise a vertical line. 139. Can draw a vertical line. 140. Know the meaning of slant. 141. Can identify a slant line. 142. Can draw a slant line. 143. Can identify horizontal, vertical, and straight lines among a set of lines.
		24. Draws (free hand) shapes of square, rectangle, circle and triangle	144. Knows that a square has 4 sides which are equal. 145. Can identify a square. 146. Can draw the shape of a square free hand . 147. Knows that a rectangle has 4 sides in which

			opposite sides are equal. 148. Can draw the shape of a rectangle free hand. 149. Can identify a circle. 150. Can draw the shape of a circle roughly without using a compass. 151. Knows that a triangle has 3 sides which may or may not be equal. 152. Can draw the shape of a triangle free hand.
MEASUREMENT	LENGTH	25. Compares lengths using a single improvised unit	153. Knows that length is the distance between the two edges of a straight object. 154. Can recognise that different objects have different lengths. 155. Can compare the lengths of objects using a single improvised unit. .
		26. Measures lengths, using personal units-span, cubit, pace, etc. (in full units only)	156. Can measure length using personal unit – span, .in full units. 157. Can measure length using personal unit like cubit, .in full units 158. Can measure length using personal unit – pace, .in full units.
	MASS	27. Compares and orders masses by actual	159. Knows the concept that an object has a mass.

		weighing (using improvised units)	160. Knows the concept of weighing. 161. Can identify that different objects have different masses. 162. Can find out the masses of different objects by actual weighing. 163. Can compare and orders masses by actual weighing (using improvised units)
		28. Weighs things/objects with improvised unit – wooden cubes, marbles, cotton reels, nails, etc., using a toy balance	164. Knows that things have weight. 165. Knows that things can be weighed using a balance. 166. Can weigh things with improvised unit like wooden cubes. 167. Can weigh things with improvised unit like marbles. 168. Can weigh things with improvised unit like cotton reels. 169. Can weigh things with improvised unit like nails.
	CAPACITY	29. Measuring and express the capacity of a container using improvised units such as cups, glasses, jars, bowls, etc.	170. Can identify that container can be filled. 171. Can identify that containers have different capacities. 172. Can measure and express the capacity of a container using improvised unit such as a cup.

			173. Can measure and express the capacity of a container using improvised unit such as a glass. 174. Can measure and express the capacity of a container using improvised unit such as a jar. 175. Can measure and express the capacity of a container using improvised unit such as a bowl. .
		30. Estimates the capacity of a container and verifies the same by actual measuring	176. Can estimate the capacity of any container. 177. Know how to measure by actual balance.
		31. Compares capacities of different containers by finding out how many smaller containers filled up are needed to fill the bigger ones	178. Know that different containers have different capacities. 179. Can identify that to fill a bigger container a liquid has to be poured by smaller containers. 180. Can find out the number of smaller containers, filled up to fill each bigger container. 181. Can compare capacities of different containers by finding out how many smaller containers filled up are needed to fill the bigger ones.
TIME		32. Names months and seasons in sequence (stories and rhymes about the seasons)	182. Knows that there are 12 months in a year. 183. Can recgnise the 4 seasons. 184. Can name months in sequence.

			185. Can name seasons in sequence. 186. Can tell rhymes mentioning the names of seasons. 187. Can tell stories in which seasons are specified.

		33. Makes appropriate use of words today, tomorrow and yesterday	188. Knows the concept today,. 189. Can use the word today in appropriate context. 190. Knows the concept tomorrow. 191. Can use the word today in appropriate context. 192. Knows the concept yesterday. 193. Can use the word yesterday in appropriate context.
MONEY		34. Makes given amounts with coins	194. Can identify a coin. 195. Know the value of every coin. 196. Can make given amount by putting together the required coins (orally summing up the values of the coins).

1ST STANDARD: ENVIRONMENTAL STUDIES

Theme – Me and My Surroundings

Theme	Concept/ Content	Expected Learning Outcomes	Specific Learning Outcomes
1. My Body	1. * External parts of the Body	1. To enable the child identify the external organs of the body –Head, neck, chest, abdomen, arms & legs	A. 1. Can identify different parts of the body of self – Head 2. Can identify different parts of the body of self- Neck 3. Can identify different parts of the body of self- Chest 4. Can identify different parts of the body of self- Abdomen 5. Can identify different parts of the body of self- Hands 6. Can identify different parts of the body o

		2. Can name the external organs of the body	self- Legs 7. Can name different parts of the body of self- Head, neck, chest, abdomen, arms & legs 8. Can touch and show different parts of the body of self and others- Head, Neck, Chest, Hands, Abdomen, and Legs B. Maths: Can differentiate the number concept – 1&2 C. Language: Can name the body partsi.e.6 words – head, neck, chest, abdomen, hands and legs

	• Similarities and differences in the external parts among peer group and elders	1. To enable the child identify the similarities in the external body parts among the peer group and elders. 2. To enable the child to identify the differences in the external body parts among peer group and elders	D. Skills/Values: * Can Listen well and understand *Can speak (reproduce the words) after listening *Can observe, retain and recall observations 9. Can identify and state the similarities in the number of body parts – one, two, five etc. among the peer group and elders. 10. Can identify state the similarities in the size of the body parts among self and elders – long, short, big, small, tall, short etc. 11. Can identify the similarities in the colour of body parts among peer group and elders 12. Can point out the differences in colour and

	2 * Varied functions of external body parts including sense organs	1. To enable the child to understand and state the functions of external body parts 2. To enable the child to identify the sense organs— Eyes, Ears, Nose, Tongue and Skin 3. To enable the child to state the functions of sense organs – Seeing, Hearing, Smell, Speech and Touch	height among peer group, self and elders. 13. Can state the differences in the size of the body parts among peer group and elders 14. Can point out the differences in the colour and length of hair among self, peer group and elders 15. Can state the functions of head, neck, chest, abdomen, hands and legs 16. Can point out the difference in the functions of body parts. 17. Can recognize the sense organs 18. Can identify the similarities in the number of sense organs. 19. Can identify and state the functions of eyes 20. Can identify and state the functions of Ears

		4. To enable the child understand that sense organs help us in different ways according to their functions	21. Can identify and state the functions of nose 22. Can identify and state the functions of tongue 23. Can identify and state the functions of skin 24. Can see with my eyes. Can see men, animals, trees birds, car, bus etc. 25. Can hear with my ears. Can hear people talking, dog barking , birds chirping and many other sounds around me. 26. Can smell with my nose. Can tell the smell of dosa, soap, jasmin, coffee, and many other items 27. Can taste with my tongue. Can say the taste of sugar, lime, curds, orange etc. 28. Can feel with my skin. Can tell if some body touch me, prick me, can feel heat, cold etc. B. Maths: Number concept-one and many

			Pre-number concepts like big/small; fat/thin; Non-standard measures of length (short/long), and distance (near and far). C. Language: Gained vocabulary of Words on similarities and differences in body parts D. skills/Values: Gained skills of listening and speaking, and recollecting; Observation skills, vocabulary development through more and more words, discrimination skills in hot/cold; soft/ hard, colours/shapes etc.

2. My Needs	• Need for wearing clothes, types of clothes necessary at different times in a year	1. To enable the child understand the need for wearing clothes	A. 29. Can say that we wear clothes to protect us from heat, cold, sun rain etc. 30. Can say that clothes keep us clean 31. Can say that clothes protect us from insects like mosquitoes, bees, wasps, caterpillars etc.
		2. To enable the child to understand different types of clothes, their functions and uses.	32. Can say that clothes made from different materials through touch & feeling texture. 33. Can say that different materials make the clothes different 34. Can say that some clothes are warm and some are cold 35. Can say that we wear light clothes during summer and warm clothes during winter
		3. To enable the child understand different seasons and the	36. Can say when to wear cotton clothes 37. Can say when to wear woolen clothes 38. Can say woolen and leather clothes help us to protect from cold

		different clothes we wear.	39. Can say that cotton clothes help us to keep ourselves cool.
		4. To enable the child understand the times of the year	40. Can say it is summer when it is too hot 41. Can say it is winter when it is very cold 42. Can say it is monsoon when it is raining 43. Can say there are four seasons in an year 44. Can say what clothes to wear during different seasons
	• Regular habits of cleanliness	1. To enable the child to know the habits of cleanliness –brushing, washing hands, bathing etc.	45. Can say what is cleanliness 46. Can say different methods of cleanliness 47. Can say how brushing help us 48. Can say why should we be bathing 49. Can say when and how we should we be washing hands. 50. Can say what things we use for to keep ourselves clean 51. Can say how cleanliness help us to be

	(brushing, washing hands, before and after the meal, bathing, healthy toilet habits)	2. To enable the child to know why cleanliness is important	healthy 52. Can say what are personal things?
		1. To enable the child to know it is important to keep personal things clean and tidy	53. Can say why personal things should be kept clean 54. Can say how personal things can be kept clean 55. Can say to be clean and healthy we should keep both ourselves and our things clean
	• Keeping other personal things clean and tidy	• To enable the child to know taking food periodically and in time is important.	56. Can say why to take food 57. Can say what time to take food 58. Can say how many times to take food
		• To enable the child to	59. Can say that food should be taken at certain particular times in a day 60. Can say that that if we don't eat every day

	• Regular food habits	know that taking food at the same time every day is also very important.	same time it will give us problems 61. Can say that before and after eating hands should be washed well 62. Can say that clean utensils should be used for eating and drinking
		• To enable the child understand that the food we eat and water we drink should be clean and fresh	63. Can say that food should not be kept open 64. Can say that drinking water should be clean
	• Safe handling of food and water	• To enable the child understand that self discipline is important	65. Can say that moving in crowd creates confusion 66. Can say that standing in a line helps to move faster
		• To enable the child understand that there	67. Know that there are some rules on the road 68. Can say the rules that have to be followed while crossing the road

	• Habit of standing in a queue • Rules of crossing the road, level crossing	are some rules for crossing the roads • To enable the child understand that	69.

1.5 INCLUSIVE METHODOLOGY : DEVELOPING INCLUSIVE MATERIALS AND PHYSICAL ENVIRONMENT

Inclusive methodology addresses the need to provide education to children with any kind of impairment. Inclusive education means providing education to the disabled child in a regular school and class, together with non disabled children. This becomes possible when the regular school, and the regular teachers are equipped to meet the special needs of the child with disabilities. No matter how the child's disability may be, he will need some support and provisions, over and above those which the regular school has for the other children. **One of the main features of Inclusive education is the development of the capability of the regular education system to meet the educational needs of children with any kind of impairment.**

The child is not taken away to a separate room or a separate class, as happens in Integrated education. He is provided all support services within the regular classroom.

By now you are familiar with the CCRD of the General Curriculum. You have also established the base line for children in your classroom.

Since each child learns at his or her own pace, it is necessary to develop an individual educational plan (IEP). To plan this the following steps need to be followed:

1.5.1 To Establish the base line

Establish the base line in each subject;

1. Count the number of learning outcomes yet to be learnt by the child. This is the annual plan.
2. Divide this by the number of working months to get the monthly education plan.
3. Divide this or the annual learning outcomes by the number of working days to arrive at the daily education plan.

Please note: The planning has to be done for each subject area. The child may be capable of learning only a few concepts. Please do not force the pace of the child. The IEP is dynamic and will change as per the pace of the child. The child may learn a few concepts in a particular subject/area very fast and may be slow in acquiring the other concepts. Always remember that if the child is not able to learn it may be due to wrong methodology, inappropriate materials, or inaccurate task analyzed steps for the activity.

+ Activity to do:

1. Prepare an individual education plan for 5 children. The plan should have annual, quarterly, monthly, weekly and daily learning of the child.

Cooperative learning:

A child as already stated does not learn only at school. It is also true that the child does not learn only from the teacher. Cooperative learning is when the child learns from the other students in the class or the peer support group. This form of learning will enhance the learning levels of all children as the retention is very high due to constant repetition.

In cooperative learning it is essential to first form groups. The groups are formed based on the learning levels of the children. For e.g. If 5 children have learnt activity 7 in language, they will naturally be ready to learn activity 8. Such children are grouped together. Similarly if 7 children have learnt concept 4 in Mathematics they will form into another group. Please remember that the groups are dynamic – that is they are ever changing – depending on the learning of each child.

Facilitator cards:

Facilitator cards describe the activity to be performed to achieve the desired learning outcome, the materials required for the activity, the place where the activity should be performed – whether outdoors or indoors, the task analyzed steps to be taken to complete the activity, the levels of success that may be achieved.

Activity to do

1. Examine the above facilitator card.

Competency: 10 2 Sub Code: 71 Sub Competency: 10.1 Indoor / Outdoor	***Facilitator Card***	Mathematics Location:
Objective: To help them prepare the tables of number of days in a week, number of weeks in a month and number of months in a year.		
THE TASKS 1. Observing a calendar. 2. Counting the days in a week. 3. Counting the weeks in a month. 4. Counting the months in a year. 5. Preparing the table.	**THE METHOD** 1. Display a calendar in the classroom. 2. Ask them to observe the days marked in red. Tell them that they are Sundays and holidays. 3. Ask them to count the days from one Sunday to another. This is a week. 4. Likewise, ask them to find out the days in a month and weeks in a month. 5. Turn the pages of the calendar and ask them to count the number of months.	
SUPPORT MATERIAL A calendar	**EVALUATION** 1. There are _____ days in a week. 2. Sundays are marked in _____ color. 3. There are _____ days in the month of January.	

2. Prepare a facilitator card for any 4 learning outcomes in each Subject. Please note that the 4 learning outcomes are from 4 different concepts/sub concepts.

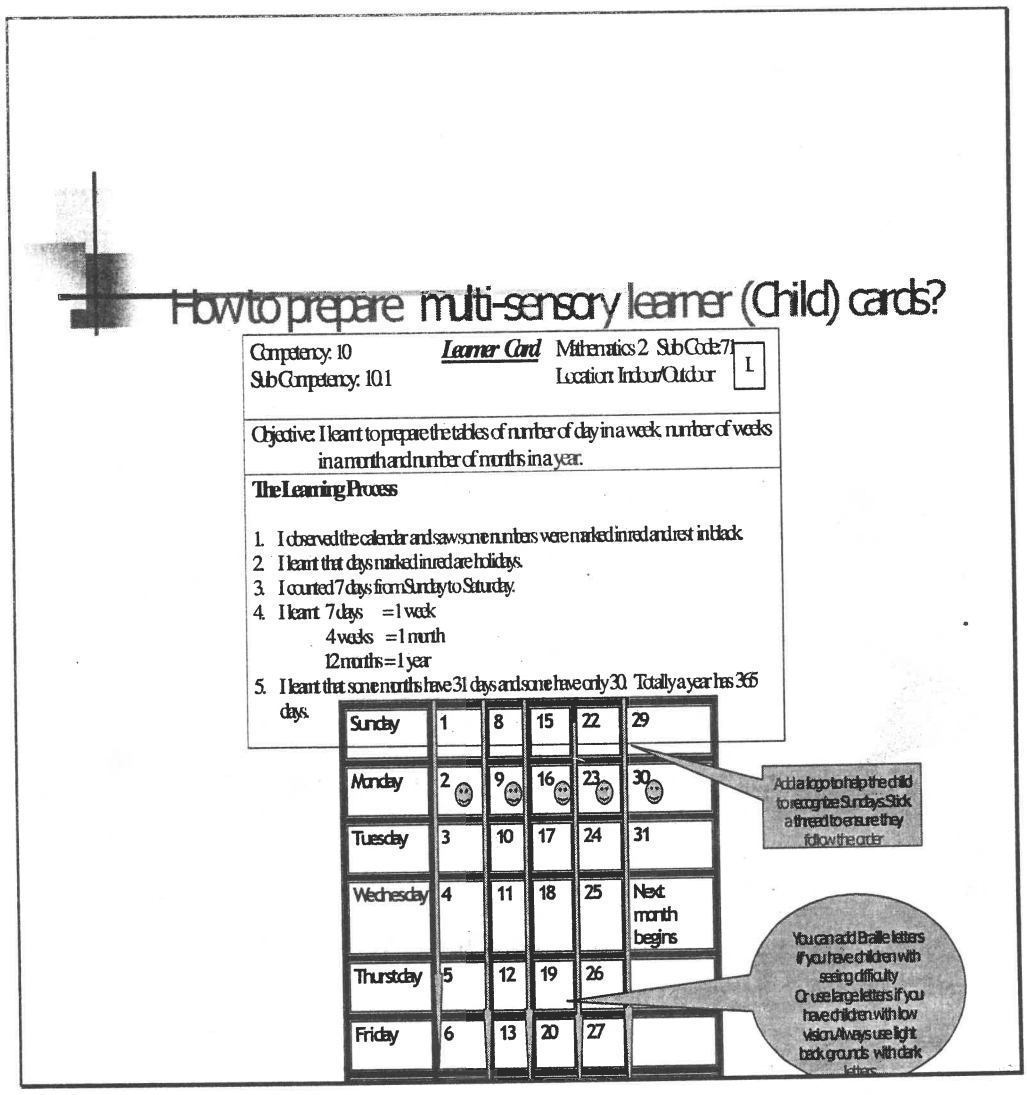
1.5.2 Multi-sensory material

When learning a new concept it is evident that well planned materials are important. But the quality of the activity being given also has a bearing on the learning that is taking place. The learning materials that are given to the child has a crucial role.

> 'Teach me and I may learn, talk to me and I may listen, but make me do and I will retain my learning for a long time.'

What is multi-sensory material?

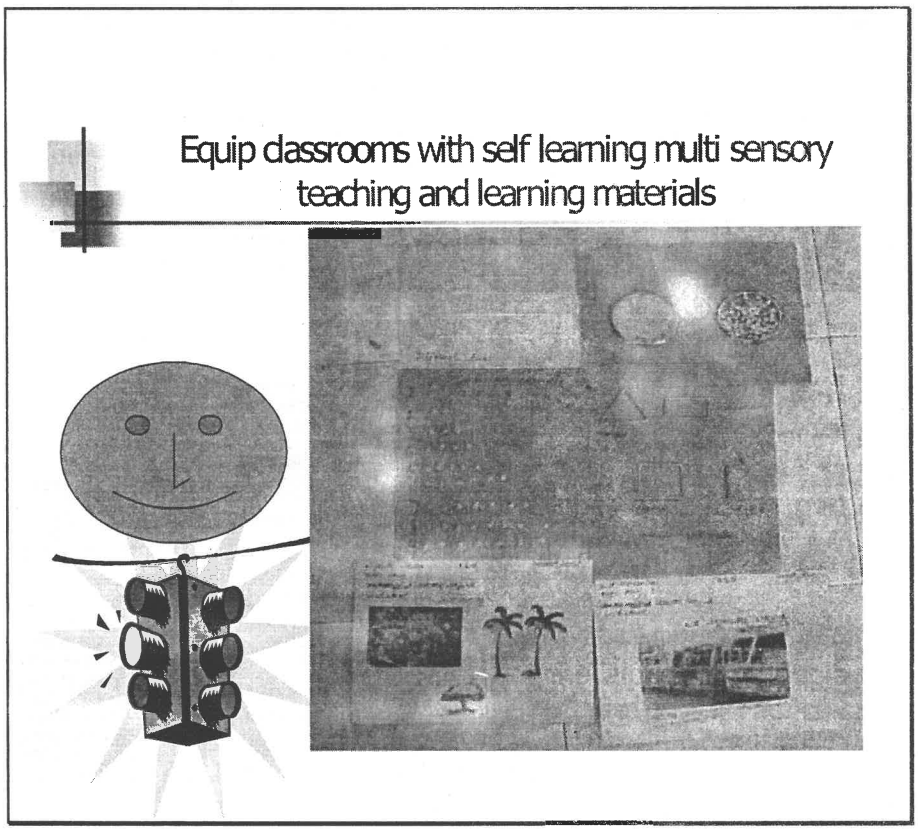
This is self-explanatory. Multi sensory material is that which may be perceived by all our senses. Therefore it should be as close to reality as possible – If the real article can be shown it is ideal, if not then a replica needs to be made. This has to be realistic and to scale. For e.g. If the concept to be learnt is about domestic animals it is useful to show the child a real cow/dog/buffalo/cat etc. If these are not present in the locality, you may show them a model of the same. Please ensure that the model is closer to the real.



3 dimensional – To ensure that the concept is as close to reality as possible, it is necessary to have a 3 dimensional model so that the child with difficulty or lack of vision will be able to touch and assimilate the concept.

Colorful: A colorful object catches the attention of young and very young children. However do not use too many colors. Using wrong colors leads to wrong concept formations.

Made of strong material: The multi-sensory material needs to be handled by children. Therefore it has to be made of strong material so that it can withstand rough handling.

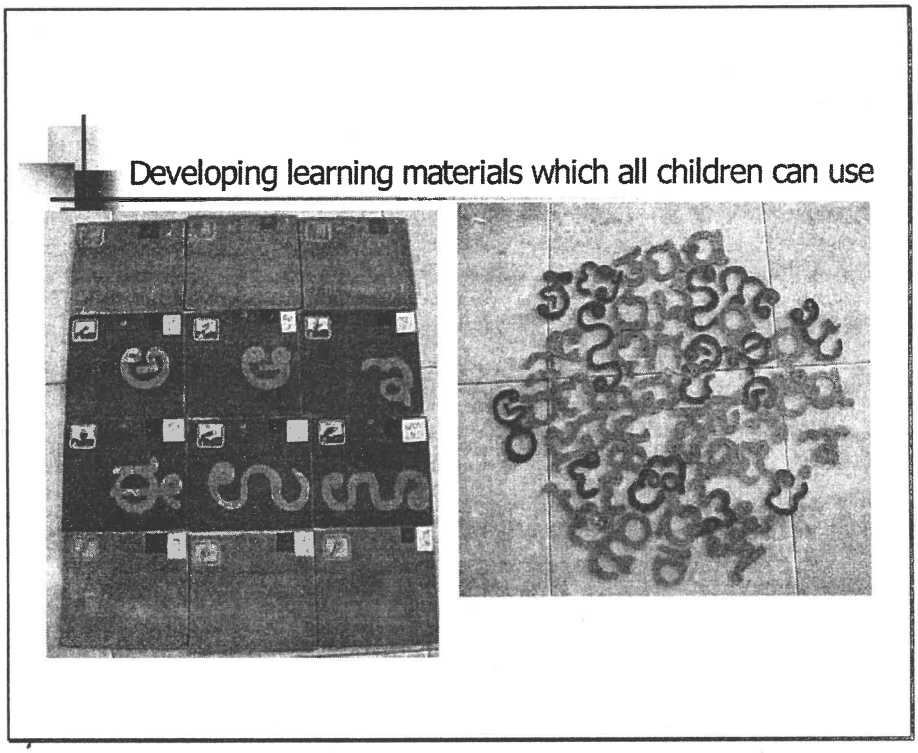


This figure gives an example of multi-sensory materials prepared to teach various concepts. Most of the materials used are available either at home or in the community. Old textbooks, magazines, newspapers, photographs are used in some cards. In other cards grains, seeds, stones and pebbles, various grades of sand etc. are used.

Activity to do:

Make 5 activity cards for the concepts selected earlier.

Develop 5 game cards to teach concepts of language and maths.



Examine these materials closely. See the number card. Each part of the card has a unique purpose.

The background is brightly colored – this has been internationally standardized – blue for numbers and red for the alphabet. If single colors are used it helps to maintain the attention of the child. The colors are soothing for all children and especially useful for children with mental retardation.

The contrast is used for the number – This is made of sand paper cut to shape. This will give tactile stimulation to the children as they will trace the numbers with their fingers. The size of the numbers ensures that even children with low vision are capable of seeing the number.

At the top is a small hole - This will help the child to hold the card in the correct position.

On the left is the sign for children with hearing impairment

On the right is Braille – both written and reading for children with vision impairment.

Activity to do:

1. For the facilitator cards written earlier, make multi-sensory materials. Please make at least 5 types of materials.

2. Make cards for your language and numbers using the above example.

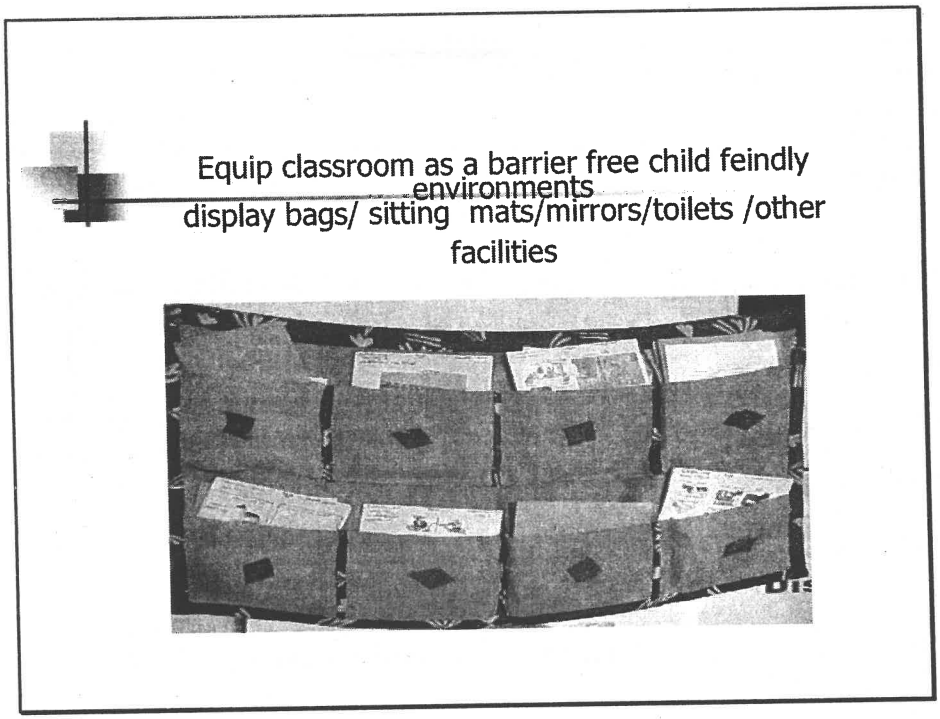
How does the inclusive classroom look like?

MODEL CLASSROOM: A model classroom needs to be child friendly. Children should feel enthusiastic about coming to school. Thus the classroom will have to be colorful and interesting, a place to investigate and to learn. Firstly since most of the schools are at a height above the ground it is necessary to provide ramps (for children with physical disability) and a hand rail (for children with visual impairment). A mug and bucket of water may be kept outside the classroom to ensure that children maintain basic hygiene after playing outside.

A mirror to enhance communication skills and self image

At the entrance of the classroom, and at the height of the child, a full-length mirror may be placed (If a full-length mirror is not within the budget, 3 small mirrors may be placed). This is to give the child the notion that it is important to keep clean at all times. The mirror may also be used to teach children with speech and hearing impairment. The classroom may be decorated with potted plants, which may also be used to explain about numbers (counting leaves), agriculture and various other concepts. From the ground up to a height of 2 ½ feet the wall may be used, after appropriate painting, as a blackboard. Each child could use this to learn various concepts, drawing etc.

Using the waste to beautify the classrooms



This slide shows an example of how a low cost material (gunny bag) is used to store the cards.

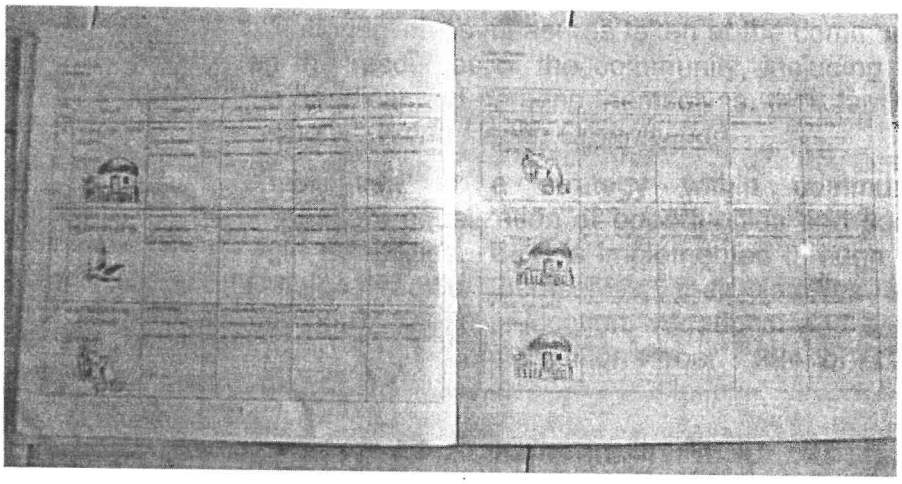
To keep the cards within reach of the child, a wall hanging with pockets to hold the various cards could be made using locally available material such as jute sacking *(Teachers in government schools in villages have used old rice bags, saris to make beautiful decorative bags to display cards).* The bags could be made with the help of senior children. They could be decorated to make them attractive. The cards would have to be sorted based on the curriculum objective and subject. Each subject would require a separate bag (In Karnataka only 3 subjects are taught at the primary level hence 3 bags would be required per classroom). The teacher cards may also be kept in a separate bag. One sided paper may be cut into small 4 inch square pieces. A large quantity of one sided paper is required to encourage children to actively draw or write. Thought for the day could be written on cardboard sheets and a different one put up every day. A resource /teaching material store room could be made at the back of the classroom using a string to tie across and old saris or sheets as partition. The resource center could be used to store low cost teaching aids or to

store children's activity such as paintings, drawings etc. Teaching materials could be developed by taking used items from the village itself. Based on the resourcefulness of the facilitator any item may be used as a teaching aid. But these materials must be cleaned, labeled, and kept in a systematic manner.

1.6 DEVELOPING INCLUSIVE EVALUATION SYSTEMS

In NRD(Norm Referenced Data) system, the evaluation is in terms of marks given to each child. In this system parents could not recognize the progress of their children in each area. But in CRD which is used in inclusive evaluation system, even the illiterate parents could easily understand the progress of the child in each area which is indicated through colour code and the logos which represents the activity

1.6.1 Evaluating the progress of each child using CRD.



You see for each concept in the curriculum there is a logo. For example listening skills has ear as a logo. There are four columns in the continuous evaluation form:

a. Concepts and logo

b. Annual educational plan

c. 1st quarter educational plan

d. 2nd quarter,,,,,,,,,,,,,,,,,,,,,,

e. 3rd quarter,,,,,,,,,,,,,,,,,,,,

There are three types of data you have to fill

How many activities child can do

without help

With partial help

With full help

Attendance:

Attendance is an important parameter. If the child is not learning find out if it is because the child is not attending the school ask reasons for absence. Talk to parents.

If the child is attending the school but not able to learn from activities without help check the baselines, teaching methods .

Activity to do:

1. Fill one quarter progress for five children

2. Discuss the progress of the child with the parents and note the observations of the parents.

Unless we have activities designed for each learning outcome, it is not possible to identify the difficulties of the child in order to perform the activity. By now you know that the list of learning outcomes which is task analyzed, properly sequenced is available in the curriculum based checklist. While presenting these activities, you will identify, if there are any difficulties experienced by the child to perform the activities. If the child finds it difficult, it could be due to several reasons.

Some of the important reasons which will lead to difficulty in learning are as follows:

- The task is too simple – the child gets bored
- The task is too difficult – the child finds it hard

- The task is not properly broken into steps – the child finds it hard
- The learning materials are not relevant to the task – the child is confused
- The teaching materials are not relevant to the task – the child is confused
- The learning teaching materials are not accessible to the child in terms of time, distance, availability – the child is frustrated.
- Prerequisites for learning are absent – Child cannot understand

Some other reasons that leads to difficulty in learning

- The child is ill – child cannot concentrate.
- Child is hungry - child cannot concentrate.
- Child cannot see – difficulty in performing activities that need seeing.
- Child cannot hear – difficulty in performing activities that needs hearing.
- Child cannot communicate – difficulty in performing activities that need communication skills.
- Child cannot move - difficulty in performing activities that need movement.
- Child is slow in learning – difficulty in finishing an activity in the prescribed time frame.
- Child is slow in retention – difficulty to express in tests and exams.
- Child has difficulty in only certain concepts – difficulty to perform only specific activities.

Activity to do

1. *Give example of difficulties experienced by child and analyze the reasons for the difficulty*

1.6.2 Introduce participatory evaluation system

A child as already stated does not learn only at school. It is also true that the child does not learn only from the teacher. Cooperative learning is when the child learns from other students in the class or the peer support group. This form of learning will enhance the learning levels of all children as the retention is very high due to constant repetition.

Cooperative learning

In cooperative learning it is essential to first form groups. The groups are formed based on the learning levels of the children. For e.g. If 5 children have learnt activity 7 in language, they will naturally be ready to learn activity 8. Such children are grouped together. Similarly if 7 children have learnt concept 4 in Maths they will form into another group. Please remember that the groups are dynamic – that is they are ever changing – depending on the learning of each child.

When the children form into groups, it will be noticed that one group learns very fast, and the others are progressively slower. The group that has learnt the concepts very fast may require very little help from the teacher. The teacher may just demonstrate the activity and the children are able to grasp what needs to be done. The other groups may require a little more support. Thus there are 4 types of support to be given to the groups:

1. Complete support from the teacher: This support will be given to the children who have difficulty in understanding a particular concept easily. The teacher may have to sit with the group and help them to perform the activity. This help may be in the form of prompting. Prompting may be physical prompting, prompting through sign, prompting through words.
2. Partial support of the teacher: Here the teacher may have to demonstrate the activity a few times and then the group is capable of doing the task.
3. Complete support of the peer: The peer could be a child from the class who has completed the activity. This support would lead to repetition and thus retention of the child who is providing the support.

4. Partial support of the peer: In this the peer will perform the activity and the other children follow.

Activity to do:

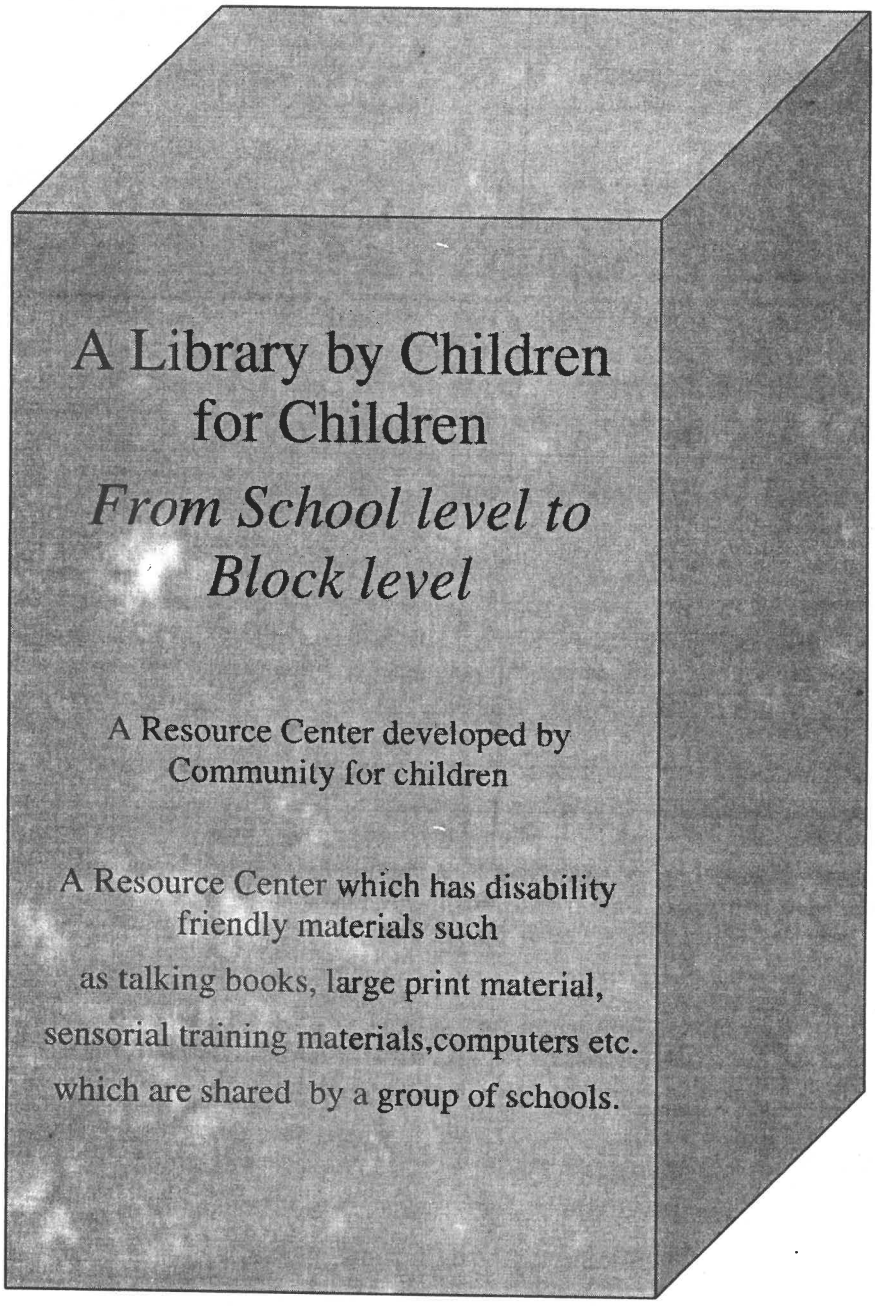
1. **Form groups in your class after establishing the baseline.**
2. Analyze the kind of support each group requires and the effectiveness of the support given.

1.7 HOW TO DEVELOP INCLUSIVE RESOURCE CENTRES AND ACCESSIBLE SCHOOL ENVIRONMENT

1.7.1 Introduction

We used CBR principle to build the community which participates in Education. There are two Examplar Strategies - Akshara resource center and Criterion based illustration based evaluation system. Akshara is a *Resource Center for ALL Children.* In IEDC exclusive resource centers were developed only for children with disabilities. The underlying principle in establishing resource centers leads to developing excellent learning materials. Other children also need these materials. The resource room concept in IEDC was exclusive. All children had no role to play. The approach was so exclusive. In Akshara this barrier was removed and expanded the definition of resource room, which could be used by all children. This principle should be used to develop Inclusive Resource Centre with community participation for education.

1.7.2 Developing Inclusive Resource Centers



A card library on village stories, rangoli, craft work, folk songs, our village sports, our village theatre, our crops, our village needs etc. These cards are written by children in classes 4th and above and educated youth also participate in the preparation of these cards by conducting interviews with the elderly people, carpenter, blacksmith, potter, etc. in the villages.

All resource materials needed for children with special needs – wheel chair, sensory training materials, sign language kits, walkers, early stimulation materials for children with special needs, parallel bars, prone boards, corner seats etc, in various models made from low cost locally available materials.

A tape recorder and cassette for children with special needs such as talking books and music cassettes, speech training cassettes.

How Inclusive resource center works:

1 Children use it as library for additional reading materials

2. Teachers use it to enhance their own learning

3. Teachers borrow learning materials from it.

4. Community uses it as a cultural center for documentation of the village resources.

1.7.3 Developing Accessible School Environment

The child may not come to school because of various barriers both social and physical. At the school level there are various barriers starting with the attitude of the teacher to the attitudes of the peer group and most importantly the physical barriers.

Many schools are at a height from the ground. The ground and the path leading to the school is uneven. Ensure that the path is even and a ramp is provided for a child on a wheelchair to reach the class. The ramp may be made of earth or wood. Make a guiding rail (bamboo or wood) so that a

child with seeing difficulty can hold the rail and get to the class. Fix a thin bamboo or a rod at 2.5 feet height in the classroom and around the walking area for child with visual impairment to hold.

Parallel bars may be fixed in the open area to make children practice walking and play.

1.8 UNIT SUMMARY

***Every School has to become a** Inclusive/Integrated School*

Factors affecting inclusive classroom. **'Any child may experience a special need during school years'.** Difficulties in Learning arise because of several factors. If a child has a disability such as difficulty in hearing, moving, communicating, learning, seeing, it does not mean that such a child will have special needs across the entire curriculum in all subjects. All classrooms are heterogeneous. They have children with different abilities, socio cultural backgrounds. Every child is unique and special. Unless the teacher respects and recognizes this uniqueness, no learning can take place.

A Curricular View: Child-Centered Pedagogy: **Curriculum has to be further modified at classroom level.** In inclusive education there is a tremendous focus on developing such curriculum, which is relevant to all children in the classroom. **A curriculum for all means** a curriculum that can be used by all children irrespective of their abilities. It is important to recognize the fact that every child is unique.

A curriculum needs to be designed in ideal conditions, for every child taking into account i.e., social, cultural, and individual factors. As we have already mentioned, curriculum comes from life. Therefore the relevance to the individual child's life settings, gives the expected relevance and application of knowledge and skills. Some of the important modifications that are required are known as **SOMA features** - **S**pecific, **O**bservable, **M**easurable, **A**chievable. It is necessary to develop the general ***C**urriculum-based **C**riterion **R**eferenced **D**ata (**CCRD**)* which gives you a checklist of learning outcomes which has the SOMA features.

Inclusive methodology: Developing inclusive materials, physical environment and classroom management: Inclusive education means providing education to the disabled child in a regular school and class, together with non disabled children. This becomes possible when the regular school, and the regular teachers are equipped to meet the special needs of the child with disabilities. **One of the main features of Inclusive education is the development of the capability of the regular education system to meet the educational needs of children with any kind of impairment.** The child is not taken away to a separate room or a separate class, as happens in Integrated education. He is provided all support services within the regular classroom.

By now you are familiar with the CCRD of the General Curriculum. You have also established the base line for children in your classroom. Since each child learns at his or her own pace, it is necessary to develop an individual educational plan (IEP). To plan this the following steps need to be followed: Establish the base line in each subject.

Developing inclusive evaluation system: In inclusive evaluation system, CRD is used and not NRD (Norm Referenced Data) system. In CRD system, even the illiterate parents can easily understand the progress of the child in each area which is indicated through colour code and the logos which represents the activity

To manage inclusive school/classroom there is need to develop inclusive resource centres and accessible school environment.

1.9 CHECK YOUR PROGRESS

1. What is the difference between a facilitator and teacher?
2. Every child has its own pace of learning. Comment.
3. What is the difference between traditional approach and inclusive approach?
4. Why should we identify the problem in the system and not see child as a problem?

1.10 ASSIGNMENT/ACTIVITIES

Activity to do:

1 Let children from 6th, 7th, 8th stds. to Prepare 2 cards on local games, stories, folk songs, recipes, local festivals etc

2 Prepare a talking book-record two lessons on audiotape-read slowly with relevant emotions.

3 Ask questions and the activity the child needs to do at the end of the lesson.

4 Prepare large print materials for five lessons, which the child can use if the child has difficulty in seeing small print.

5 Prepare clay models of geometrical solids.

6 Make 2 display boxes-use old card board boxes and paper to make boxes for display of material.

7 Make 3 jute display bags to display cards.

8. Raise awareness in the community regarding the needs of children with disability.

9. With the help of the people in the community make a ramp, and parallel bars and other aids for children with special needs.

1.11 POINTS FOR DISCUSSION AND CLARIFICATION

After going through this unit you may like to have further discussion on some points and clarification. Note down those points below:

1.11.1 Points for discussion

_____

_____

_____

_____

1.11.2 Points for clarification

1.12 REFERENCES

1. Inclusive Education by Ture Johnson
2. UNESCO Resource Pack

UNIT – 2 : IDENTIFICATION CRITERIA – DSM 5

STRUCTURE

2.1 Introduction

2.2 Objective

2.3 Procedure

2.4 Observation Report

2.5 Observation of A Child

2.1 INTRODUCTION

Refer to Block-3 *UNDERSTANDING OF EARLY CHILDHOOD DEVELOPMENT AND INTERVENTION OF CHILDREN WITH DISABILITIES* in this series. Unit-2 in this Block deals with EARLY IDENTIFICATION AND ASSESSMENT and Unit-3 deals with EARLY INTERVENTION.

It is intrinsically important to identify any delays in early childhood development, since early identification would lead to optimum use of residual potential in every child. in e*arly childhood.* There can be deficits in the development of the child. The reasons for delays or deficits in the development is not necessarily because of disabilities alone but could also be due to social, cultural and health factors of the child

The universal intervention model is known as the portage. Portage guide is basically a system for teaching skills to pre-school children with developmental delays. The portage project is a home based training system which directly involves parents in the education of their children in the early childhood ie., 0-6 years of age.

The early identification and intervention can be learnt from direct observation. There are separate units in health delivery service system for early intervention which offer services to children with developmental delays between 0-3 years. The units will have the staff like occupational therapist, physiotherapist, social worker, pediatrician, etc. ***The teacher-trainees can be taken to such a Unit for direct observation of identification and intervention under the supervision of the previously engaged staff of the Unit.***

2.2 OBJECTIVE

After completion of this Unit you will be able to

- understand the importance of early identification and intervention.
- be aware of the services and referral.

2.3 PROCEDURE

You should observe at least 2 (maximum of 4) cases in the Early Intervention Unit and submit the report as per Format given in 2.4 and 2.5..

2.4 FORMAT FOR OBSERVATION REPORT

1. Name of the Institute
2. Address:
3. Type of disability (indicate the type of disabled children given early intervention)
4. Number of children attending(average number per day)
5. Staff in the unit (write the staff working in the unit including helper)
6. Physical facility :
   a. Space (whether the space in the therapy room is adequate or not)
   b. Equipment and material (write the names of equipment and mateiral used for stimulation).

c. Pay equipment

d. Toilet facility

7. Comments :

Signature of the Supervisor

Signature of student trainee

2.5 FORMAT FOR OBSERVATION OF A CHILD

1. Name
2. Age/ Sex
3. Address
4. Type of Disability
5. Case History (briefly wrtie the presenting complaints with which the child came and the birth history. This information you can get from the case file):
6. Assessment tools used (write the assessment checklists used for assessing the performance of the child):
7. Intervention given by the staff (Describe stimulating activities given by the therapist):

Skill/ Task	Activity given	Persons giving (OT, PT, SW)

8. Comments (you need to submit 4 reports)

Signature of supervisor

Signature of student trainee

UNIT – 3 : DIFFERENTIAL DIAGNOSIS

STRUCTURE

Introduction

Objective

Procedure

3.3.1 Observation Report (Special School)

3.3.2 Observation Report (Integrated/Inclusive School)

3.1 INTRODUCTION

Individual differences among children with disability, especially mental retardation vary to such an extent that planning of common group instruction is not possible. Therefore, you need to look into the individual needs of each child and plan the *Individualised Education Programme (IEP).*

In special school, the teacher assesses and plans programme for each child (IEP). The programme includes, annual goals, objectives, methods and material. The teacher pupil ratio is 1: 8 in case of children with mild/moderate mental retardation and 1:5 in case of children with severe and profound MR..

There is provision in the Programme Guide for the Trainee-teachers to observe, during First Contact Programme, in Special School 2 Lessons in each disability area, i.e., total 8 lessons and 8 hours of after-observation conference-cum-discussion.. They will also observe 4 lessons in Integrated/Inclusive School.

3.2 OBJECTIVES

After going through this Unit you will be able to :

- understand the process of educational programme in special class;
- observe and learn the methods of teaching and management of children with disability in class room in special school and integrated/inclusive school;
- understand the importance of special material and equipment;
- understand the need for maintaining records.

3.3 PROCEDURE

Observe the special teacher teaching children with disability in her class (special/inclusive). Write the report in the FORMAT given below.

3.3.1 FORMAT of Observation Report (Special School)

1. Name
2. Address
3. Type of Programme offered (Tick Mark)
   - Early intervention
   - Special School (day care)
   - Residential School
4. Type of disability
5. Age Group (range)
6. Severity level(mild, moderate, severe, profound)
7. Staff in the school
8. Physical facility
   - Space in the classroom
   - Wall space for display
   - Equipment
   - Furniture
   - Learning material
   - Play ground (play equipment)
   - Toilet facility (observe whether there are any special facilities for younger children such as sinks and mirrors at low level, western type of toilet for children with physical disability, provision for training dressing, cooking etc.)
   - Any other
9. Class room observation
   - Group (mild/moderate/severe no. of children in the group)
   - Teacher pupil ratio
   - Furniture (appropriately)
   - Activity taught (write what topic teacher is teaching)

- Equipment and material used for teaching (Display of material, presentation of material while teaching quality and appropriateness of learning material).
- Teacher and learner interaction.
- Group management by the teacher
- Any other

10. Comments

Signature of the supervisor Signature of students trainee

3.3.2 FORMAT of Observation Report (Integrated/Inclusive School)

1. Name of the School

2. Address

3. Tel no. and email

a) Regular Class (Ist class, 2nd class) with disabled children

- Number of disabled children in the class.
- Number of regular school children in the class

b) Special class in a regular school

- Number of children in the class.
- Type of activities for which children are integrated.
- With which class children are integrated (1st, 2nd, 3rd)

4. Staff in the school

5. Physical facility

- Space in the classroom
- Wall space for display
- Equipment
- Furniture
- Learning Material
- Play ground (Play equipment)
- Toilet Facility (Observe whether there are any special facilities for younger children such as sinks and mirror at low level, western type of toilet for children with physical disability, provision for training dressing, cooking etc.)
- Any other.

6. Class room observation

- Group (mild/moderate/severe; no. of children in the group)
- Teacher pupil ratio
- Furniture (appropriately)

- Activity taught (write what topic teacher is teaching)
- Equipment and material used for teaching (Display of material, presentation of material while teaching quality and appropriateness of learning material).
- Teacher and learner interaction.
- Group management by the teacher.
- Any other

7. Comments

Signature of Supervisor

Signature of student trainee

UNIT – 4 : ASSESSMENT TOOLS – STANDARDIZED (WISC, SPM, CPM, DTLD, DTRD, BCSLD, GLAD, ASTON INDEX), CRTS AND NRTS, TMTS

STRUCTURE

4.1 Introduction

4.2 Objective

4.3 Procedure

4.4 Lesson Plan Formats for Teaching Practice

4.4.1 Sample Lesson Plan Format for Group Teaching of Mentally Retarded Children

4.4.2 Sample Lesson Plan Format for Teaching of Hearing Impaired Children

4.4.3 Sample Lesson Plan Format for Teaching of Children with LI & CP

4.4.4 Sample Lesson Plan Format for Teaching of Visually Impaired Children

4.5 Sample Lesson Plans

4.5.1 Lesson Plan for Teaching LI & CP Children

4.5.2 Lesson Plan for Teaching Visually Impaired Children

4.5.3 Lesson Plan for Teaching Mentally Retarded Children

4.1 INTRODUCTION

After going through Blocks 1, 2 & 3 of the Foundation Course you will develop theoretical knowledge on the course. After orientation and training during the First Contact Programme of two weeks in the Study Center you will know how to plan and teach lessons particularly for catering to the needs of disabled children in inclusive mode. You may conduct supervised teaching in your school.

A total of 15 lessons must be taught by you to various groups of disabled children, 2 in Contact Mode and 13 in Distance Mode. You may have your teaching practice for different age group of children available in pre-primary or elementary schools or even lower secondary schools. See Procedure (4.3).

4.2 OBJECTIVES

After completion of this Unit the trainee-teacher will be able to

- Plan the programme and teach in integrated/inclusive school;
- Develop appropriate teaching learning material.

4.3 PROCEDURE

Formats and Sample Lesson Plans

Formats and Sample Lesson Plans are given in this section for your guidance to assist you to frame specific lesson plans required by you.

Contract Mode

Plan two lessons for a given group.

Distance Mode

Prepare 13 Lesson Plans for teaching in inclusive school. Your planning should also include task analysis. Out of them, 10 must be curricular and 3 must be co-curricular lessons. Use the FORMATts and Lesson Plans given in this Section..

4.4 LESSON PLAN FORMATS FOR TEACHING PRACTICE

The Examplar Lesson Plan Formats presented below are suggestive and for providing guidelines to the trainee-teachers to frame their lesson plans. These are nether imposed on them nor obligatory to be followed. The trainee-teachers are free to add. delete or modify the format or even create a completely new format relevant to a specific situation confronted by them.

4.4.1 SAMPLE FORMAT FOR LESSON PLAN FOR GROUP TEACHING OF MENTALLY RETARDED CHILDREN

NATIONAL INSTITUTE FOR THE MENTALLY HANDICAPPED, SECUNDERABAD

LESSON PLAN FOR GROUP TEACHING

Note : *If possible select three different age group (6-8;9-11;11-15 years) of children. Plan 4 to 5 lessons for each child.*

NAME OF THE SCHOOL : _____ **CLASS :** _____
DATE : _____

Name of the Teacher Trainee : _____ **Age Range:** _____

Time: _____

No. of Children : _____

General Objective : _____

_____

Skill : _____

_____

Current level : _____

_____

SPECIFIC OBJECTIVE :

Persons Affected	Condition	Behaviour	Levels of Performance	Duration

Motivation:

Classroom Arrangement :

Material Used	Teacher's Activity	Learner's Activity

Self-Evaluation:

Signature of the Student Trainee

Observer's Remarks

Signature of the Observer

- **Note - TEACHING PRACTICES :-** 10 lessons in Academic / Curricular Area
  5 lessons in Non-Academic / Co-Curricular Area

4.4.2 SAMPLE LESSON PLAN FORMAT FOR WRITING A LESSON PLAN FOR TEACHING OF HEARING IMPAIRED CHILDREN

The Format is given in 2 Parts – **Part 1, and Part 2.**

Part 1 is the first page of a lesson plan. It gives in brief the important points covered in the lesson plan. **The idea is that just by reading the first page the tutor /supervisor should get an idea of the layout of the entire lesson.**

Part 2 is the detailed description of the way the lesson will be conducted, and what and how the teacher will be teaching.

Sample Format For Writing A Lesson Plan : PART 1

Name of Trainee:

Date :

Name of School:

Time allotted:

Class:

Number of children:

Medium of Instruction:

Mode of communication:

Subject:

Average age:

Topic:

School age:

CURRENT LEVEL OF FUNCTIONING (relevant to the topic of the lesson)

a) Knowledge :

b) Language :

SPECIFIC OBJECTIVES OF THE LESSON :

a) Knowledge goals :

b) Language goals :

INSTRUCTIONAL OBJECTIVES / ASSESSMENT :

TEACHING AIDS :

Signature of Supervisor

Date : ***Signature of trainee***

Sample Format For Writing A Lesson Plan : PART 2

(1) (2) (3) (4) (5)
(6)- (columns)

1½"	2½" 2½"-(size)	1½"	4½"	2½"

Rows	Subject matter	Language points	Teacher activity	Student's response	Black Board Work and Teaching Aids

(Use double full scape papers for part2)

Introduction

Presentation

Recapitulation

Evaluation

_____

_____

Remarks and
Signature

_____

_____

4.4.3 SAMPLE LESSON PLAN FORMAT FOR TEACHING OF LI & CP CHILDREN

Name of the student(s):

Date :

Time :

Subject :

Topic :

Behavioural objective :

Materials needed :

Procedure :

Teacher behaviour	Student response	Teacher feedback
Introduce the topic in relevance to the student's base level in the topic you have chosen. (e.g. if you are teaching Addition introduce the topic by asking the students to say the numbers.) Teach the topic with selection of appropriate method of teaching depending upon the students learning style and rate of learning.	Active participation of the students throughout the lesson is needed. Asking them questions during the lesson can promote this.	Immediate feedback from the teacher for the student's response is very essential.
Recap: After teaching the topic completely, plan either questions or activities to help the children to recall the learnt topic. This involves re-teaching if in case the child is not able to		

recall.		
Evaluation: This is to examine the learnt topic. This can be done either verbally (questions) or by performance (activity).		

Follow up activities:

4.4.4 SAMPLE LESSON PLAN FORMAT FOR TEACHING VISUALLY IMPAIRED CHILDREN

Name of the School:

Standard:

Period: Time. :.

No. of students.: Average Age.: Medium of communication :

Subject .

Sub-subject.: .

General Objectives.: 1

Teaching Aids.

S.No.	Teaching Point	Teacher's Activities	Pupil's Activities	Teaching Materials
1	Questions based on previous knowledge			
2.	Presentation			
3.	Statement			
	Statement			
4	Statement			
5	Capitulation			
	Evaluation			
6	Assignment			
7				
8				

4.5 SAMPLE LESSON PLANS

4.5.1 LESSON PLAN FOR TEACHING LI & CP CHILDREN

Name of the students: Mary, Joseph, Surya, Mathan and Pushpa.

Date : 11.9.2000

Time : 10.30 a.m. to 11.15 a.m.

Subject : General Knowledge

Topic : Directions (East, West, North, South)

Behavioural objective: when asked questions on directions , the children will be able to answer correctly with minimum verbal prompt with an accuracy of 80% at the end of the session.

Materials needed : pictures showing directions and a magnetic needle

Procedure :

Teacher behaviour	Student response	Teacher feedback
Good morning children.	Good morning teacher.	
The teacher will ask Mary, ' where are you sitting?'	She points out the chair. (non-verbal	'Very good', Mary
' Surya where are you sitting?'	Child) 'on the chair miss'	'good Surya'
The teacher will ask, 'who is sitting in front of you?'	'you miss' the children will answer in chorus	'very good' children
'Who is sitting at the back of you?' Madhan.	'Durga Miss and Anusuya Miss are at my back'.	'very good'
'Surya, can you say who is	The child will look at the sides and will say the	'very good'

sitting at the sides of you? As a conclusion the teacher will say the front, back, right and left are the four sides. The teacher will continue saying there are four main directions: east, west, north and south. "children can you name the four directions?" 'You know Sun always rising in the morning. Won't you?" 'Mathan, do you know in which direction the sun rises.' The teacher will explains that every day the sun rises in the east and sets in the west. The teacher will show a picture of a child facing the rising sun, with hands stretched on sides and will explain as follows, when we face the rising sun in the morning with extended hands in a horizontal position the direction we are facing is east and the direction at the back is west. The direction of our right hand is south and the direction at the left hand is north. The teacher will make the children imitate her as demonstrated above (facing east with stretched hands). The teacher will show a flash	correct names. The children will listen to the teacher carefully. The children may or may not answer. Yes miss. I don't know miss. The children will keenly observe the teacher. The children will be interestingly participating in the activities. The children will be actively participating.	Okay. I'll explain. Good. Good children.

card with 'east' written on it. Then she will touch the forehead of the child and show the card to the child and ask the child to repeat the word 'east'. Then a flash card with 'west' touched on back and shown to the child. Again flash cards with south and north will be touched by right and left hand respectively and the child will repeat them.		Very good.
Now can you tell me	East	
The direction we face is --	West	
The direction at our back --	North	
The direction at our left ---	South	
The direction at our right --	The children look carefully at the magnetic needle.	Very good.
Then the teacher will show the magnetic needle to the children and will explain that the magnetic needle always points towards north and south and the front and back directions can be known as east and west. This needle is used in mariner's compass.		Very good, Pushpa.
		Excellent.
	'Front, back, right and left', says Mathan.	
RECAP:	East, west, north and south.	Very good.
The teacher will ask, ' what are the 4 main sides?'	Mary points to the word 'east' in the flash card.	Good.
What are four main directions ?-Pushpa	West, Miss.	Very good.
'When we face the rising Sun in the morning what direction are we facing Mary?'	The right side shows south.	The teacher will explain the whole procedure again showing the flash cards and will help
'What will be our back side, Joseph?'		

'What will be the direction in the right side while facing Sun, Mathan?' Our left hand is showing what direction while facing the Sun, Surya? The teacher will show the magnetic needle to the children and ask them to name it and tell the uses of magnetic needle.	North Miss. The children may or may not answer.	the children to recall.
EVALUATION: The teacher will ask questions about the 4 main directions and how to find directions.		

Follow activity:

The teacher will give homework to find out in which direction is their school situated from their houses.

ASSIGNMENT

The trainers are required to conduct 15 lessons for practice teaching as follows:

- 5 at pre-primary level- language and mathematics
- 3 at primary level- language and mathematics
- 5 at secondary level- elective subject and related language points
- co-curricular activities at 2 levels

For this purpose they are required to plan each and every lesson as per specific need of each lesson at specific level as per format of lesson plan.

Besides they are required to learn about the other aspects of school activities.

4.5.2 A SAMPLE LESSON PLAN FOR TEACHING VISUALLY IMPAIRED CHILDREN

Name of the school : SHARP MEMORIAL SCHOOL FOR THE BLIND, DEHRADUN.

Standard : Fourth

Period: 2nd **Time.** :40 mnts.

No. of students.: 10 **Average Age.:** 11 yrs. **Medium of communication** : Hindi

Subject : Properties of different leaves .

Sub-subject.: To impart knowledge about leaves used in vegetables on the basis of taste, smell and shape.

General Objectives.: 1. To acquaint students with various leaves which are used as vegetables and medicine.

2. To enhance touch and smell sense in students.

Special Objectives: 1. To give knowledge about Mint, Coriander, Basil and fenugreek leaves.

2. Let the students to identify shape, smell and taste of all the above mentioned leaves.

Teaching Aids : Mint, Coriander, Fenugreek & Basil leaves.

S.No.	Teaching Point	Teacher's Activities	Pupil's Activities	Teaching Materials
1	**Questions based on previous knowledge**	1 In preparation of sauces generally what are the materials we use ?	Tomato, mint, Tamarind, Coriander	Lea ves of Mint, Coriander, Fenugreek, & Basil leaves.
		2. To which plant do we offer water on the name of God after taking bath in the morning?	Tulsi (Basil)	
		3. Generally at the time of cold and cough which leaves do we use in tea?	Tulsi (Basil)	
	Presen tation	4. Which leaves are used in curing diseases of skin?	Neem leaves	Some tablets of Mint
2.	**Statement-1**	Today I shall tell you about leaves often	Pupil will listen carefully.	
3.		used in daily life.		
		The teacher will tell the students about the qualities of all four types of leaves after handing over the leaves to them.	Pupil will try to know the shape by touch and know the odour after smelling them..	
		1. First of all the teacher will ask the students to smell and to notice the structure of the leaves of coriander by touch.		
	Statement-2	2. Now the teacher will explain regarding the qualities of the same, that it works as a digestive and the powder of its seeds are generally used in different dishes.		
		Similarly the teacher will	Pupil will try to know the shape by touch and	

	Statement-3	provide the leaves of mint and ask the students to feel the difference in shape and smell of the mint .and will explain the qualities of mint leaves -that it is often used in summer. Grinded mint leaves are used in vomiting and loose motions. In case of indigestion mint juice is very effective. It is also given with curd or as jaljeera in case of heat stricken. Now a days mint tablets are available in the market since fresh mint is not available. Mint tablets will be provided to the students.	know the odour after smelling them.. Pupil will again try to know the shape by touch and know the odour after smelling them..	
	Recapitulation	The teacher will acquaint the students with the shape and smell of basil leaf. Teacher will explain the qualities of basil leaf. Every Hindu family pay due regard to the plant of Basil. The leaves are used as medicine generally in cold and cough and fever too. According to the resent researches it is also helpful in curing diseases like Cancer.		
	Evaluation	Now the teacher will tell them to taste those leaves separately and ask 1. Is there any difference in the shape of leaves of Mint, Coriander, Basil and fenugreek? 2. Is there any difference in the odour of leaves of Mint, Coriander, Basil and fenugreek?	Yes Sir Yes Sir Yes Sir	

	Assignment	3. Is there any difference in the taste of leaves of Mint, Coriander, Basil and fenugreek? Today you learnt about those leaves which are generally used in our daily life i.e. leaves of Mint, Coriander, Basil and fenugreek 1. The teacher will give basil leaf to the students and ask them to identify the leaf by smell, taste and shape. 2. The teacher will give Mint leaf to the students and ask them to identify the leaf by smell, taste and shape. 3. The teacher will give fenugreek leaf to the students and ask them to identify the leaf by smell, taste and shape. The teacher will assign the students to collect information from the community about the use of the leaves of Mint, Coriander, Basil and Fenugreek in different aliments.	Pupil may reply regarding Basil leaf. Pupil may reply regarding Mint leaf Pupil may reply regarding fenugreek leaf	

4.5.3 LESSON PLAN FOR TEACHING MENTALLY RETARDED CHILDREN

As per format developed by National Institute for the Mentally Handicapped, Secunderabad

Lesson Plan for Group Teaching

NAME OF THE SCHOOL : MIRIAM SCHOOL FOR THE M.R.
CLASS : PRIMARY
DATE : 14-7-2001

NAME OF THE TEACHER TRAINEE : _____
AGE RANGE: 6 TO 8
TIME: 10:30 TO 11:15

No. of Children : 06

General Objective : Developing Personal Hygienic Skill

Skill : Washing hands using soap.

Current level :

- Student can identify the soap, wash basin, functioning of tap.
- They have adequate motor ability like, grasp, eye-hand coordination
- Know concept of hear or see
- Aware of tactile sensation.

SPECIFIC OBJECTIVE : Develop the skill how to wash hands with soap

Persons Affected	Condition	Behaviour	Levels of Performance	Duration
	Provision: *wash basin with tap, soap.* Students are asked to wash there hands with soap	students will wash their hands	with the help of physical and verbal prompting	30 to 40 minutes

Motivation: Friends, every one should wash their hands before & after every meals & after elimination. We must wash our hands using soap. Soap kill the germs from the hands.

Classroom Arrangement : Half circle around a wash basin.

UNIT – 5 : PORTFOLIOS, CHECKLISTS, RATING SCALES, ANECDOTAL RECORDS, OBSERVATION SCHEDULES

STRUCTURE

5.1 Introduction

5.2 Objective

5.3 Procedure

5.4 Outline of Report

5.5 Assignment

5.5.1 Assignment 1 (Group Work)

5.5.2 Assignment 2 ((Individual Work)

5.2 INTRODUCTION

A candidate preparing for the Foundation Course on Education of Children with Disabilities (FC-DE) should have a clear perception of the Status of Disability in the community as well as about the intervention measures undertaken for Community Based Rehabilitation / Community Based Education (CBR/CBE) implemented in the country for the disabled sector of population. For this he/she has to carry out a Project Work on Disability Status in the local community. This will enable him/her to understand the needs of the disabled children and will be in a position to sensitise the peers, parents and the community to overcome attitudinal barrier as well as to meet the specific educational needs of the children with disability in inclusive classroom and school..

During the First Contact Session the teacher-trainees will carry out a Community Contact Programme under the supervision of a Counselor and learn the art of community survey. and develop a perspective and skill how to identify and assess status of disability in a Community.

5.2 OBJECTIVE

After going through this Unit the trainee will be able to

- perceive the concept of CBR/CBE
- have an understanding of CBR services and the education for the all disabled children
- conduct survey of a community to identify and assess status of disability in the community, record faithfully and prepare an authentic report of the specific programme undertaken on CBR/CBE,
- have a broad perspective on specific educational needs of the school going population in the community and formulate appropriate programme for effective curricular transaction in inclusive environment..

5.3 WHAT IS CBR/CBE

"Community based rehabilitation involves measures taken at the community level to use and build on the resources of the community, including the impaired, disabled and the handicapped persons themselves, their families and their community as a whole."

-World Health Organisation

"Community based rehabilitation is a strategy within community development for the rehabilitation, equalization of opportunities and social integration of all people with disabilities. CBR is implemented through the combined efforts of disabled people themselves, their families and communities, and the appropriate health, education, vocational and social services."

- Joint Position Paper, 1994 of *I.L.O., UNESCO and WHO*

Objectives of CBR/CBE

The main objectives of CBR programme are :

- **to make the home of the disabled person to become the rehabilitation centre;**
- **to make the community (village/slum) to become the training site.**

The specific objectives of CBR/CBE are :

- **to integrate the disabled persons into family and community with active participation;**
- to dissuade family members and community people from the deeply rooted and prevailing attitude that disabled people are idle and unproductive;
- to create awareness in the community regarding specialist and referral services when the need arises.
- to find out educated young people in the community who are willing to serve and undergo training as CBR workers;

5.5 PROCEDURE OF COMMUNITY CONTACT PROGRAMME

5. The Trainee-Students will be divided into groups of 4/5 trainees per group.
6. Each Group of trainees shall identify a village or a slum area, separate for each group, for CCP.
7. Collect data as per FORMAT 4.4.1 and FORMAT 4.4.2.

8. A complete report of the work will have to be submitted by each trainee separately as per FORMAT 4.4.3 :

5.4.1 FORMAT FOR COLLECTION OF DATA ON SELECTE *COMMUNITY / VILLAGE / SLUM AREA*

i. Name of the Community :

_____

and address

_____

_____

ii. Location : State District Block

_____ _____ _____

iii. Land Area (in Hectares) : Total Cropland Forest Grassland Others

_____

iv. Population : Male Female
Children

Total :

_____

Disabled :

_____

v. Occupational Profile : Agriculture Industry Service

1. (a) Owner(Capital) :

_____

(b)Employee(Labour):

2. (a) Professional :

(b)Skilled Manpower :

(c) Unskilled Labour :

viii. Economic Profile : HIG MIG LIG
BPL

ix. Educational Profile : Graduate & + +2 10 Primary
Illiterate

:

viii. Housing conditions :

x. Sanitation:

(a) Safe water :

(b) Disposal of Waste :

x. Health Facilities :

xi. Educational Facilities :

_____

xii. Awareness about
Disability :

_____

xiii. Attitude towards
disability, :

_____

___

xiv. Rehabilitation facilities :

_____

xvii. Name of the Contact person
in the slum / village :

_____

xviii. Agency, if any, which work
for the disabled :

_____

(You may add more information if relevant to your case-study and the general report.)

5.4.2 FORMAT FOR CASE STUDY/ HISTORY (A SAMPLE)

Name :

_____

Date : _____

Age / D.O.B. : _____

Sex : M / F / MC / FC

Address : Permanent:

Temporary :

_____

_____

_____

_____

_____

Religion : _____

Aid User : Yes/No, If so, Model : _____

Nature and type of disability : _____

Degree of disability : _____

Father's / Guardian's Name

Mother's Name

_____

_____

Age : _____

Age : _____

Education : _____

Education : _____

Occupation : _____

Occupation : _____

Income : _____

Income : _____

Religion : _____

Religion :_____

_____

Education : _____

Mother tongue : _____

Occupation : _____

Income : _____

Earlier investigation / treatment :

_____

Child's Educational History :

Attends school : Regular / Special,

Studies in class : _____

Age of Admission _____

Medium of Instruction : _____

Mode of Communication : _____

Failure, if any, Indicate level : _____

Prenatal History :

Problems during pregnancy, if any : Viral infection / Drug taken / Physical and emotional

Trauma / Rh incompatibility / Any other :

Perinatal History :

Delivery at : Home / Hospital, Full time / Premature / Post mature

Birth cry : Normal / Delayed / Feeble

Birth weight : _____

Blueness : Yes / No

Postnatal History : (Indicate the age of onset and duration of illness)

Viral infection / Drugs taken / Respiratory infection / Neurological Problems / Head Injury / Convulsions (with or without fever) / Exposure to noise / Any other : _____

Family History :

a. Nuclear family / Joint Family : b. Consanguinity : Yes / No

a) History of family deafness / other handicaps :

_____

_____

_____

_____

Social and behaviourial history :

Gross motor activity :

_____

_____

Fine motor activity :

Social interaction :

Receptive language :

Expressive language :

Reading :

Writing :

Numbers :

Time :

Money :

Domestic activity :

_____

_____

Recreation / leisure time activity :

_____

Additional information for child / adult if any :

(You may add more information if relevant to your case-study and the general report.)

Name of Interviewer :

Signature

Date : / /

5.4.3 FORMAT OF THE REPORT ON CCP (All Disability Areas, M.R; H.I; L.I; V.I.)

1. **Project Title :** Assessment of Status Diability and CBR/CBE Services in a Community (mention the Name of the Community chosen).
2. **Introduction :** Briefly mention the perspective and nature of your project work, the need and reason for selection of the community, the nature of problems you encountered, your target group, statistics or previous studies/data if any.
3. **Objectives :** Mention the specific objectives of your project work, i.e., point out what you wanted to achieve .
4. **Profile of the Community :** (1)Describe the location of the community (village / slum / locality / area) chosen. (2) Briefly mention the demographic, social, economic, cultural, environmental status of the District/Block to which your selected community belongs. (3) Write on the basis of your survey data (See Annexure 1) : (a)the profile of the population, human resources, educational and health and social welfare services, socio-economic status and environmental resources and carrying capacity of the community and its location (geographical boundary, Block,

District, State); (b) the existing profile of the disabled (VI/MR/HI/LI&CP) children and adults in the community (village/slum); (c) the CBR/CBE services available, (d) referral services available when the need arises.

13. **Plan of Action to meet Specific Educational Needs of the Children with Disability:** Make a critical analysis of your survey data. Study the Community profile and outline a Plan of Action that you will follow in meeting the specific educational needs in inclusive classroom and integrating children in the school, families and community.

14. **Methodology :** Give an outline of your approaches, materials used, mode of communication, cases identified, referral/management, linkages developed and so on.

15. **Outcome :** Give details of the outcome of your effort in quality and quantity.. Attach Charts , Illustration, Graphs, Tables, Photographs, any other Teaching Aids You have prepared/collected and used in your project..

16. **Experience :** You have made an attempt to apply your knowledge and skills you learnt to a practical situation. Describe what you experienced and what are your impression? What are the positive features of your project? What are the negative features of your project?

17. **Limitations :** What were the limitations of the project work?

18. **Follow up Work :** Give your recommendations on follow up work which can be undertaken in inclusive education in the school .

19. **References :** Give references of books and journals that you had consulted or referred .

20. **Annexures :**

    5. Data on demographic, social, economic, cultural, environmental status of the District/Block to which your selected community belongs (Collect from District statistical office).

    6. Data on the Disability status of the selected community

    7. Data of the Selected Community (See Format of Community Profile for CBR Project Work)

    8. Charts, Illustration, Graphs, Tables, Photographs, any other Teaching Aids, Clippings used for the Project Work.

5.5 REFERENCES

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BLOCK 4: DOMAINS OF ASSESSMENT

UNIT 1: MOTOR

STRUCTURE

1.1 Introduction

1.2 Objectives

1.3 Functional Definition

1.4 Distinction among Impairment, Disability and Handicap

1.5 Causes of Disability

1.6 Magnitude of the total disabled persons and children in the world and India .

1.7 Unit Summary

1.8 Check your Progress

1.9 Assignment Activity

1.10 Point for Discussion and Clarification

1.11 References

1.1 INTRODUCTION

Disability is an impairment of a physical and mental function which enforce the performance of the activities of an individual at a very particular social and economic environment.

1.2 OBJECTIVES

After studying this unit you should be able to

- Define the term 'Impairment', Disability' and 'Handicap'
- Understand the conceptual difference between the terms

- Understand the major causes of Disability
- Understand the overall scenario of Children with Disabilities globally and in India.

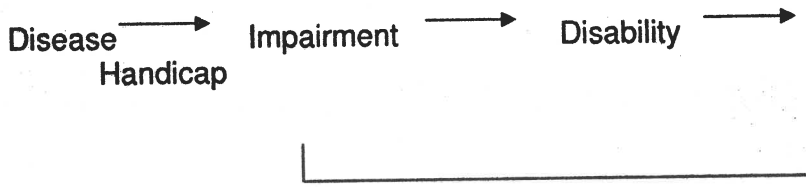
1.3 FUNCTIONAL DEFINITION

Impairment may occur simply, as a result of, aging process. A person after age of 40 may not be able to see as well as he did at 30. But he can still perform all the activities expected of him if necessary by using appropriate glass. This is not a disability. However, if vision is so reduced that the person is unable to read, go out alone or perform other activities in the office or factory, called disabled.

There are many perception about visually impairment. For example, the persons with significant visual impairment may have difficulty in choosing life partner. This is a case of Handicap resulting from impairment or disability. Disability may be physical or mental while handicap is social consequences of disability.

1.4 DISTINCTION AMONG IMPAIRMENT, DISABILITY AND HANDICAP

The World Health Organisation (WHO) has defined the terms 'Impairment', Disability and Handicap in 1980 through the publication of *the International Classification of Impairments Disabilities and Handicaps* (ICIDH), which is a manual of classification relating to the consequences of diseases. The ICIDH proposes the concepts and definitions of Impairment, Disability and Handicap and discusses the relation between these dimensions. It is based on a linear model implying progression from disease, impairment and disability to handicap.



ICIDH Model (WHO 1980)

Impairment: According to the ICIDH, impairment is any loss or abnormality of psychological, physiological or anatomical structure of functions generally taken to beat organ level.

Impairment is a damage to tissue due to disease or trauma. A person who has poor or no vision due to damage to retina or optic nerve may be said to have a visual impairment.

Disability : Disability has been defined as any restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being, generally taken to be at the level of the individual.

Disability denotes the consequences of impairment in terms of functional performance and activity by the individual. A person who has an optic nerve or retinal damage would have limitations in performing those tasks that requires the use of eyesight.

Handicap : The ICIDH defines Handicap as a disadvantage for an individual, resulting from an impairment or disability, that limits or prevents fulfillment of a role, that is normal for that individual.

1.5 CAUSES OF DISABILITY

The causes of each impairment may be different. However, there are certain general factors which may give rise to impairment :

- Viral infection of the mother, particularly in the first three month of pregnancy;
- Blood incompatibility between mother and father;
- Prolong labour and difficult delivery;
- Medical examination during the process of birth;
- Severe jaundice in early childhood;
- Very high fever in early childhood;
- Low oxygen during the process of birth.

Major causes of important impairment are given below:

Causes of Visual Impairment

- Vitamin A deficiency, in early childhood may cause a condition called Xerophthlmia or dry eyes and opacity of the cornea.
- Congenital Catracts caused by some abnormalities during pregnancy or inheritance.
- Pre- maturity in the administration of high concentration of oxygen in the incubator giving rise to ratinopathy of pre-maturity; this may result total loss of sight.
- Catracts – usually occuring in middle old age. This condition is amenable to treatment by surgery.
- Glucoma – High pressure in the eye resulting in damage of ratina.

Causes of Hearing Impairment

- RH incompatibility in the blood of mother and father.
- Accumulation of large amount of wax in the ear.
- Immobilization of the three bones, behind the ear drum.
- Untreated discharging ear.
- Untreated and sustained cough and colds.
- Brain Damage.
- Damage to ear drum through trauma.
- Infections.

Causes of Locomotor Impairment

- Polio
- Congenital deformities of limbs.
- Accidents.
- Trauma
- Falls from heights.
- High fever in early childhood.
- High blood pressure leading to stroke.
- Brain damage during the peri-natal process.
- Lack of oxygen.

Causes of Mental Retardation

- Endocrinal deficiency like diabetes during pregnancy.
- Trisomis, i.e., splitting of one of new chromosomes during pregnancy.
- Pre-maturity
- Low birth weight.
- Too small a brain
- Too large a brain.
- Head Injury in childhood.
- Severe Jaundice in early childhood.
- Anoxia
- Lack of oxygen to the brain.

Causes of Learning Disability

There is little agreement on the causes of learning disabilities, because so many different types of children come under this category. There is no single or a primary cause for learning disabilities, there are many causes for the problems.

There are people, who view that the problem lies in the child's environment and situations outside the child- external factors (e.g. educational factors such as inappropriate instruction, lack of appropriate reinforcement; cultural factors etc.) There are people, who view that the problem lies within the child- internal factors (e.g. attention, low grasping ability). Both view points are true to some extent.

Learning disability is a problem related to the central nervous system (neurological deficit). The neurological deficit could be the result of genetic, prenatal, perinatal and postnatal factors.

- **Genetic Factors :** Is learning disability hereditary? There is some evidence to suggest that learning disability and hyperactivity tend to run in families. Some studies conducted in other countries have found that 20% of a group of hyperactive children had at least one parent who was hyperactive. Only 5% of non-hyperactive children had a hyperactive parent. So genetic basis of learning disability cannot be altogether ruled out. But the knowledge of genetic factors

does not help us in providing remedial assistance to the learning disabled child.

- **Prenatal :** When the child is in mother's womb, certain maternal factors can influence the development of the fetus. The neurological deficit in the child may be brought about if the mother (i) uses drugs (ii) consumes excessive alcohol, (iii) suffers from malnutrition, (iv) suffers from rubella (German measles) or (v) suffers from severe sickness and fever to the point of being physically immobile.
- **Perinatal Causes :** Perinatal factors refer to those that occur at birth. The perinatal causes include: (I) anoxia (loss of oxygen) during pregnancy or at birth (ii) injury to the child's brain as he passes through the birth canal or immediately after birth, and (iii) any other method of delivery causing injury to the brain cells of the child.
- **Postnatal Causes:** The postnatal causes are: ***(a) Biological or Biochemical Causes*:** The factors in this category responsible for learning disability include: (I) Hypoglycaemia or low blood sugar (ii) nutritional deficits, (iii) food allergies particularly to sugar, eggs, wheat, and chocolate, (iv) hyperactivity due to certain substances in the diet such as artificial colouring or certain chemicals found in fruits and (v) use of certain types of drugs. ***(b) Environmental Causes:*** Several environmental factors are linked to learning disability. Any factor that can cause neurological problems can cause learning disability. These factors include (i) accidents or other types of trauma to the brain, (ii) ingestion of certain substance (e.g. lead paint) and (iii) exposure to fluorescent lights and lights from television because of low level radiation. ***(c) Development Causes:*** Learning disability may be caused by lags in neurological development (not loss of neurological function). This is called as maturational lag. This theoretic model presumes that there has been some delay in the development of certain central nervous system components, and in many cases this may be overcome through natural development sometime in the future. It is because of this reason that the development of listening speaking, reading, and writing skills for the learning disabled children is usually slow.

1.6 MAGNITUDE OF THE TOTAL DISABLED PERSONS AND CHILDREN IN THE WORLD AND INDIA

According to UN statistics, 600 million people in the world have a significant disability. *About 10 percent of this population, that is, about 60 million are children of school going age.* The precise number of children with disability in a given country will depend to some extent on the demographic pattern of

the country. In the countries, where the number of elderly people is small, about 40 % population is believed to be below 16 years of age.

India has over 1000 million people (2001 census). There may be 50 to 100 million people with disabilities. This number includes people with Visually Impairment, Hearing Impairment, Locomotor Impairment and Mental Retardation. The school age children constitute twenty per cent of the total population, that is, 200 million and 20 million children require special educational needs. The Programme of Action (POA) of the National Policy of Education in 1992 gave the following estimated number of children with disabilities:

Category	Figures in million	
Projected Population of children with Disability in the age group 5-14 years		3.19
Locomotor Handicap	1.48	
Hearing Handicap	0.65	
Speech Handicap	0.91	
Visual Handicap	0.15	
Mentally retarded children in the age group 5-14 years		3.60
Children with learning disability in the age group 5-14 years		3.60
Children with disability in the age group 16-18 years		2.20

1.7 UNIT SUMMARY

In order to understand children with special needs we must know the different adjectives or terms by which they are often described. Impairment, Disability and Handicap are terms which are frequently used interchangeably. However, there are conceptual differences among the terms. The differences have been clearly outlined in the definitions of each of the terms by WHO in the *International Classification of Impairment, Disability and Handicaps.*

Impairment represents exteriorization of a pathological state and occurs at tissue level.

Disability refers to excesses or deficiencies of customarily expected activity, performance and behaviour, and is located at the level of the person.

Handicap reflects the consequences for the individual – cultural, social, economic and environmental that stem from the presence of impairment and disability.

There are certain general factors which may give rise to impairment such as (a) viral infection of the mother, particularly in the first three month of pregnancy; (b) blood incompatibility between mother and father; (c) prolong labour and difficult delivery; (d) medical examination during the process of birth; (e) severe jaundice in early childhood; (f) very high fever in early childhood; (g) low oxygen during the process of birth. The causes of different impairment may be different. (SeeText).

As per UN statistics, 600 million people in the world, i.e., 10 per cent of global population, have a significant disability. *About 10 percent of this population, that is, about 60 million are children of school going age.* India has over 1000 million people (2001 census). There may be 50 to 100 million people with disabilities.

1.8 CHECK YOUR PROGRESS

A) Fill in the Blanks

1. Inability to perform functional activities is called _____.
2. _____ is denoted by anomalies on organ, tissues, or functioning of body systems.
3. Limitations is fulfilling one's age appropriate socio-cultural role is know as _____.
4. Where as _____ situation specific, _____ is an aspect of life.

B) Match each of the disabilities which ensuing handicaps

Disability	Handicap
a) loss of sight	i) mobility
b) loss of hearing	ii) employment
c) loss of arms	iii) schooling
d) loss of legs	iv) communication
e) mental deficiency	v) self care

1.9 ASSIGNMENT/ ACTIVITY

Define the term 'impairment' and 'handicap' and provide live examples of two such children from your locality to describe each term.

1.10 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

1.10.1 Points for Discussion

1.10.2 Points for Clarification

1.11 REFERENCES

1. Ashman, A & Elkins, J(Eds) (1994) Educating Children with Special Needs, Prentice Hall, New York.

2. Hallahan, D.P. & Kauffman, J.M.(1991) Exceptional Children : Introduction to Special Education, Allyn & Bacon, Boston.

UNIT 2: PERCEPTUAL

STRUCTURE

2.1 Introduction
2.2 Objectives
2.3 Physio-Medical Needs
2.4 Educational Needs
2.5 Social Rehabilitation Needs
2.6 Vocational Needs
2.7 Empowerment Needs
2.8 Unit Summary
2.9 Check Your Progress
2.10 Assignment/ Activity
2.11 Points for Discussion and Clarification
2.12 References

2.1 INTRODUCTION

Different disabilities like Visual Impairment, Hearing Impairment, Locomotor Impairment and Mentally Retardation create different needs. These will be discussed in greater detail in the relevant chapters. The purpose of this Unit is to give general understanding of the needs of all children with disabilities, so that the teacher and parent may have basic understanding of how to meet the needs at home, in the school and in the community.

2.2 OBJECTIVES

After studying this Unit, you should be able to

- understand the various needs of children with various disabilities.
- broadly understand how they can be educated and prepare for socio-economic independence.
- understand how children with disabilities would be empowered in the family so that they are not discriminated against.

2.3 PHYSIO-MEDICAL NEEDS

Many disabilities like visual impairment, locomotor impairment, cerebral palsy create condition of some physical dependence. These needs can be met partly by training in survival skills and partly by providing relevant aids and appliances.

But before training is imparted, it is necessary to consult a qualified medical professional so that, to the extent possible, the physical or medical conditions can be improved. For example, physiotherapy may assist people with locomotor disability and cerebral palsy to improve their movement. Eye and ear conditions may improve with surgery or medical treatment. These should be first met before starting on educational or training programmes so that optimum use is made of remaining capacity.

To illustrate, if the condition cannot be surgically or medically improved it may be possible to provide an optical or hearing aid to improve the functional ability of the child. Magnifiers may help a low vision child to read better or hearing aid may help a hearing impaired child in communicating better between peers and teachers.

2.4 EDUCATIONAL NEEDS

Experience over the last three centuries has convincingly demonstrated the ability of children with various disabilities to receive education either in special school or in regular schools with support services. The support services to be provided in a regular school may include the following:

- Removing architectural barriers, steps, narrow doors or providing special sitting arrangements.
- The assistance of teacher trained in special education.

- Providing reading material in accessible form; visually impaired children may acquire reading materials in Braille, recorded tapes, enlarged print; similarly, hearing impaired children may require to be communicated in sign language supported by training in speech.
- Providing the child with an appropriate technical aid; a blind child may need a braille state and an arithmetic frame; a hearing impaired child may need individual or group hearing aid; a physically impaired child may need a pair of crutches to walk. Further details could be seen in the relevant chapter.
- Adopting appropriate teaching strategies depending on the nature of disability and the level of intelligence of the child.

If these needs are met, at least in part, most children with disabilities can either be educated at all stages or atleast acquire functional academic skills.

2.5 SOCIAL REHABILITATION NEEDS

It is important to realise that disability is not a curse.. It may create some amount of dependency, but the condition may be relieved by training and provision of appropriate appliances. Moreover, as explained earlier, disability does not totally destroy the educational or productive potential of the child.

It is also important to realise that individual differences are an integral part of life. Disability should be regarded as one such individual difference. Everyone has a lack of some capacity. Some differences are visual and others are not.

2.6 VOCATIONAL NEEDS

The main purpose of education is preparation for life. This includes achieving economic independence. This cannot be done without obtaining proper education or professional training. Specific vocational choices will depend on the nature of the disability of a child, his attitude, interest, parent's wishes, acceptable training facilities, availability of trained teacher and other relevant faculties. But it is important to get gainful employment. It is as much needed by child with disability as everybody has.

2.7 EMPOWERMENT NEEDS

Depending upon the nature and extent of the disabilities of a child may need training and activities of daily living like toileting, eating, dressing, mobility

and speech etc. Appropriate training should be started with the help of qualified person. This will empower the child in the family as well as in the neighbour-hood. Dependence creates negative attitude. The best way to eliminate negative attitude is to empower the child to the maximum extent by using appropriate aids, giving proper education and training.

2.8 UNIT SUMMARY

The Human organism is composed of many systems like eyes, ears, arms, legs and spine. Damage to any one of them may create dependence on others; but this dependency can in part be relieved by either medical treatment or the provision of appropriate aids and appliances.

People with various impairments need special educational interventions that can be met by using special teaching techniques and technology. People with disabilities, as a rule, are not socially accepted. Such negative attitude arises from their ignorance of the potential of people with disabilities for productive endeavour. This negative attitude can be eradicated through proper intervention measures such as imparting of special education, appropriate vocational training and empowering people with disabilities.

2.9 CHECK YOUR PROGRESS

A. How can physical dependence be relieved ?

B. How will you educate a child with disability?

2.10 ASSIGNMENT / ACTIVITY

Identify two children with disabilities in your area and list their needs. Also suggest ways of meeting theses needs.

2.11 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

2.11.1 Points for Discussion

2.11.2 Points for Clarification

2.12 REFERENCES

1. R.S. Pandey and Lal Advani - Perspective in Disability and Rehabilitation – Vikas Publisher 1994.

UNIT 3: COGNITIVE

STRUCTURE

3.1 Introduction

3.2 Objectives

3.3 Intervention Measures

3.4 Preventive Measures, Early Intervention Strategies, Child Rights and Human Rights

- 3.4.1 Preventive Measures
- 3.4.2 Early Intervention Strategies
- 3.4.3 Child Rights and Human Rights

3.5 UN Declaration on the Rights of Disabled Person

3.6 Salamanca Declaration on Inclusion of Children with Disabilities

3.7 Persons with Disabilities Act 1995

3.8 Rehabilitation Council of India Act 1992 and its relevance to Education

3.9 National Trust Act 1999

3.10 Unit Summary

3.11 Check Your Progress

3.12 Assignment/ Activity

3.13 Points for Discussion and Clarifications

3.14 References

3.1 INTRODUCTION

For a long time people with disabilities have been deprived of basic human rights like an honorable place in the family, non-discrimination, education, appropriate vocational training and employment. This is not because they can't receive education or training; but it is largely because of negative attitude prevalent in the community. These negative attitudes are basically the product of perceiving disability as a threat. We often fail to realise that individual differences are an integral part of life. We need to emphasise the fact that people with disability can become as productive as the rest of us. Whether the disability, visible or invisible, mild, moderate or severe, the individual does retain quite a bit of potential for developing his remaining abilities to his own advantage and advantage of the community.

3.2 OBJECTIVES

After reading this Unit, you should be able to

- Understand that the disability is an integral part of life.
- Understand that the Persons with Disabilities can be an educationally and economically as productive and useful as anyone else.
- Convince the community that disability does not destroy all one's potential for receiving education and engaging in useful and remunerative work.
- Understand that the social interventions are essential to fulfill the basic needs of the disabled.
- become aware of the international charters and the national legislative frame work on the nights of the disabled.

3.3 INTERVENTION MEASURES

Recognition of fundamental rights of the disabled is implicit in Article 25 of *the Universal Declaration of Human Rights, 1948*, which says that everyone has the right to security in the event of disability. Section 22 of *the Vienna Declaration and Programme of Action* stipulates that special attention needs to be given to equal enjoyment of all human rights by disabled persons. Section 63 *ibid* provides that persons with disabilities should be guaranteed equal opportunity through the elimination of all socially determined barriers,

be they physical, financial, social or psychological, which exclude or restrict full participation in society.

Three initiatives were undertaken internationally to guarantee the rights of the disabled: (i) 1981 was declared as *the International Year of Disabled Person;* (b) the decade 1983-92 was declared as *the UN Decade of Disabled Persons*; (c) the ESCAP declared 1983 to 92 as an *Asia-Pacific Decade for the disabled.*

In India several social interventions in disability have been made since 1947. In 1977, the Ministry of Social Welfare reserved 3% vacancies in group C and D posts in government departments and public undertakings for the Visual Impairment, Hearing Impairment and Locomotor Impairment. As a result, on International Year, many NGOs launched new programmes for the education and rehabilitation.

3.4 PREVENTIVE MEASURE: EARLY INTERVENTION STRATEGIES, CHILD RIGHTS AND HUMAN RIGHTS

3.4.1 Preventive Measures

1. Provide adequate nutrition to pregnant and nursing mothers.
2. Do not give toxic drugs to the mother during pregnancy.
3. If possible before marriage, the blood compatibility of the husband and wife should be checked.
4. The pregnant mother should be protected against viral and other serious infections atleast during first three months of pregnancy.
5. Provide trained medical care during pregnancy.
6. Protect the neonate against such diseases as jaundice, brain fever, brain damage due to lack of oxygen, serious injuries to the brain etc.
7. Teach the child to maintain good personnel hygiene.
8. Teach the child to have good drinking water.
9. If the child complains of eye, ear or any other trouble, consult an appropriate medical specialist.
10. Closely watch the progress of the child at school.

3.4.2 EARLY INTERVENTION STRATEGIES

1. Consult a competent and relevant medical specialist in the case of suspicious of any physical sensory or intellectual deviation from normal development.
2. Immunise the child against Polio, TB, DPT and, if possible, Jaundice.
3. If a deviation is detected, the child should be seen by a competent Special Educator. The recommendations of the Special Educator should be followed.
4. A variety of educational options is available. One of these that suit the child should be adopted.
5. UN has been emphasising that the basic patterns of behavior are formed by the time the child is three years. Therefore, early stimulation should be given to the child on the advice of either special educator or an appropriate medical specialist. This will reduce the occurance of secondary disabilities. Experience shows that if speech stimulation to the hearing impaired child is provided from the early stage the chances of his/her developing good language are greatly increased.

3.4.3 Child Rights And Human Rights

The Convention on the Rights of the Child

'*The Convention on the Rights of the Child*'. the resolution No. A4/25, adopted by General Assembly on 20 November, 1989, was another step in the direction of recognizing human rights. The need to extend particular care to the child had been stated in *the Geneva Declaration of the Rights of the Child* in 1924 , *the Declaration of the Rights* adopted by the General Assembly on 20 November 1989 and recognized in *the Universal Declaration of Human Rights, the International Covenant on Civil & Political Rights* (Articles 23 & 24), in *the International Covenant on Economic, Social & Cultural Rights* (Article 10) and also in other declarations, the statutes and relevant instruments of significant agencies and organizations concerned with the welfare of children. Some of its articles relevant to disability are described below:

Article 2

States Parties shall respect and ensure the rights set forth in the present Convention to each child within their jurisdiction without discrimination of any kind, irrespective of the child's or his or her parent's or legal guardian's race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.

Article 23

1. States Parties recognize that a mentally or physically disabled child should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child's active participation in the community.

2. States Parties recognize the right of the disabled child to special care and shall encourage and ensure the extension, subject to available resources, to the eligible child and those responsible for his or her care, of assistance for which application is made and which is appropriate to the child's condition and to the circumstances of the parents or others caring for the child.

3. Recognizing the special needs of a disabled child, assistance extended in accordance with paragraph 2 of the present article shall be provided free of charge, whenever possible, taking into account the financial resources of the parents or others caring for the child, and shall be designed to ensure that the disabled child has effective access to and receives education, training, health care services, rehabilitation services, preparation for employment and recreation opportunities in a manner conducive to the child's achieving the fullest possible social integration and individual development, including his or her cultural and spiritual development.

4. States Parties shall promote, in the spirit of international cooperation, the exchange of appropriate information in the field of preventive health care and of medical, psychological and functional treatment of disabled children, including dissemination of and access to information concerning methods of rehabilitation, education and vocational services, with the aim of enabling States Parties to improve their capabilities and skills and to widen their experience in these areas. In this regard, particular account shall be taken of the needs of developing countries.

The conventions vide Article 43 and 44 ensured the evaluation of progress made by the State Parties in achieving the realization of the obligations undertaken in this convention. This was done through a Committee on the Rights of the Child. It was also urged that the State Parties will submit reports on the measures adopted by them.

3.5 UN DECLARATION ON THE RIGHTS OF DISABLED PERSONS

The UN General Assembly proclaimed in 1975 *the Declaration on the Rights of Disabled Persons* and called for national and international actions to ensure that it would be used as a common basis and frame of reference for the protection of these rights:

1. The term "disabled person" means any person unable to ensure by himself of herself, wholly or partly, the necessities of a normal individual and/or social life, as a result of a deficiency, either congenital or not, I his or her physical or mental capabilities.

2. Disabled persons shall enjoy all the rights set forth in this Declaration. Theses rights shall be granted to all disabled persons without any exception whatsoever and without distinction or discrimination on the basis of race, colour, sex, language, religion, political or other opinion, national or social origin, state of wealth, birth or any other situation applying either to the disabled person himself or herself or his or her family.

3. Disabled persons have the inherent right to respect for their human dignity. Disabled persons, whatever the origin, nature and seriousness of their handicaps and disabilities, have the same fundamental rights as their fellow-citizens of the same age, which implies first and foremost the right to enjoy a decent life, as normal and full as possible.

4. Disabled persons have the same civil and political rights as other human beings, paragraph 7 of the Declaration on the Right of Mentally Retarded Persons applies to any possible limitation or suppression of those rights for mentally disabled persons.

5. Disabled persons are entitled to the measures designed to enable them to become as self-reliant as possible.

6. Disabled persons have the right to medical psychological and functional treatment, including prosthetic and orthetic appliances, to medical and social rehabilitation, education, vocational training and rehabilitation, aid, counselling, placement services and other services which will enable them to develop their capabilities and skills to the maximum and will hasten the process of their social integration or reintegration.

7. Disabled persons have the right to economic and social security and to a decent level of living. They have the right, according to their capabilities, to secure and retain employment or to engage in a useful, productive and remunerative occupation and to join trade unions.

8. Disabled persons are entitled to have their special needs taken into consideration at all stages of economic and social planning.

9. Disabled persons have the right to live with their families or with foster parents and to participate in all social, creative or recreational activities. No disabled person shall be subjected, as far as his or her residence is concerned, to differential treatment other than that required by him or her condition or by the improvement which he or she may derive therefrom. If the stay of a disabled person in a specialised establishment is indispensable, the environment and living conditions therein shall be as close as possible to those of the normal life of a person of his or her age.

10. Disabled person shall be protected against all exploitation, all regulations and all treatment of a discriminatory, abusive or degrading nature.

11. Disabled persons shall be able to avail themselves of qualified legal and when such aid proves indispensable for the protection of their persons and poverty. If judicial proceedings are instituted against them, the legal procedure applied shall take their physical and mental condition fully into account.

12. Organisations of disabled persons may be usefully consulted in all matters regarding the rights of disabled persons.

13. Disabled persons, their families and communities shall be fully informed, by all appropriate means, of the right contained in this Declaration.

Realizing the need to initiate action at international and national level to guarantee these rights, two major initiatives were undertaken by the UN. These were the UN Decade for Disabled Persons (1983-92) and the Asian & Pacific Decade of the Disabled (1993-2002).

3.6 THE SALAMANCA STATEMENT AND FRAMEWORK FOR ACTION ON SPECIAL NEEDS EDUCATION (1994)

The Salamanca Statement and the Framework of Action was adopted by the World Conference on Special Needs Education in Salamanca, Spain in 1994 jointly organized by Government of Spain and UNESCO. Five regional seminars were held prior to this that prepared the basic ground for this conference. Representatives of 92 Government and 25 international organizations participated in this World Conference on Special Needs Education. The framework stems from the messages of the Jometien World Declaration on Education For All (1990) and was reaffirmed in the Dakar Framework of Action (2000).

The statement begins with a commitment to education for all. The major approach reiterated in the conference was inclusive education, which is highlighted by the following statements:

"Schools should accommodate all children regardless of their physical, intellectual, emotional, social, linguistic or other conditions."

"Regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building and inclusive society and achieving education for all; moreover, they provide an effective education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system."

The World Conference went on to call upon all governments to:

- Give the 'highest policy and budgetary priority' to improve education services so that all children could be included, regardless of difference or difficulties.
- 'Adopt as a matter of law or policy the principle of inclusive education' and enroll all children in ordinary schools unless there were compelling reasons for doing otherwise.
- Develop demonstration projects and encourage exchanges with countries with inclusive schools.

- Ensure that organizations of disabled people, along with parents and community bodies, are involved in planning decision-making.
- Put greater effort into pre-school strategies as well as vocational aspects of inclusive education.
- Ensure that both initial and in-service teacher training address the provision of inclusive education.

The Statement also calls on the international community to endorse the approach of inclusive schooling and to support the development of special needs education as an integral part of all education programmes. In particular it calls on UNESCO, UNICEF, UNDP and the World Bank for this endorsement.

It asks for the United Nations and its specialized agencies to 'strengthen their inputs for technical co-operation' and improve their networking for more efficient support to integrated special needs provision. Non-governmental organizations in this statement are asked to strengthen their collaboration with official national bodies and become more involved in all aspects of inclusive education.

3.7 PERSONS WITH DISABILITIES (EQUAL OPPORTUNITIES PROTECTION OF RIGHT AND FULL PARTICIAPATION) ACT 1995

Purpose of the Act

This Act was passed by the Parliament on Dec. 12, 1995 and notified on Feb. 7, 1996. The Act elaborated the responsibility of the Central and State Government, local bodies to provide services, facilities and equal opportunities to people with disabilities for participating as productive citizens of the country. The Act enlists the rights and facilities persons with disabilities would be entitled to and which are enforceable.

This is an important landmark. The Act provides for both preventive and promotional aspects of rehabilitation.

Chapter I – Preliminary

The Disabilities covered in the Act are : - blindness, low vision, leprosycured, hearing impairment, locomotor disability, mental retardation and mental illness.

A person with disability has to be certified by a medical authority that he or she is suffering from not less than 40% of the disability.

Chapter II – The Central Co-Ordination Committee An Executive Committee

1. The Central Government shall constitute a Central Co-ordination Committee (CCC), headed by the Minister of Social Justice and Empowerment.

The CCC consists of 39 persons, 24 are official members and 15 nominated by the Government, will represent NGOs and associations concerned with disabilities. At least one woman and one person from SC or ST is to be included. The term of all the members will be for three years.

The important functions of the Central Co-ordination Committee are :

a) Review and coordinate the activities of Government and NGOs.

b) Development of National Policy.

c) Advice the Central Government on the Formulation of policies, programmes, legislation and projects.

d) Advocacy with national and international organisations with a view to provide for schemes and projects for the disabled in the national and international plans and programmes.

e) Review donor funding policies from the perspective of their impact on persons with disabilities.

f) To ensure barrier-free environment.

g) Monitor and evaluate the impact of policies and programmes.

The Central Co-ordination Committee will be bound by such directions in writing as the Central Government may give it.

The Committee shall meet once every six months.

The Central Executive Committee (CEC)

The Central Executive Committee shall carry out the decisions of the Central Co-ordination Committee. The Executive Committee shall meet every three months. The CEC will consist of 23 persons, including five persons concerned with disability.

Chapter III – The State Coordination and Executive Committee

Each state shall appoint a State Coordination Committee, consisting of 23 official and five non-official members.

The State Executive Committee will have 13 official and 5 non-official members.

The terms and conditions and functions of the State Committee shall be the same as those of the Central Committees.

Chapter IV – Prevention And Early Detection Of Disabilities

Within the limits of economic capacity and development, the concerned authorities, with a view to preventing the occurrence of disabilities, shall

a) Undertake or cause to be undertaken surveys, investigations and research concerning the cause of occurrence of disabilities.

b) Promote various methods of preventing disabilities.

c) Screen all children at least once in a year for identifying at-risk cases.

d) Provide facility to trained staff at the primary health centres.

e) Sponsor or caused to be sponsored, awareness campaigns and disseminates information for general hygiene, health and sanitation.

f) Take measures for prenatal and postnatal care of mother and child.

g) Educate the public through the pre-schools, schools, primary health centres, village level workers and anganwadi workers.

h) Create awareness amongst masses through TV, radio and other mass media on the causes of disabilities and its prevention.

Chapter V – Education

The Act envisages :

Every child with disability should have access to free and adequate education till the age of 18. Students with disabilities should be integrated into normal schools. Special schools should be established in Govt. and Private Sectors and equipped with vocational Training facilities.

Introduce schemes for non-formal education of children who have discontinued their education after 5th class. Conduct special part time classes for functional literacy in the age group of 16 and above and provide

each child, free of cost, special books and equipment needed for his or her education, including education in open schools and universities.

Government shall set up teachers training institutions to run special schools and integrated schools for children with disabilities by trained teachers.

The Government shall provide to such children transport facilities, remove architectural barriers from educational institutions, imparting vocational training and education, provide books, uniform and others materials to children attending schools, grant scholarships and restructure curriculum for the benefit of students with disabilities.

Government shall promote research for assistive devices to give a child with disability equal opportunities in education.

Government shall present a comprehensive education schemes including transportation, barrier-free environment and grievances redressal forum.

Chapter VI – Employment

The Government shall reserve at least 3% posts in Govt. jobs for persons with disabilities as follows : -

1.	Blindness or low vision	1%
2.	Hearing Impairment	1%
3.	Locomotor Disability or Cerebral Palsy	!%

If in any year, the vacancy cannot be filled then it would be carried to next year, thereafter, people with other disabilities can be given employment and finally, if there is no suitable disabled person, then only a person other than a person with disability can be given employment.

Special Employment Exchanges would be set up.

Appropriate Government shall formulate schemes for ensuring employment of persons with disabilities including training.

All Government educational institutions and those receiving aid from the Government shall reserve not less than 3% seats for persons with disabilities. Not less than 3% of all poverty alleviation schemes shall be reserved for persons with disabilities. Government shall within their economic capacities frame scheme to give incentives to employers in public and private sector to ensure that atleast 5 % of their work force is composed of persons with disabilities.

Chapter VII – Affirmative Action

The Government shall provide aids and appliances to persons with disabilities and shall provide land at concessional rates to persons with disabilities for housing, business, special recreation centres, special schools, research centres and factories by enterpreneurs with disabilities.

Chapter VIII – Non–Discrimination

Govt. transport shall take special measures to adapt their facilities and amenities so to permit easy access to persons with disabilities.

All authorities shall within their capacity, provide auditory signals along red lights, crossing. Constructions shall be designed for wheel chair users and engraving or zebra crossing for blind people. Buildings and toilets shall be constructed with ramps and other features.

No employer shall terminate an employee who acquires a disability during service. No employer shall also deny promotion to an employee on grounds of disability.

Chapter IX – Research And Manpower Development

Government shall promote and sponsor research to prevent disability, rehabilitate the disabled, develop assistive device identify jobs and develop pro-disabled structural features in factories and offices.

Chapter X – Recognition Of Institutions For Persons With Disabilities

Within six months of this Act being passed, persons running establishments or institutions for persons with disabilities shall apply under this Act, for a certificate of registration from a competent authority of this State Government.

Chapter XI – Institution For Persons With Severe Disabilities

Persons having 80% or more disabilities are considered persons with severe disabilities. The Government shall establish and maintain institutions for them. Where private institutions, meting Government standards exists, they shall be recognised for the purpose.

Chapter XII – The Chief Commissioner And Commissioners For Persons With Disabilities

The Central Government shall appoint a Chief Commissioner for Persons with Disabilities for the implementation of this Act. The Chief Commissioner shall coordinate the work of the Commissioners and monitor the utilization of funds distributed by the Central Government.

Commissioners shall have similar responsibilities at the State level. The Chief Commissioner and the Commissioners shall take up any complaint or sumoto regarding deprivation of rights of persons with disabilities and non-implementation of laws, rules, orders, instructions issued by the Government or local authorities.

The Chief Commissioner and the Commissioners have the same powers as are vested in a court under the Code of Civil procedure, 1908 for summoning and enforcing attendance of witnesses, receiving evidence on affidavits etc.

The Chief Commissioner shall prepare an annual report to be layed in Parliament. The Commissioners shall submit an annual report to the respective State Legislature.

Chapter XIII – Social Security

The Government shall, within their economic limits, undertake rehabilitation of all persons with disabilities and grant financial assistance to NGOs undertaking rehabilitation programmes for persons with disabilities. Where possible, give unemployment allowance to persons with disabilities registered with the

3.8 REHABILITATION COUNCIL OF INDIA ACT 1992 AND ITS RELEVANCE TO EDUCATION

This Act was passed in 1992 for the purpose of constituting the Rehabilitation Council of India, for regulating the training of Rehabilitation professionals and for maintenance of a Central Rehabilitation register. It was amended by Rehabilitation Council of India (Amendment) Act, 2000 to provide for monitoring the training of rehabilitation professionals and personnel, promoting research in rehabilitation and special education as additional objectives of the Council.

FUNCTIONS OF THE COUNCIL

RECOGNITION OF QUALIFICATIONS FROM INDIAN UNIVERSITIES

RECOGNITION OF OUTSIDE QUALIFICATIONS

Council is empowered with the statutory responsibility for

- Enrolment of qualified Rehabilitation Professionals
- Collection of relevant information
- Appointment of Inspectors
- Appointment of Visitors at examinations
- Withdrawal of recognition
- **Prescribing minimum standards of education**
- Registration of Rehabilitation Professionals
- Registration of Vocational instructors and personnel working on disability in the Register.
- Recognition of Man-power development Centres
- Privilege of persons registered on the Register
- Professional misconduct and removal from Register
- **Appeals against order of Removal from Register**
- Furnishing information
- Prosecution of Offenders

Rights of The Disabled That Emerge From The Rehabilitation Council Of India Act, 1992

1. To have the right to be served by trained and qualified rehabilitation professionals whose names are borne on the Register maintained by the Council.
2. To have the guarantee of maintenance of minimum standards of education required for recognition of rehabilitation qualification by Universities and other institutions in India.
3. To have the guarantee of maintenance of standards of professional conduct and etiquette by rehabilitation professionals through the provision of penalty of disciplinary action and removal from the Register of the Council.

4. To have the guarantee of regulation of the profession of rehabilitation professionals by a statutory council under the control of the Central Government and within the bounds prescribed by the state.

3.9 NATIONAL TRUST ACT (FOR THE WELFARE OF PERSONS WITH AUTISM, CEREBRAL PALSY, MENTAL RETARDATION AND MULTIPLE DISABILITIES)ACT 1999

Introduction

The National Trust is a statutory body under the Ministry of Social Justice and Empowerment, Government of India , setup under the "National Trust for the welfare of persons with Autism, Cerebral Palsy, Mental Retardation And Multiple Disabilities" Act (Act 44 of 1999)

OBJECTIVES

- To enable and empower persons with disability to live as independently and as fully as possible within and as close to the community to which they
- To strengthen facilities to provide support to persons with disability.
- To extend support to registered organisations to provide need-based services during the period of crisis in the family of persons with disability.
- To deal with problems of persons with disability who do not have family support.
- To promote measures for the care and protection of persons with disability in the event of death of their parent or guardian;
- to evolve procedure for the appointment of guardians and trustees for persons with disability requiring such protection.
- To facilitate the realization of equal opportunities, protection of rights and full participation of persons with disability; and
- To do any other act which is incident to the aforesaid objects.

Thrust Areas

- **Campaign for effecting positive attitudinal change**
- Programme which foster inclusion and independence by

- Creating barrier – free environment
- Developing skills.
- Promoting self-help groups.

- Training and Support of Care givers and community members.
- Formation of local level committees to grant approval for guardianship.
- Development of sustainable models for Day Care, Home Based, Respite and Residential Care.
- Research in the four areas of Disabilities.
- Advocacy for the rights of persons with four disabilities.
- Programme for persons with severe disabilities and women with disabilities.

Resource Mobilization

- **One-time contribution from Central Government**
- Donations, Gifts, Grants.
- Benefactions, bequests or transfers from individuals and organisations.
- Funds in any other manner or from any other source.

Programmes

- Registration of Associations (of Parents and Non-Government Organisations).
- Formation of Local Level Committees.
- Appointment of Guardians.
- Support for a range of services including residential
- Home Visiting/ Care Givers Programme.
- Development of Awareness and Training Material
- Community Participation Programme for Reach and Relief.
- Such other programme which promote the objectives of the Trust.

Coordinating and Implementing Agencies

- **National Trust**
- District level local committees.

- Registered Parents Associations and Non-Governmental Organisations.

3.10 UNIT SUMMARY

In this Unit various strategies for preventing disabilities have been described. There is close association between Poverty and Disability, giving better nutrition to the child and pregnant mother and providing process of birth would go a long way towards preventing a child with disability.

The UN General Assembly adopted a charter of rights of the disabled in 1975.

The Indian Parliament provided the legislative framework for protecting the rights of people with disabilities and giving them equality of opportunity by enacting the following three Acts::

1. ***RCI Act 1992***: The Act guarantees right of the child to be taught by a qualified teacher.
2. ***Persons with Disabilities Act 1995.*** The Act has the following provisions:.
   - Assures that every child with disability shall have access to education until 18 years of age.
   - Every child with disability shall be placed in the most appropriate educational environment.
   - Reserves 3% seats for children with disability in every aided school in the country.
   - Establishes grievance redressal machinery at the central and state levels.
   - Earmarked 3% vacancies for people with disabilities in identified post in all classes of employment under the central and State Govt. and Public Sector Undertaking.
3. ***The National Trust Act 1999.*** It provides for support to people with MR, CP, Autism and Multiple disabilities in their own homes or appointment of guardians after there is no one to care for them. In special cases care homes can also be established.

3.11 CHECK YOUR PROGRESS

1. What are the main features of Persons with Disability Act 1995.
2. Describe briefly the functions of RCI.
3. Describe briefly the objects of National Trust Act 1999.

3.12 ASSIGNMENT /ACTIVITY

Identify three children with disabilities in your area indicating how they can be helped by Law.

3.13 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

Points for Discussion

3.13.2 Points for Clarification

3.14 REFERENCES :

1. Ray, D. (1987). Human Rights and Education: an overview. In Tarrow, N.B. (Ed.) Human Rights and Education (Vol. 3) Paragons Press.
2. Rehabilitation Council of India Act 1992,
3. Person with Disability Act 1995.
4. National Trust Act 1999.

UNIT 4: SOCIAL-EMOTIONAL

STRUCTURE

4.1 Introduction

4.2 Objectives

4.3 Concessions offered by the Central Government

4.3.1 Travel Concession

4.3.2 Tax Concession

4.3.3 Other Tax Concession

4.4 Central Government Scheme for Rehabilitation

4.4.1 Reservation in Jobs

4.4.2 Educational Assistant Scheme

4.4.3 Programme of Integrated Education

4.4.5 Other Benefit

4.5 Unit Summary

4.6 Check Your Progress

4.7 Assignment/ Activity

4.8 Points for Discussion/ Clarification

4.9 References

4.1 INTRODUCTION

Every disability imposes on the individual extra expenditure. For example, a blind person may need an escort and a person with moving problems may need someone to move the wheel chair. To partly compensate for this extra financial burden, the Central and State Governments have announced number of concessions to be given to people with disabilities especially in taxes and travels as well as in other benefits.

4.2 OBJECTIVES

After studying this Unit, you will be able to acquaint yourself with the following:

- Reservation in jobs for the disabled.

- Economic assistance for self-employment.
- Educational Facilities/ Scholarships
- Travel Concessions
- Tax concessions

4.3 CONCESSIONS OFFERED BY THE CENTRAL GOVERNMENT

4.3.1 Travel Concessions

1. By Road

Many of the State Governments offer either full concessions or 50 % concession for Travelling in States run buses.

2. By Rail

The Ministry of Railways allows the disabled persons travelling with an escort, travel by rail the concessional fare up to 75 % in the first, second and sleeper classes. The concession is 50% for the season ticket-first and second class.

3. By Air

The Indian Airlines Corporation does not give concession to Orthopaedically Handicapped persons, as given to the blind persons. But, the Orthopaedically Handicapped persons are allowed to carry a pair of crutches/ braces or any other prosthetic devices free of charge.

4. Others

Disabled employees used to get Rs. 100 as conveyance allowance per month. The limbs Pay Commission has revised this scheme. Now persons suffering from disability affecting their lower get transport allowance, that is double of the allowance normally entitled to them in accordance with their pay scale.

4.3.2 Tax Concessions

1. Income Tax Concessions

Section 80 DD of the Income Tax Act provides for a deduction I respect of the expenditure incurred by an individual on the medical treatment (including nursing), training and rehabilitation etc. of handicapped dependents. The limit of deduction is Rs. 15,000/-.

Under the Section 80 V, the parent of a disabled minor is allowed to claim a deduction upto Rs. 20,000/-.

Section 88 B provides for an additional rebate from net tax payable by a resident individual, who has attained the age of 65 years, to 20% in case where the gross total income does not exceed Rs. 75,000/-.

A deduction of Rs. 20,000/- from the taxable income of the parents or guardians of handicapped children has been allowed provided this amount is deposited in any approved scheme of LIC, UTI etc.

Deductions from the total income of the handicapped persons under Section 80 U is Rs. 40,000/-

2. Custom Duty Concessions

The Central Government exempts certain pre-identified categories of goods when imported into India by a locomotor handicapped or disabled person for his personal use, from the whole of the duty of customs and the additional duty subject to the condition that the importer produces to the Assistant Collector of Customs, at the time of importation, a certificte from the Civil Surgeon of the District, Medical Officer or the Administrative Medical Officer or the Director of Health Services of the concerned State or a Specialist in the concerned speciality attached to Government Hospital or a recognised medical college to the effect that the importer suffers from the particular handicap or disability and that the imported goods is respect of which the exemptions claimed are essential to overcome the said handicap or disability. The list includes:

a) Orthopedic appliances falling under heading 90.21 of the first schedule to the Customs Tariff Act.

b) Wheel Chairs falling under heading No. 87.13 of the said first schedule.

4.3.3 Other Tax Concessions

Physically handicapped persons owning a motorised vehicle get exemption from paying road-tax.

4.4 CENTRAL GOVT. SCHEMES FOR REHABILITATION

4.4.1 Reservations in Jobs

Since 1977, the Central Government has reserved three percent of the vacancies in lower level posts. This reservation is not against all vacancies, but is limited to posts which the handicapped can satisfactorily manage. Similar reservations in favor of the handicapped have been made by several State Government and Union Territories. This reservation policy has been genuinely welcomed by the handicapped population. The Central Government has also set up Special Employment Exchange to exclusively register and place handicapped job-seekers.

It is generally found that orthopaedically handicapped persons can handle a wide variety of jobs in most organisations. Locomotor disabled persons do not suffer from any learning or sensory difficulty and could, therefore, handle most jobs, Field jobs, which require a high degree of mobility, would however, present difficulties for them. Locomotor disabled persons should not generally be excluded from any job and should be considered as eligible for holding all jobs other than those types which are outside their physical capabilities.

Most of the jobs whether technical or non-technical can be handled by the locomotor handicapped persons depending upon the nature of the jobs and the degree of the disability. Most of the undertakings/ banks and representatives of the various departments are of view that persons with loss of not more that one upper limb could handle a large number of jobs both in technical and non-technical areas while persons with disabilities lower extremities could handle jobs in which a high degree of mobility is not needed.

Jobs in Finance, Accounts, Hindi(Translation), Law and Personnel Departments can handled by the orthopaedically handicapped.

Proper placement of the handicapped persons is not possible without identifying the suitable for employment of handicapped persons.

4% vacancies are reserved for the orthopaedically handicapped persons in group 'C' and 'D' posts in Central Services and in comparable posts in government of the Public Sector Undertakings. Priority is accorded for submission for candidates by employment exchanges against Central Government Vacancies for Group 'C' and 'D' posts.

Where a sufficient number of person belonging to a given category of the physically handicapped is not available, the unfilled vacancies will be carried over for a period up to three recruitment years.

4.4.2 Educational Assistance Schemes

Educational Facilities/ Scholarships

Ministry of Welfare

The scheme covers scholarships for general education from Class-IX onwards and for technical training at certificate, diploma and degree levels.

Department of Social Welfare

State Governments also provide scholarships to pursue education from Class I to Class VIII.

4.4.3 Programmes of Integrated Education

The Programme of Integrated Education by placing handicapped children in ordinary schools provides for special coaching classes qualified and specially trained teachers for every type of handicapped child. Assessment at the time of admission and later at regular intervals is major feature of this programme.

The Central Government has taken the responsibility of meeting 100% expenditure.

Fellowships

The University Grants Commission has reserved 1% of the fellowships allocated to the University for the handicapped.

Admission into ITIs

In Industrial Training Institutes, State Government have reserved 3% seats for the handicapped under the Craftsmen Training Programme at the Centre/State level have been instructed to identify trades from among the existing 136 trades designated under the Apprentices Act, 1961 considered suitable for Apprentices. Training of the physically handicapped and to place the maximum number of handicapped apprentices in the establishment concerned so as to achieve to overall target of 3% taking all the establishments in the public and private sectors together.

Others

Handicapped persons are exempted from payment of application and examination fee as prescribed by UPSC/SSC.

Hostel facilities for physically handicapped students are provided by certain States and Union Territories.

4.4.4 Other Benefits

1. Assistance to Disabled Persons for Purchase/ Fitting of Aids/Appliances

The main objective of the scheme is to assist the needy physically handicapped persons in procuring durable, sophisticated and scientifically manufactured aids and appliances that promote their physical, social and psychological rehabilitation. The scheme is implemented through centres run by institutions registered under companies Act, registered Societies, Trusts or any other institutions recognised by the Ministry of Welfare for the purpose.

2. Allotment of Accommodation on Priority Basis

Ad-hoc allotment of general pool residential accommodation to the physically handicapped employees is allowed on request after recommendation by the special recommendation committee and on approval of the Ministry of Urban Affairs and Employment.

4.5 UNIT SUMMARY

In view of the fact that disability is closely associated with poverty. Central and State Govt. have granted concessions to persons with disabilities in travel, taxes an scholarship.

4.6 CHECK YOUR PROGRESS

1. Describe briefly travel concession given to the disabled by Central Govt.

4.7 ASSIGNMENT/ ACTIVITY

Identify five children in your area who can benefit from various concessions of the Central and State Govt. indicating how they can benefit.

4.8 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the unit you may like to have further discussion on some points and clarification on other. Note down those points below:

4.8.1 Points for Discussion

4.8.2 Points for Clarification

4.9 REFERENCES

1. Government of India , Handbook on Disability Rehabilitation. New Delhi : National Information Centre on Disability Rehabilitation, Ministry of Social Justice and Empowerment.

2. NCPED and NAB (1998) Role of NGOs vis-à-vis the employment scenario in India with reference to disabilities, New Delhi.

3. Respective State Government – Department of Welfare compilation of benefits and concessions.

UNIT 5: LANGUAGE

STRUCTURE

5.1 Introduction

5.2 Objectives

5.3 Community Mapping

5.4 Mobilising Community Resources Including the Panchayat at various levels.

5.5 Formation of self-help mutual aid groups of families to promote education of children with disabilities.

5.6 Unit Summary

5.7 Check Your Progress

5.8 Assignment

5.9 Points For Discussion And Clarification

5.9 Reference

5.1 INTRODUCTION

The purpose of educating a child with a disability is to prepare him for full participation in community life. Therefore, it is of the greatest importance that the community should from the very start be involved in the education of children with disabilities in their neighborhood. This will ensure better acceptance of disability and potential of children with disability for education, employment and social activities.

5.2 OBJECTIVES

After reading this unit you will bale to

- understand the process of community involvement
- adopt the methods suggested in this unit in your own negihbourhood

- Even if you are a teacher, you can in your spare time be the educate of the disabled in your community.

And this unit will suggest ways how to do so.

5.3 COMMUNITY MAPPING

This means preparing a list of all those resources in the community, which can help the education of children with disabilities. To illustrate you can ask, which regular schools in your community are prepared to admit children with disabilities and what support services they can provide. You can talk to peers and find out whether they will be able and willing to escort or help in either ways a disabled peer.

5.4 MOBILISING COMMUNITY RESOURCES

Community resources can be mobilised to promote the education of children with disabilities. For example, if a Resource Teacher is needed, you may ask the Panchayat, whether they will be able to pay his/her salary. Similarly, if some equipment is needed, the local Panchayat or the Block Development Officer may be able to pay or get through convergence some aids and appliances. You amy also be able to locate special school or an alternative school to which a child with a disability can go. For this purpose, you may have to contact the District Education or Social Welfare Officer, who can guide you on available resources. Some villages have appointed a Village Education Committee. Please find out, whether such a committee exits in you village. If so what help they can give.

5.5 FORMATION OF SELF-HELP GROUPS

In urban areas, to minimize the burden of the transportation difficulties, car sharing is a common phenomenon. Similarly group of parents can get together and help each other in some of the following tasks:

- **getting admission for their disabled wards in a neighboring school.**
- **taking turns to take a few children with disability to school every day and bringing them back.**
- **organising evening Coaches.**

- **organising appropriate recreational activities.**

5.6 UNIT SUMMARY

Community Mapping **means preparing a list of all those resources in the community, which can help the education of children with disabilities.**

Community resources **can be mobilised to promote the education of children with disabilities.**

Formation of Self-Help Group **can minimizse burden, bring relief, will educate children with disabilities.**

5.7 CHECK YOUR PROGRESS

1. **Discuss briefly how you will involve community in the education of children with disabilities.**
2. **How will you undertake community mapping.**
3. **What steps will you take to form mutual Self Help Group.**
4. **What work will you assign to these group .**
5. **How will you ensure that the Groups continue and do not break up.**

5.8 ASSIGNMENT

Write down briefly all the steps you will take to identity children with disabilities in a rural area and what steps will you take to fully involve the local community.

5.9 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

5.9.1 Points for Discussion

_____

_____

5.9.2 Points for Clarification

5.10 REFERENCES

Perspective in Disability in rehabilitative R.S. Pandey and Lal Advani 1994, Vikas Publisher, Disabled village children.

BLOCK 5: ASSESSMENT OF CURRICULAR AREAS

UNIT 1: READINESS SKILLS

STRUCTURE

1.1. Introduction
1.2. Objective
1.3. Intelligence
1.4. Aptitude
1.5. Teacher Attitude
1.6. Peer Attitude
1.7. Socio-economic environment
1.8. Unit Summary
1.9. Check Your Progress
1.10. Assignment
1.11. Points for Discussion and Clarification
1.12 References/Further Readings

1.1 INTRODUCTION

This chapter will provide a broad overview of the factors affecting learning. Nature and severely of the disability of the child may limit the child's ability to learn in the ordinary way. He may need accessible reading material, special aids and appliances and motivation to optimise his learning. This Unit will provide a broad overview of important factors influencing learning.

1.2 OBJECTIVES

After studying this Unit, you will be able to:

- understand better the factors that profoundly influence the learning process;
- appreciate individual differences between children;

- identity the strength and weakness of every child and devise special techniques or teaching learning materials to enhance and enrich in learning process.

1.3 INTELLIGENCE

Intelligence is a global phenomenon closely associated with enriched learning adaption to the environment and observing what is taught. Memory may be a part of intelligence, it includes retention processing of information and recall. All these processes are indispensable for schoolwork as well as life in the community.

The expression of intelligence may be to some extent hampered by various disabilities. The modes of adaptation in learning may also vary. A child who has the necessary intelligence can easily adapt himself to the environment and to the method of teaching of the teacher. The intelligent child not only understand what has been taught but is also motivated, interested and get joy in the learning process.

Experiences shown that joyful learning is the best form of learning. An intelligent teacher may adopt child centered teaching approaches. He may also use peer tutoring, group teaching, cooperative teaching, and other newer methods of teaching. The use of these methods will not only enhance the motivation of the children but will also encourage them to engage in self-discovery.

1.4 APTITUDE

Aptitude is the inclination or interest of a child in a particular area. Moreover, most children are oriented to best learning through vision, through hearing or though touch. It is necessary for a good teacher to identify the specific orientation of each child and design TLM and his total presentation to suit the orientation of various children. This orientation may be particularly influenced by the nature, severity and type of the disability of the child. For example, blind child can not be visually oriented. Although to some extent this may be possible for a low vision child.

Similarly, a child with rigid musscles or with involuntary movement and owing to brain damage may find it very difficult to use touch as a means of learning. Therefore, the teaching strategies, to some extent, be influenced by the nature of disability of the child. Further many children may be interested in acquiring academic skills. Other may be more interested in doing manual work. Moreover, even in academic area some children may have a preference for learning languages while others may be good in maths or social studies. The teacher will need to bear in mind the special

attitude, interest and preferences of every child and adapt teaching methods which can meet the need of his/her students.

1.5 TEACHER ATTITUDE

A classroom having children with disabilities calls for considerable innovativeness on the part of the teacher. A teacher with a positive attitude towards students can adapt better than one with indifferent or negative attitude. Therefore, a teacher must learn to adopt a very positive attitudes towards his/her students. Motivation is a strong factor in shaping attitude. Motivated teacher is flexible and adaptable. Unmotivated teacher may not be able to be innovative and adaptable.

In a regular classroom, where there are only a few children with disabilities the teacher needs to be very positive towards them. He/she must recognise the latent potential of every child and learn skills of activating that potential.

How can this be done. This can be done through appropriate training. A teacher of visually impaired children may have to acquire at least rudimentary knowledge of braille and use of magnifies as well as proper use of various mathematical devices. Similarly, a teacher of Cerebral Palsy (brain damage) children may have to learn a few things about speech therapy. The facilitating skills needed by a teacher will depend on the nature and severity of the disability of his pupils.

1.6 PEER ATTITUDE

Society believes that children with disability can not study or play with ordinary children. This attitude has held so long that it has become a part of the conditioned behaviour of many children. therefore, peers are not always inclined to accept children with disabilities as equal. Many myths and misconceptions prevail about disability. Some believe that disability may be infectious. Other may believe that the behaviour patterns of children with disabilities should not be imitated. Still others may think that peers with disabilities can not engage enjoyable play activities.

It is a duty of an enlightened teacher to try to eradicate such negative attitude. Children are usually prone to modeling. Therefore, a teacher should provide an ideal role model. If a teacher adopts positive attitude, the peers will automatically learn and imitate the teacher's attitude.

No specific efforts will be needed. But it will be an asset, if a teacher gave a few examples of success of students with disabilities having academic achievement to their credit. Peer tutoring have now been well recognised as the good teaching practice. This can not be done without peers

interacting warmly and reacting constructively to their peers with disability. Only one who accepts disability as a normal variation in life can help children with disabilities. Negative attitudes may hamper cooperation.

1.7 SOCIO-ECONOMIC ENVIRONMENT

The Socio-economic environment of the child at school, at home and in the community is an important determinant of his living patterns, his aptitudes, his abilities, his strength and weakness. Academic achievement may, for example, be closely associated with socio-economic status of the parents. If a child with disabilities is a first generation bearer, he may encounter special problems acquiring academic skills. In the absence of adequate motivation at home his strength and abilities may go unrecognized or un-reinforced. The more a child's achievements are positively reinforced, the more they are likely to sharpen. This may be difficult for parents who have never been to school. All children need parental approval. This may only be grudgingly given by parents who have themselves never acquired academic skills.

Parents who are engaged in mechanical work may unconsciously transmit these skills to their children. For example, quite often, the son of a carpenter may want to become a carpenter. A son of a farmer may aspire to be perhaps a better farmer. The son of a shopkeeper may be interested only in making money. Son of a motor car driver may want to become a bus driver.

Many girls even after they acquire academic skills wish to become housewives because their mothers and grand mothers have done so. Thus the kind of nurture a child gets may profoundly influence his/her aptitudes and aspirations. The situation will be somewhat more complicated if the child has a significant disability. Vocation choices may be somewhat limited. Careful matching of the children's abilities and available occupations may need to be done by trained teacher to ensure that every child with a disability is prepared for congenial occupation.

1.8 UNIT SUMMARY

The learning process of a child with disabilities is influenced by a variety of factors. These factors include teacher attitudes, peer attitudes, the child's own aptitudes and the socio –economic environment in which the child is placed.

The skill of the teacher may facilitate or obstruct learning. Advances in modern technology have brought forth a crop of devices which can enhance the learning of the child with disabilities. The teacher and the child must

both be acquainted with utilisation of modern technology and locally prepared teaching learning materials.

1.9 CHECK YOUR PROGRESS

1. Describe briefly the main factors influencing the learning of a child with disabilities. Please read the following statement and choose the correct answer.

(i) Visually Impaired Child can not go to regular school

(ii) Can go to a regular school, if supporting services are provided

(iii) He/She can only go to open school.

2. An attitude is a :
   - (i) A consistent reaction
   - (ii) Inconsistent reaction.
   - (ii) No reaction at all.

3. Learning depends on
   - (i) Intelligence
   - (ii) Parental Attitude
   - (iii) Peer Attitude

1.10 ASSIGNMENT

Give brief case history of a child with a disability who followed his father in choosing his occupation.

1.11 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

1.11.1 Points for Discussion

_____

_____

_____

_____

1.11.2 Points for Clarification

1.11 REFERENCES / FURTHER READINGS

UNIT 2: READING

STRUCTURE

2.1 Introduction
2.2 Objectives
2.3 Difficulties in seeing
2.4 Difficulties in learning
2.5 Difficulties in communication /hearing
2.6 Difficulties in moving
2.7 Specific learning difficulties
2.8 Multiple disabilities
2.9 Unit Summary
2.10 Check Your Progress
2.11 Assignment
2.12 Points for Discussion and Clarification
2.13 References/Further Readings

2.1 INTRODUCTION

Children may suffer from a number of impairments, which call for adaptation of teaching strategies, provision of special reading materials, teaching of plus curriculum skills or use of special assistive devices. These will be broadly discussed in this Unit. Special attention will be paid to the educational needs of children with *Visual Impairment, Mental Retardation, Hearing Impairment, Locomotor Impairment and Cerebral Palsy, Specific Learning Difficulties and Multiple Disabilities.*

2.2 OBJECTIVES

After studying this Unit you will be able to

- identify educational implication of children with each significant impairment;
- teach effectively children with all major types of disabilities;
- develop plus curriculum activities and TLM for the children with each type of disability.

2.3 DIFFICULTY IN SEEING (VI)

Lowerfelt B (1974) describes the following three major limitations imposed by serious visual impairment.

1. *Restriction in the range of variety of experiences.* This means that in the absence of vision the child with server visual impairment may be deprived of such experiences as the ordinary child has without effort. To illustrate, a young seeing child may look at an orange, jump to pick it up, feel it, smell it and eat it. At one go, he has visual, auditory, tactile, gustatory and smelling experience. On the other hand, a serosly visually impaired child may have great difficulty in locating an orange. He will be able to locate it if it is within the range of his grasp, or within the reach of his arm. In this way the ordinary child easily get a total experience, where as a visual impaired child has a limited experience. His experience in range can be enhanced only by supplementary tactile or auditory inputs given by teacher or parents

2. *Restrictions on ability to get about.* This means that a seriously visually impaired child may have difficulty in moving about independently in unfamiliar environment. Why is this so? Because sight does not give the child the total framework of the space in which he moves. Therefore, determining the direction of movement poses special problems. This is particularly difficult in large open spaces. Further detection of obstacles in the way may pose serious problems. He/She may run the risk of injury.

3. *Restriction in control of environment in relation to one's ownself.* To illustrate it is not easy for a seriously visually impaired child to read facial expression. Reinforcement of positive behavior may be denied

to him if he can not read the face of his mother to whether she is happy. Parental approval is strong positive reinforces.

Another difficulty, which a seriously visually impaired child may experience, is incidental learning. Let us consider what this meas. When an ordinary child enters a class room, at one glance he knows how many children are sitting or dresses they are wearing, how many boys and how many girls, how many tall or short, where the blackboard is located, what kind of table the teacher has etc. The visually impaired child can not do so. He has to be given special orientation by someone to acquaint him with the contents of the classroom.

Orientation is meant to build in the mind of the child and acquaint image of the object or environment shown to him/her. When a visually impaired child enters in the same classroom he is not getting total feedback. He is depending on the image formed in his mind yesterday. This has significant educational implications. Orientation must be repeated often to update experience.

One major difference in the learning styles of visually impaired and seeing children is that while the visually impaired child depends largely on past experience, the seeing child is getting fresh feedback every time he enters the classroom or any other room.

Another educationally significant difference in sight and touch is that sight is a holistic sense. It provides information at one glance, where as touch is an analytical sense. For example, if you show only one drawer of a table to a visually impaired child, he or she will be able to describe only that drawer and that too only if that drawer hase been shown bit by bit and an accurate image built in the child's mind of that drawer. Information gathering range of touch is limited. Therefore, if you want a Visual Impaired child to build an accurate image in his mind of any object, you should show it to him bit by bit till he has synthesized the image in his mind.

Hearing is also a distance sense like vision, but it is less specific. For example, it may tell you, where the sound is coming from, the nature of the sound, some guess of what is giving the sound. But it gives no information about the size, shape and colour of the object from which the sound is coming. While hearing has immense importance in learning language, its usefulness in spatial orientation is minimum.

Smell is also a distance sense, but with much more limited range. It too gives no information about the shape, size and nature of the object from which it is coming.

Taste is a close sense. It gives you partial information about the size and shape of the object.

The kinesthetic sense gives you extremely limited information about size and shape. It only helps you to judge whether it is heavy or light.

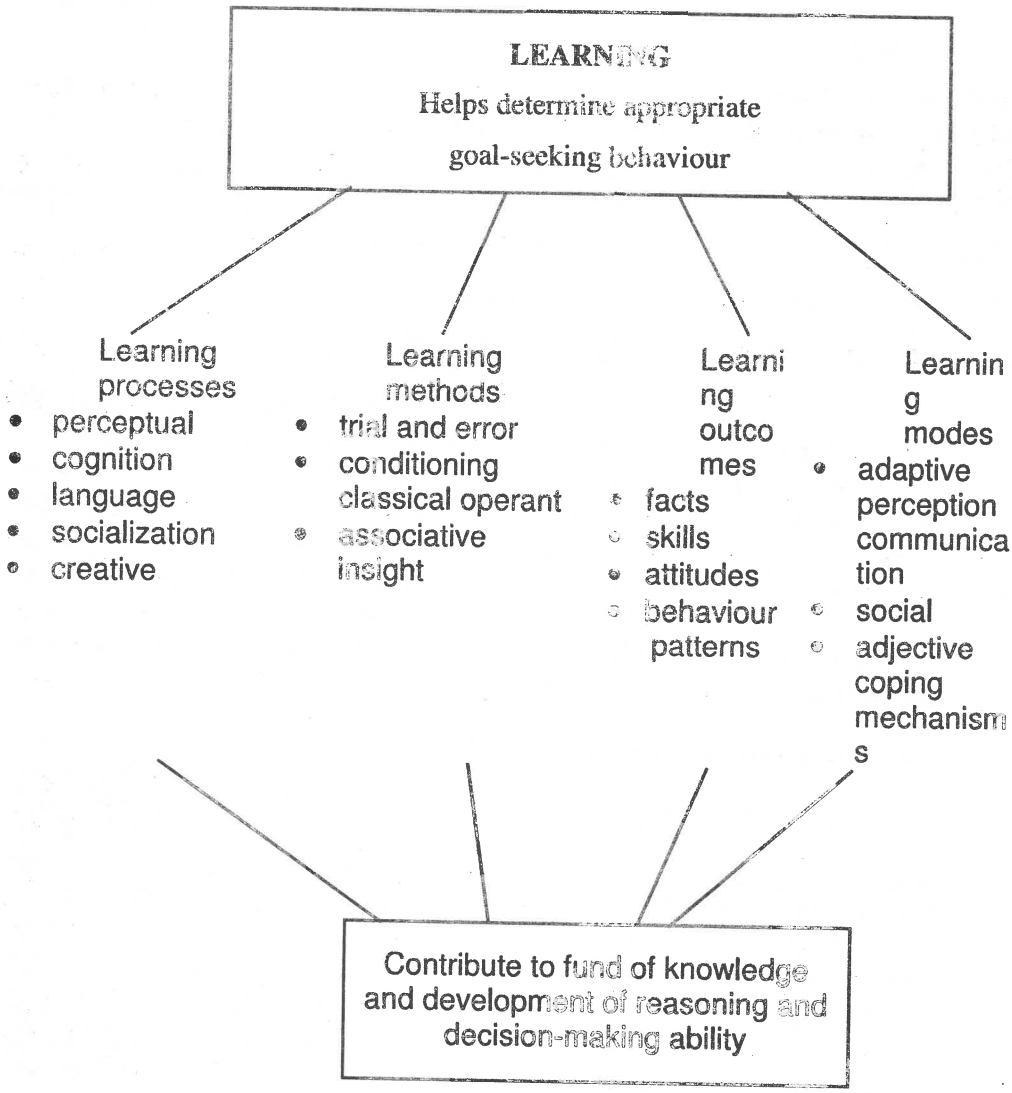
But please remember that multi sensory training is of great importance in the education of visually impaired children. Proper processing of inter sensory information will be a very significant extent compensate for the loss of vision.

2.4 DIFFICULTIES IN LEARNING (MR)

Persons with mental retardation have limited capacity to learn due to the brain damage. To call a persons `intelligent', ht should have the ability to attend, should have memory, abstract thinking, problem solving and ability to generalize. Persons with mental retardation have impaired/inadequate abilities in these areas. When these vital cognitive skills are impaired, it will adversely affect the performance of the person in daily living routine activities as well as task involving complex decision making. Let us see how it leads to performance difficulties and influence other areas of development.

2.4.1 Learning in Non-retarded Persons

Learning is fundamental to quality life. All of us have a need to learn those aspects that will help us to survive and actualize in our culture and environment. The more complex the society or culture in which we live, the more facts and skills we must learn to be able to have comfortable life. Therefore, every one must develop the processes of learning which includes our visual, auditory, tactile, sensory channels, reasoning, thinking and problem solving abilities (cognitive) and expressive skills of language, gestures and/or writing skills. These learning can occur through trial and error, conditioning or insight. Trial and error is doing, learning from mistakes, correcting and re-doing. Conditioning involves getting used to `if.....then' – cause-effect understanding. Insight is through developing reasoning ability and association. All these are used in adjustive, adaptive or coping behaviour. We as human beings have the freedom of choice in initiating behaviour and decision making. Behaviour can be learnt or innate.



Most behaviour are learnt, or initiated on the basis of learned elements. Adaptive behavior is a change in behaviour that helps one to meet environmental demands. Coping behaviour is a learned action that permits an individual to live with unwanted circumstances. For example, adaptive behaviour is hailing from a village and learning to live in a city. Coping behaviour, learning to live with the grief of loss of a loved one. Every one has the potential to adapt/cope to

overcome obstacles using his thinking and rearranging – cognitive abilities.

When we say that a person is intelligent he generally has the abilities to: 1. learn, 2. deal with task involving abstractions effectively and 3. deal with new situations. A mentally retarded person as you have known, has limited abilities in these areas. Therefore, his ability to learn to live independently is also limited.

2.4.2 Problems in Learning by Children with Mental Retardation

You would have seen people who look like anyone of us. However, if you continue to watch the person, you will find that the activities he carries out are not age appropriate – that is, looking grown up, but behaving like a child, not able to talk clearly, indulge in such acts that are not appropriate to age, time and place. If you watch him closely, for a long time, you do realize that he is different from us, though he looks like any of us. One of the reasons for this condition can be mental retardation. The term mental retardation simply means `limited development of the mind, which leads to difficulty in carrying out various tasks expected of their age.' The extent of difficulty in doing the tasks depends on the degree of damage to the brain during childhood (upto 18 years).

Depending on the degree of retardation, the persons with mental retardation exhibit certain difficulties in learning. Some of the problems in learning are given below.

2.4.2.1 Poor language development

Many persons with mental retardation have communication difficulty. Their ability to understand and express are limited. A profoundly retarded person may never speak while a mildly retarded may use 2-3 word sentences with limited word usage.

2.4.2.2 Difficulty in paying attention

All of us have the ability to filter out unwanted stimulus (details) in our environment and focus on what we want to listen, see or do. A persons with mental retardation may find everything around him attractive to him and therefore may want to attend to all of them at a time. As a result, every task he undertakes remains incomplete or he shifts quickly to another one, when you are teaching him a certain task. In other words, he is easily distracted. This certainly interferes with learning, because every learning activity as a first step needs student's attention.

2.4.2.3 Problem solving

Everyday we come across problems in daily routine – some small, some big.... However, we find solutions and carry on with the activities. Confronted with the same problem, two of us may deal with it in two different ways, depending on our exposure, ability, resources..... A persons with mental retardation has difficulty in finding solutions to his problem. Further if a problem can have more than one solution, he may not be able to decide which is the best solution. For instance, if he misses the bus one day,.....`what to do?....wait for next bus?....Walk....? take an auto.....? Go back home.....? There can be more solutions. But our mentally retarded youngster can have difficulty deciding what to do. Therefore, problem solving and decision making skills need focus in our training.

2.4.2.4 Poor memory

While they are slow to learn, many a time remembering learnt skills is found to be difficult in a mentally retarded person. If the learnt skill is put to use everyday, like self-feeding, bathing and so on, he may remember. But, if the skill is not used everyday, he may tend to forget. For instance, if you have trained a mentally retarded person in pickle/papad making, he may do well to your satisfaction. As this activity is seasonal, next year when you involve him, you may find that he has forgotten and you have to begin teaching again. While selecting skills to teach, make sure they are put to use constantly.

2.4.2.5 Difficulty in understanding abstraction

Children need concrete examples for learning when they are young. As they grow up, they understand abstract terms. A retarded person has difficulty in understanding abstraction even as an adult. Terms like left-right, far-near, yesterday-tomorrow, next week – last week and such other abstract terms are difficult to teach. Therefore, you should try to have visual cues wherever possible. Also try and convert abstract statement into concrete ones. For instance if the retarded person does not know right and left for wearing slippers, tell him `see whether the toe rings of the slipper are next to each other before wearing'. This is concrete and will help him wear without error.

2.4.2.6 *Needs repeated instruction*

Anything told once is not easily understood by a mentally retarded person and needs to be told a number of times. Be brief and clear in your statements.

2.4.2.7 *Poor understanding of cause-effect*

Mentally retarded persons learn experience based activities better. Therefore, explaining cause-effect such as `**if** you touch the utensil on fire, it will hurt you' is not easily comprehended by them. All health and safety activities must be carefully planned.

2.4.2.8 *Inability to generalize*

What is learnt in one situation a retarded person does not easily apply in another situation. For instance, if he is taught to peel cucumber, he will not apply the same skill naturally for peeling radish or carrot. It needs to be taught again, though with a little less effort.

2.4.2.9 *Impulsivity*

Many-a-time, we resist from doing certain acts which we wish to do, considering its inappropriateness to the context. When a lecture is going on, if you feel like eating, you will resist, won't you? A retarded person may tend to do instantly what comes to his mind. This characteristic many a time is considered as problem behaviour. Such as laughing to self, beating/pinching others, throwing things.... We should find out what provokes him to do so and correct the behaviour.

2.5 DIFFICULTIES IN COMMUNICATION / HEARING (HI)

2.5.1 Introduction

Deafness is inability to hear and understand conversation and speech in most situations. This also prevents the normal natural process of acquisition of language and speech in early childhood. Both blindness and deafness are sensory deficits and both the blind and the deaf are disabled at a functional level in their own ways. But a blind person attracts society's immediate attention and sympathy. On the other hand, deafness remains a hidden handicap till a deaf child/person tries to communicate with other persons or vice versa. The deaf person outwardly looks so normal that the lay-public cannot realize the extent to which this impairment can create difficulties for him.

An effort has been made in this unit to help the readers to see and understand the problems arising out of **hearing difficulties** from different angles and perspectives. This should help all those who are involved in educating the deaf child, i.e. the parents, teachers and other professionals, to realize the disability that deafness imposes and to find ways of reducing its adverse effects in order to promote the child's learning in as many directions as possible. The teacher will be able to do his/her job well only when he/she can understand the exact nature of the handicap and realize that the needs of children will vary according to the child's level of deafness and his environment. (Except the Unit on 'Deafness and Associated Disabilities' in Block 3 in Paper I, the rest of the Units in Paper I and II mainly refer to straight forward deaf children with severe to profound hearing losses.)

2.5.2 Effects of Deafness

Learning for young children is a social activity where new skills and understandings are gained through interaction with both adults and their peers, i.e. the people around them.

2.5.2.1 Communication Disability

Severe to profound hearing loss, mainly in the case of a pre-lingually deaf child, imposes a communication disability on him. The infant/child is deprived of the natural everyday input of language that every hearing child receives from his mother at home and his immediate environment. The direct result of this is language deficiencies which involve severe to total absence of language and speech. A deaf child's thinking capacity is generally intact. He can see everything and understand a few things. But on his own, because he cannot hear, he cannot learn the words that represent these. He also cannot learn the way sentences are formed to express complete thoughts. He may try to use gestures to express himself but may not always be understood by others, nor can he understand the signs and gestures used by others beyond very simple directions and explanations. Unless very special effort is made to provide words / language for the signs / gestures that are used, the child will never learn language. Consequently his knowledge base will also remain very impoverished.

2.5.2.2 Effects of Deafness on Various Aspects of Development

The language retardation in the deaf child seriously affects the various aspects of development such as cognitive (understanding and knowing, in general, thinking, reasoning, solving problems etc.) speech, social and educational development. All these aspects of development are almost inextricably interdependent. Therefore, the progress or deficit in one area will invariably affect the other areas.

- **Educational Aspect -** Deafness itself does not affect a person's intellectual capacity to learn, yet deaf children generally require some form of special schooling and training to gain adequate education. . Since the child's education in school will almost entirely depend upon the child's mastery of language, his inability to hear will greatly hinder his intellectual development and educational/academic achievements in the absence of early appropriate measures of intervention.
- **Social Aspect –** Owing to difficulties in communication that is of language comprehension and expression, the child/person is very

likely to feel mentally isolated, frustrated, suspicious of everyone and everything and will tend to resort to withdrawal from social situations.

- **Psychological Aspect** – There may be a degree of maladjustment in behaviour depending upon number of factors such as home background, innate abilities, emotional stability, additional disability, etc.

2.5.2.3 PRIMARY AND SECONDARY EFFECTS OF HEARING IMPAIRMENT

In **Dr. Daniel Ling**'s words, *"Hearing impairment, if sufficiently severe, has numerous primary and secondary effects on the human.*

Its primary effect ***is the restriction it can impose on acquisition and use of language in communication.***

Its secondary effects ***are more widespread and (particularly because of inappropriate measures of habilitation) can include impoverished communication that restricts experience, hinder personal / social development, and prevent optimal educational attainment.***

The ***third level of adverse effects*** *is found when the child is due to leave school. Poor educational attainments will restrict employment options, limit income and circumscribe leisure activities.*

These restraints can, in turn, ***substantially reduce the quality of a person's life in a myriad of ways. The effects of hearing impairment are not limited to the afflicted individual. Such effects extend to the family of the person and to the society at large."***

Simply put, without early intervention and quality training and education for years, it will invariably be like:

No hearing (Severe, profound loss)

No language and speech

No verbal communication

No education/literacy

No knowledge

No thinking at certain abstract levels

Many cognitive and social aspects of human life are affected.

- **Early intervention through the use of hearing aids.**

Rapid advances in electronics and technology have given us access to high quality hearing aids suitable for different types and varying degrees of hearing impairment. Fitting these aids at very early age, coupled with intensive auditory training and active parent participation has yielded good results in a number of cases. (For details please refer to Paper III, Block I & II –Audiology.)

- **Communication Through Sign Language**

A number of studies of the 'Development of deaf children of deaf parents' have shown that an early use of sign language for interaction between the parents and the child facilitates communication required for the child's overall growth. This leads to better adjustment of the child to his surroundings and everyday dealings, emotional stability and satisfactory cognitive development.

(For details please see Paper – I, Block – II)

2.5.3 How Do We Learn

Our senses are the gateways to learning. We acquire information and knowledge that one gains through experience through the distance senses – **hearing and vision**, and the close senses – smell, touch and taste. Of these, we are constantly in touch with our environment through hearing because we cannot close our ears completely, not even in sleep. Also, sound signals reach us from all around whereas visual signals are received only from what is in front of us and when

our eyes are open and focused on it. However, most of what we know of the world external to us is learned through distance senses and the languages that the most people know are normally acquired through hearing (except the sign language of the Deaf which is a visually based system of communication as against the auditory based spoken languages).

2.5.3.1 The Primary and Secondary Signals That Provide Information

In animals too, same as in human beings, information about the environment is provided through the five senses – the first/primary signaling system. Both human beings and other primates (such as apes, dolphins, etc.) have an inborn ability to think, perceive and mentally process (i.e. to analyze, reason, form concepts, solve problems etc.) the information received from the environment through these senses. In addition to this, man also has the ability to receive and interpret the secondary signals namely the words of a language. Words are mainly the arbitrary spoken symbols, which stand for almost everything that we perceive through our senses and these are stored in our brain along with the rules of language for ready use. Words also enable us to store in our mind/brain the labels for concepts, which are the results of our conscious, as well as unreflective thought processes.

The word 'arbitrary' means there is no direct connection between the word symbol and the actual object that it represents; e.g. the concepts of action or objects refered in different languages are the same but the words are different, e.g.'kairi' in Gujarati, 'aam' in Hindi, 'awakaya' in Tamil, etc. for the object/concept of 'mango', or 'daud' in Hindi, 'pal' in Marathi,. 'dodwu' in Gujarati, for the action of running. In man however, the secondary signals i.e. language, later serves as the main source of information and a most efficient tool for intellectual functioning.

2.5.3.2 Communication and Language: Main Distinguishing Feature Between Man and other Animals

In the living world, besides man, several animals do communicate with one-another. But possession of language is probably the most important distinguishing feature between man and other animals. Animals are seen to use some sound signals, but these are extremely limited and completely non-productive, e.g. parrots do not create novel sentences and dogs do not understand complicated commands. As against this, man has the ability to reproduce the word symbolically through language, which sets him free from his immediate temporal and spatial environment. This allows man to think and talk about not only here and

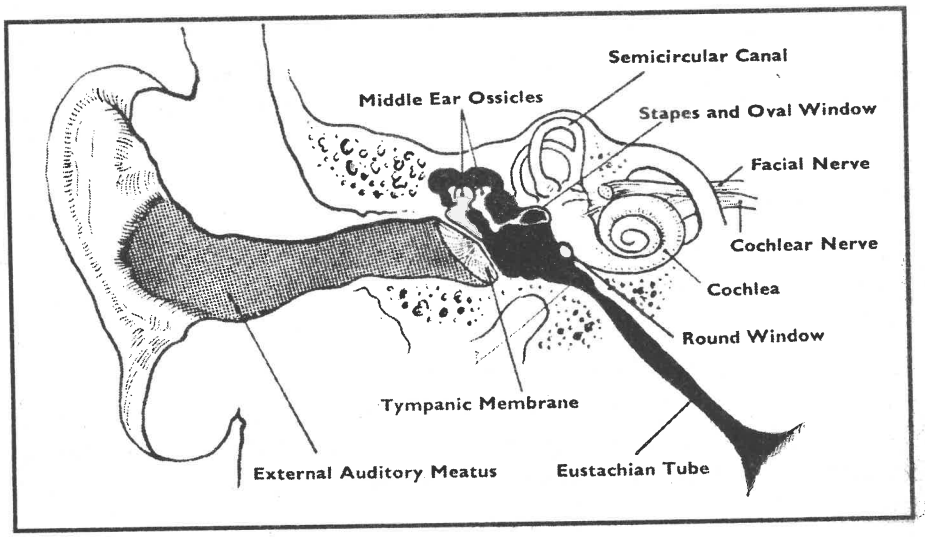
now, but also about things and events from a distance and from the past and the future. Then again, animal communications are genetically transmitted. They are completely determined by the genetic structure of the animal. Therefore the crows all over the world will crow the same way and all bees will use the same system of the genetically acquired dance with only occasional variation among different colonies of bees. On the other hand, human beings in different parts of the world speak different languages, and although the potential to learn is genetically acquired by man, the details of the linguistic system must be learned anew by each speaker. Only Man has the inborn ability/brain potential to learn language the complex system of verbal language **mainly through the sense of hearing.**

2.5.4 How We Hear And How Deafness Is Caused

2.5.4.1 The Ear

The ear is one of the most delicate parts of the body and can easily be damaged.

There are three main divisions of the ear :



The figure of the ear

- The **outer ear, which is the part,** we can see and which leads to the ear canal going down to the eardrums that cannot be seen easily.
- The **middle ear**, which is the other side of the eardrum. It contains 3 little bones linked together which move as a unit along with the eardrum. The eardrum vibrates when the sound waves press on it, and the 3-bone unit passes on these vibrations to the adjoining inner ear.
- The **inner ear** is a very complicated organ. It receives and sorts out all the vibrations as different sounds, so that the brain, through the auditory nerves and the auditory pathway, can receive them and after processing, interpret them.

Damage to any of these parts including the **auditory area in the brain** itself, can cause deafness.

2.5.4.2 Types of Deafness

- **Conductive Deafness:**

Functionally, the outer and middle ears form the conducting apparatus whose function is to carry the sound to the inner ear. Thus any damage to these parts prevents sound wholly or partly, from reaching the inner ear and resulting deafness is termed conductive deafness. This kind of deafness often responds to medical treatment. Also, a person with conductive deafness can hear and understand speech when it is loud enough.

- **Sensory Neural Deafness:**

The inner ear is the end organ of peripheral hearing. Damage to this apparatus creates deafness, which is termed as **'sensory-neural deafness'.**

Sensory-neural (and central) deafness cannot be cured by medicine or surgery but can be alleviated, that is the loss caused due to the damage can be lessened, only through use of amplification devices and other modalities of teaching language, training at home and through special education.

- **Mixed Hearing Loss :**

Sometimes a child might have both sensory-neural and conductive deafness i.e. mixed hearing loss. In such cases, the conductive part of the

deafness only can be treated. However, new devices such as the 'Cochlear implant' are now being surgically installed in a deaf child's /

person's inner ear in selected cases as a remedial measure to sensory neural loss. (Details are given in Paper No.3 ,Block No.1.)

- **Central Hearing Loss :**

This is an abnormality in the central nervous system from brain damage or disease.

2.5.4.3 Terms Used in Classification of Hearing Impairment

A brief glance at the classification, which is discussed in detail in other Units, will help to get a better picture of hearing impairment.

Hearing impairment is termed by different professionals in different ways. It is related mostly to how it helps them to deal with deafness:

Medical professionals and audiologists are mainly concerned with the diagnosis of the exact degree and type of deafness and then based on this diagnosis, provide medical or surgical help if possible and also provide suitable amplification devices (hearing aids) to the hearing impaired person. Accordingly,

Terms used in Medical Profession and Audiology :

- Medically / Audiologically, hearing loss, as per the nature of the loss, is termed as:

  i conductive
  ii sensory-neural
  iii mixed
  iv central

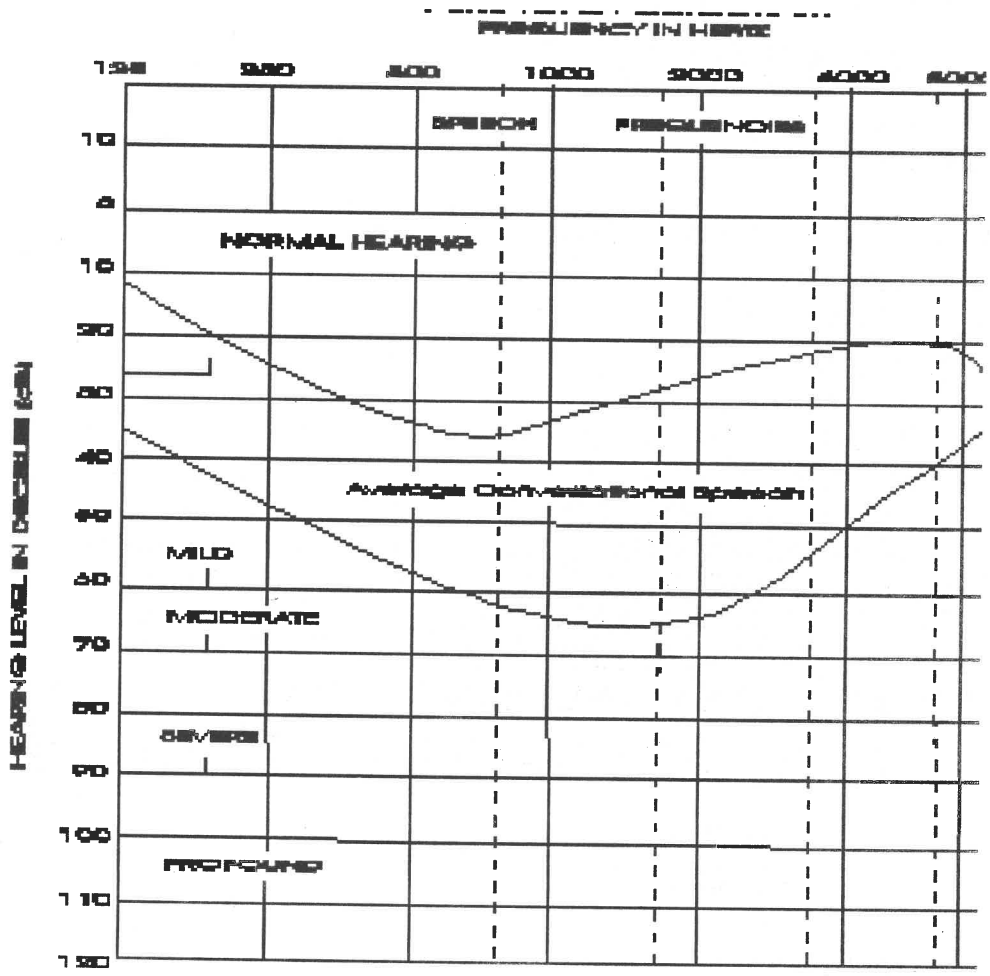
- Deafness has a degree, some children are totally/stone deaf, who just cannot hear any thing, while others can have a varying degree of ability to hear sounds.

The degree of hearing loss is termed as

i	mild	26 - 40 dB
ii	moderate	41 - 55 dB
iii	moderately severe	56 - 70 dB

iv severe 71 - 90 dB

v profound Greater than 90 dB



These terms approximately indicate the extent to which a person can make use of the residual/ remaining capacity to hear sound and then how he can function in the Society. Hearing aids of different types are available to suit the varying degree and type of hearing loss..

A person with **mild or moderate loss** will be able to hear speech in quiet surroundings if it is sufficiently loud. A person having **severe to profound loss** may not be able to acquire language and speech adequately sometimes even with the use of hearing aids. The degree of hearing loss and the time of its onset are important in determining the effect of the

impairment upon the personality, psychological and educational development patterns of a hearing impaired person.

- **Terms used in Education :**

Educationally hearing loss is termed on the basis of the stages in a child's development when the loss occurred:

i congenital / from birth

ii pre-lingual – before the acquisition of language by a child.

iii post-lingual – after the child has acquired language.

iv post-vocational

These terms indicate to what extent a person can make use of the residual /remaining capacity to hear sound and how he can function in the society. These stages will decide the severity of the problem that the child / person will face in his life.

2.5.4.4 Causes of Deafness

The main causes of deafness are heredity, accident and illness. In about 50% of all cases of deafness, genetic factors/heredity are probable cause of deafness. Environmental factors (accidents, illness, auto toxic drugs, etc.) are responsible for deafness in many cases. Rubella or other viral infections contracted by the pregnant mother may deafen an unborn child. Hazards associated with process of birth, e.g. a cut-off in the oxygen supply may affect hearing. Illness or infection may cause deafness in young children. Constant high noise level can cause progressive and eventually severe sensory-neural hearing loss. Similarly, tumors, exposure to explosive sound, injury to skull or ear could lead to deafness.

2.5.5 The Factors that Influence a Hearing Impaired Child's Normal Development

A Hearing Impaired child (mainly who suffers from severe to profound hearing loss) needs to spend considerable time on learning language and speech as communication skills that will help him to gain education and develop social skills.

Principal factors affecting the child's progress are :

Age of onset of hearing impairment

Degree and type of impairment

Age of discovery of impairment and age of diagnosis

Age at which effective intervention was begun

Effective use of hearing aids and/or use of other communication modalities to suit the child's needs

Mental ability

Personality

Home and surrounding environment

Guidance to parents and their ability to follow guidance

Parental support

Quality of teaching in schools.

2.5.6 Psychological Aspects Of Deafness –Need For Understanding

Deafness is a serious handicap. Unless we take steps to prevent its ill effects right from early childhood, a deaf child's development will be influenced adversely from early infancy by his defective hearing. Not only the deaf child himself, but also his family and the community around him are affected

2.5.6.1 The child

- **Tends to get isolated from normal life,**
- **Is cut off from many of the experiences and opportunities that hearing children enjoy, e.g. voices associated with people, dishes tinkling which means food, singing and rhythm of music, the mother's loving voice and the guidance, comfort and reassurance that follows from the words, etc.**
- **Has to make constant and considerable efforts to achieve things that come easily to the hearing children.**

2.5.6.2 The Family

- **Has to make efforts to understand what the handicap exactly means to the child, how it impinges on his life,**
- **Has to work out ways of lessening its effects and promoting the child's learning in as many directions as possible,**
- **Has to realize clearly that the parents are the first teachers of the child and nobody can contribute as much as they can in the natural setting of their home,**
- **The siblings of the deaf child too may vary in their behaviour towards the deaf child. Sometimes they have to, at a young age, take the responsibility of caring for their deaf brother/sister.**

2.5.6.3 The adolescent and the other deaf

The adolescent years are a trying time for all children and more so for the deaf child. The possibility of tension within the family increases. The adolescent deaf often experiences difficulty in establishing a personal position within a family structure. It is during these years that the child is trying to establish his own identity and maintain and develop relationships. "Who am I?" "Where do I belong?" "How do I fit in?" "What am I worth as a person?" are all very important questions faced by all adolescents including deaf ones. Establishing peer groups becomes critical. There is increased dependency on verbalization among peers and the deaf adolescent often feels isolated and a burden to his family. It is therefore during this period that the adolescent deaf, together

with the family, is subject to strong psychological and societal pressures.

2.5.6.4 *The grand parents*

The grand parents have difficulties to overcome a denial stage because they have to bear a double pain. They have to get over the pain of having a deaf grand child as well as their own child, who is a suffering father or mother and help in what ever way possible to promote the progress of the deaf child.

2.5.6.5 The community at large

Many a time, the general public is unaware of this unseen but formidable disability of deafness. Community awareness programmes will help to minimize its effects to some extent.

2.6 DIFFICULTIES IN MOVING (LI, CP & SPINAL INJURY)

Children with locomotor difficulties have limitations imposed by the disability in the form of moving, sitting for long deviation, writing, if their hands are affected, taking care of their daily need such as toileting, participation in play activities. Children with severe locomotor impairments may also suffer from problem of behaviour, integration with other childrens. Most of the children with locomotor impairments use some gadget like caliper, crutches or wheel chair for his/her mobility. Some children may also be taking medicine for their problem specially children suffering from leprosy or having associated problem of fits. Children suffering from locomotor impairment like spinal injury, may have additional problems like not having proper control over their urination and bowel evaluation. Children suffering from Cerebral Palsy may in addition to having the above mentioned problems may also have associated hearing speech, visual or mental retardation which are described under the respective impairments.

In order to mange to provide education to locomotor impaired children, the teacher has to first understand the limitations of the child by interaction with the parents and possibly the local doctor under whose care, the child is taking the treatment. Secondly, along with knowing the limitations of the child, it is also important for the teacher to know about the special abilities of the child with moving difficulties because some such children may be extra brilliant than even the able bodied children.

After knowing the limitations, and the special abilities of the child, the teacher can help the children with moving disabilities to attend the education

in a better way. The important things to be kept in mind by the teachers are as follows:

1. Regular interaction with the parents of locomotor impairment child in order to have a regular feed back from them regarding his competence in the activities of daily living, his behaviour at home and participation in the social activities. In case of any parent having any problem in bringing the child to the school due to his restricted mobility, it should be sorted out so that all the children suffering from locomotor impairments can attend the school.

2. Watch every child carefully and find out about the child's behaviour in the class, so that if any child is having unwanted behaviour, you can correct it. In order to correct the unwanted behaviour try to ignore it, so that child does not repeat it again. When the child shows wanted behaviour give a reward each time, when the child behaves well. Then gradually the child will stop behaving in unwanted way.

3. In order to social integrate, locomotor impairment children in the class, tell the other children about the disabilities. It may be by way of a disabled person, coming to the class and talking to them about disability. Tell the able bodied children stories about the disabled children who have achieved something in life. You can also practice role play in the class so that able bodied children develop positive attitude towards the children with disabilities. This will help in better social interaction of these locomotor impaired children in the class, it will also help the disabled children to make friends in the class and they will feel more secure and accepted in the peer group.

4. The children with locomotor disabilities using the aid and appliance, should be taught how to use them properly so that they can walk and function in a better way with minimum energy consumption.

5. Never try to over protect , the children with locomotor disability neither they should be treated as inferior to others. This should also be suitably explained to other children in the class so that they do not develop the habit of demanding extra attention.

6. In the classroom, a child with difficulty in moving may not need any attention. In case of severe disability, they might need extra physical assistance. This problem can be solved by pairing such child with a child having no disability and asking him to assist the disabled child. If it is not possible, then you may have to seek the help of a volunteer from the community to which the child belongs to.

7 While teaching in the class, make sure that the children can see you and hear you when you teach or write something on the blackboard. Some children may have problem of weakness of the hands due to which they are either slow in writing or not able to write themselves. You have to identify such children and provide them either extra time or arrange for a volunteer to write for him.

8. The teacher should always encourage physical activities in the school for all children. It helps to keep them healthy and fit. It may be that disabled children are not able to participate fully in a particular physical activity.

9. Teach the children about the role of cleanliness and how it helps in keeping them healthy. Also teach them to clean their teeth, to wash their hands, to take bath daily so that they are better accepted and also do not get other illness.

10. Children should also be taught how to prevent accidents at home and in the school and teach how to be careful to prevent the injuries.

11. Children should also be taught about traffic rules and to cross the roads. To do so, they can be taken to the road side and explain to them how and when to cross the road. It will help to prevent them from any road side accident.

12. Some children who are having problems of feeling in the hands or feet, like the children suffering from Leprosy should be taught about the role of sensation and feeling of pain and how they can prevent them from injuring their senseless part of the body.

13. Some children who are not able to hold the ordinary pencil or pen because of weakness of grip may be provided with some adaptation so that they can hold it and write themselves.

Undertaking the above precautions, you will be able to overcome the problems of children with locomotor impairments, cerebral palsy and spinal injury, and, assist them in achieving their education goals so that they can become independent adults and are able to go for work and earn for themselves. They will also be able to learn as to how to get along with others and how to behave, how to make friends. In this way they can become useful members of the community.

2.7 SPECIFIC LEARNING DIFFICULTIES

Specific learning difficulties may usually be caused by minimum brain damage. They have to be distinguished from first generation learners who

may also exhibit temporary symptoms of difficulties in reading. writing and counting but generation learners do not usually show attention deficit on hyper activity.

Estimates A incidence in India vary from 10 to 15 percent of the school going population. Study conducted by the institute of neurology in Kerala estimated the incidence of 10% Another study conducted by Samveda at Bangalore estimated the incidence at 15% of the school going population. Some studies have shown the incidence to be 6 to 7 %. At any rate the incidence is large and major cause of school drop outs. Therefore, understanding the educational needs to meet them is a crucial importance for a teacher.

Types . There are many kinds of specific learning difficulties, the major ones includes :

- *Dyslexia* (Problem in reading)– This is a condition in which a child while reading may omit substitute or reverse the letter and words.
- *Disgraphia* (Problem in writing)– In this condition, the child is unable to write constantly, his handwriting clumsy and improper spaced.
- *Dyscalculia* (Problem in calculating)– The child may have much difficulties in making manual calculation
- *Attention deficit hyperactive dis-order* (Problem in paying attention) - In this condition span of attention is very limited and he is restless. He is inclined to pay attention to irrelevant stimuli. He shows considerable amount of hyperactivity. The child cannot sit even for a moment.
- *Dysphasia* – This is a language disorder.

  There are two types of Dysphasia

  (I) Child is unable to use language meaningfully.

  (II) The child is unable to understand spoken word.

Task Analysis

The teacher can choose a learning task appropriate for the child to master and the terminal objective should be stated in behavioural terms. The terminal goal is broken down into incremental steps arranged in order of complexity, with each item being a pre-requisite for the subsequent one until the terminal goal is reached.

Structured lesson presentations

Students with learning disabilities achieve more when lessons are clearly presented, well sequenced and well organised. Explanations should be concise and clearly understood with the key concepts highlighted.

Organised Equipment and materials

The teacher must organsie the equipment and materials needed before starting a lesson. The teacher should also ensure that the equipment and materials are relevant and easy to understand to the students.

Peer Teaching

In this strategy, one student who has proficiency in a skill teaches another student with the teacher's supervision. In this technique, one student teaches another student, on one-to-one basis.

Multi-sensory approach

The multi-sensory method is based on the premise that some children learn best when content is presented in several modalities. Frequently, kinesthetic (movement) and tactile (touch) stimulation are used along with the visual and auditory modalities. In this approach, the child sees, feels, says and hears the content. The multi-sensory programs that feature tracing, hearing, writing and seeing are often referred to as VAKT (visual-auditory-kinesthetic-tactile). To increase tactile and kinesthetic stimulation, sandpaper letters, finger paint, sand trays raised letters and sunken letters are used.

Writing

Allocate time for writing instruction. A sufficient amount of time should be allocated to writing instruction (e.g. four times per week) because students can learn and develop as writers only by writing.

Expose students to a broad range of writing task. Students should participate in writing activities that present highly structured problem-solving

situations as well as activities that involve self-selected and expressive writing.

Maths

Use manipulative devices such as buttons and beads. Let the students drop beads into a clear plastic cup as he/ she counts so that he/she can see how many beads represent the number. The child also gets auditory input to support this concept.

Attention Deficit Hyperactive Disorder

Reward the student for being prepared by allowing him/her to participate in favourite activities, conferring classroom privileges (like making the child monitor of the class)

Establish routines for placing objects – especially routinely used objects such as books or assignments.

Point out to the salient features of the assignments (topic sentences, headings or table of contents)

Provide the student with a list of materials needed for each task. Limit the list to only those materials necessary to complete the task. Enhance the clarity of instructions. Repeat as often in a clear, calm tone.

2.8 MULTIPLE DISABILITY

A person who has combination of two or more certifiable handicapping conditions whose impact is so severe that the educational needs of the person can not be met in a programme designed for the separate handicapping conditions.

Characteristics of Persons with Multiple Disabilities

Best & Brown (1994) use the term 'multi-sensory impairment' to describe a situation rather than a condition, the situation being characterized by an individual being unable to :

- **Gather sufficient information from the environment to learn independently;**
- **Make sufficient use of the environment to function independently.**

Other characteristics of multiple disabilities are :

a. Children with severe or profound learning disabilities have particular difficulty in separating relevant cues from irrelevant aspects of the environment (Ashman & Conway, 1989)

b. Children have problems in retaining information in short and long term memory.

c. It disrupts the processing of information and their abilities to organise problem-solving responses to a situation (Muldoon and Pickwell, 1993)

d. There is interference in the basic abilities of early communication which include making eye contacts and attending toan interpreting facial expressions and body gestures (Kiernan et al, 1982)

e. It affects interactive relationship with parents and caretakers who may be unable to understand the child's needs or intentions (Beveridge, 1989).

f. Have acquired splinter skills – may have some high level skills but not able to do other more simple things.

g. Such children need very structured instructions

h. They need a variety of supporters a large and diverse support system.

i. They have trouble with abstract thinking.

j. They need to learn small steps with a lot of patience.

k. Each child has her own temperament and her olwn set of experiences (Erin, 1995).

l. Each child may be affected in different ways by a medical condition or physical disability (Erin, 1995).

m. It makes it almost impossible to predict how much any child will learn and what she will be able to do as an adult (Erin , 1995)

Impact of Multiple Disabilities

According to de'jong (1992), population of persons with multiple disabilities may be considered to represent two categories of needs : The key words used to describe these categories are "additive" and "interactive".

Additive Impact

Within this group, the impact of two or more disabilities on living and learning can be considered as additive or the sum of the impact of the separate disabilities. Approaches for persons with one of each of the represented disabilities can, therefore, be used in combination. An example of an individual representing this category is the child who is visually impaired and has lost his legs due to amputation. This child can be provided lower prosthesis and taught through the same methods used to tech other visually impaired children.

Interactive Impact

Within this group, the impact of two or more disabilities on living and learning can be considered as interactive. Thus, a combination of approaches from the single disability area would not be adequate to severe this persons needs; rather, a specific approach must be used. . An example of an individual representing the category described as 'interactive ' is the child with visual impairment and cerebral palsy . The spasticity resulting from the cerebral palsy precludes the use of a tactile method which is traditionally used with a visually impaired child. As visual approach would be ineffective for this child, a new and unique approach must be developed.

Needs of Individuals

A team approach should be used to design and implement a comprehensive programme for each individual. The team should be composed of a variety of professionals, family members and other care-givers. Mohit (1995) also advocates that keeping in view the diversity of needs and all relevant factors including onset and extent of disability, the age of the child, the socioeconomic status, family attitude and so on, a range of professional interventions, service delivery approaches and curriculum approaches are essential for implementing a comprehensive programme for each VIMD child.

According to Paul (1995),the multi-disciplinary team may consist of:

- Special Educator
- Physiotherapist
- Occupational Therapist

- Low Vision Specialist
- Speech Therapist
- Audiologist
- Orientation & Mobility Specialist
- Psychologist
- Vocational Counsellor
- Social Worker, and
- Family members.

It is essential to remember that each VIMD child is unique with his/her own distinct set of problems ,learning abilities and residual skills .

2.9 UNIT SUMMARY

- The ordinary child easily get a total experience, where as a visual impaired child has a limited experience. His experience in range can be enhanced only by supplementary tactile or auditory inputs given by teacher or parents.
- As we have seen earlier, persons with mental retardation have limited capacity to learn due to the brain damage. To call a persons `intelligent', ht should have the ability to attend, should have memory, abstract thinking, problem solving and ability to generalize. Persons with mental retardation have impaired/inadequate abilities in these areas. When these vital cognitive skills are impaired, it will adversely affect the performance of the person in daily living routine activities as well as task involving complex decision making
- Deafness is inability to hear and understand conversation and speech in most situations. This also prevents the normal natural process of acquisition of language and speech in early childhood. Both blindness and deafness are sensory deficits and both the blind and the deaf are disabled at a functional level in their own ways.
- Children with Locomotor difficulties have limitations imposed by the disability in the form of moving, sitting for long deviation, writing, if their hands are affected, taking care of their daily need such as toileting participation in play activities. Children with severe locomotor impairments may also suffer from problem of behaviour, integration with other childrens. Most of the children with locomotor

impairments use some gadget like caliper, crutches or wheel chair for his/her mobility. Some children may also be taking medicine for their problem specially children suffering from leprosy or having associated problem of fits. Children suffering from locomotor impairment like spinal injury, may have additional problems like not having proper control over their urination and bowel evaluation. Children suffering from Cerebral Palsy may in addition to having the above mentioned problems may also have associated hearing speech, visual or mental retardation which are described under the respective impairments.

- Specific learning difficulties – usually caused by minimum brain damage. They have to be distinguished from first generation learners who may also exhibit temporary symptoms of difficulties in reading. writing and counting.
- A person who has combination of two or more certifiable handicapping conditions whose impact is so severe that the educational needs of the person can not be met in a programme designed for the separate handicapping conditions.

2.10 CHECK YOUR PROGRESS

VI Area

1. Name three major limitations imposed by serious visual impairment.

MR Area

2. Narrate any two problems which affects learning in children with mental retardation.

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3. Describe a mentally retarded person whom you have seen highlighting atleast three problems in learning the following sub-unit.

HI Area

4. State the effects of deafness on the functioning of a deaf child /person.

5. Explain the terms,

- Prelingually Deaf
- Postlingually Deaf
- Deaf & Dumb
- Heterogeneity in the deaf population
- Primary signaling system and secondary signaling system of communication

6. **Explain the similarities and differences in the life-style of the adult deaf and the hearing adult population.**

LI Area

7. Can the teacher effectively teach without understanding the limitations of the child with locomotor impairment.

2.11 ASSIGNMENT

1. Make a study and prepare a report what special attention will be paid to the educational needs of children with any of the following impairments :

- Visual Impairment
- Mental Retardation
- Hearing Impairment
- Loco-motor Impairment and Cerebral Palsy.
- Specific learning difficulties
- Multiple Disabilities.

2 Identify educational implication of children with any significant impairment.

2.12 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

2.12.1 Points for Discussion

2.12.2 Points for Clarification

2.12 REFERENCES/FURTHER READING

UNIT 3: SPELLING

STRUCTURE

3.1 Introduction
3.2 Objectives
3.3 Types of Schools
3.3.1 Special Schools
3.3.2 General Schools
3.3.3 Open Schools
3.3.4 Non-formal Schools
3.4 Models of Education
3.4.1 Resource Room Model
3.4.2 Itinerant Teaching Model
3.4.3 Distance Learning Model
3.4.4 Alternative School Model
3.4.5 Home Based Education Model
3.5 Unit Summary
3.6 Check Your Progress
3.7 Assignments
3.8 Points for Discussion and Clarification
3.9 References/Further Readings

3.1 INTRODUCTION

Provision for education of children with disabilities are usually made in Special schools. But these special schools are completely inadequate to cater to the need of the vast population of children with disabilities . So the steps have been taken to make provision of education of these children in general, open and non-formal schools.

Various models have been developed for education of children with disabilities such as Resource Room Model, Itinerant Teaching Model, Distance Learning Model, Alternative School Model, Home Based Education Model.

3.2 OBJECTIVES

After going through this Unit the trainee will know about :

- Types of Schools available for children with Disabilities;
- Models of Education available for children with Disabilities.

3.3 TYPES OF SCHOOLS

3.3.1 Special Schools

Special school concept is the earliest one implemented in India. The attitude changes to the services for disabled persons in India were not too different from those existed internationally. As a matter of fact, the educational community did not realise that disabled children could be educated. But the inception of special schools for different disabilities proved them to be wrong. In a special school setting only the disabled students reside and learn. Music, recreation activities, and pre-vocational skills are taught to the children in special schools in addition to curricular skills. Adapted physical education is also emphasised in special schools. Most of the special schools follow a special curriculum widely suited to a disabled child. In most cases the special schools provide 24 hours custodial care to the children with disabilities in a protective environment.

The growth of special services for disabled children in India has followed the global trends of care and help. It suggests the availability of some form of education and rehabilitation of persons with disability (Jangira and Ahuja, 1993). In pre-independent India, foreign missionaries introduced services for the disabled in the country. Besides direct services to these persons, the missionaries also assisted the Indian counterparts in attaining skills by

undergoing technical courses abroad. The first school for the deaf in Mumbai and the first school for the blind in Amritsar were started by missionaries in 1883 and 1887 respectively. At the time of independence in India, there was no formal legislation to ensure compulsory education for the disabled. Though the article 45 of the *Constitution of India* is assuring better services to persons with disabilities in India, it was not enforced through legislation until recently. As on today more than 3000 special schools for the disabled are functioning in India of which approximately 900 are institutions for the hearing impaired, 400 for the children with visual impairment, 1000 for mentally retarded and the remaining 700 for children with other physical disabilities.

Relevance of Special Schools

Setting up a special school with all the necessary resources like infrastructure, equipments and manpower warrants a huge capital. In a developing country like India which can't afford to huge investments an alternative system becomes imperative so as to bring all the disabled children under the umbrella of education. Inclusive education is one of the viable approaches to make this dream come true. Inclusive education is not a threat to integrated education concept or the special school programmes. The special schools can concentrate more on difficult groups such as children with additional disabilities. It is noted that the introduction of one system had never suppressed the old system but has widened the scope and action of such system. Therefore, special schools can change their role in the following ways for expanding inclusion.

1. Serving as resource centres for a cluster of general education schools which are involved in inclusive education.
2. Organising in-service courses to the teachers of general schools in methods of handling children with disabilities.
3. Sharing special equipment with general schools for enriching learning experiences of children with disabilities.
4. Organising summer camps for non-disabled children to create awareness in them on disability related issues.
5. Providing residential school facilities to children with severe and profound disabilities.
6. Undertaking action research studies on disability related issues and disseminate the information to general schools.

7. Initiate community based rehabilitation services to provide alternative education and rehabilitation to persons with disabilities in their own localities.

Therefore, special schools can play a vital role for the betterment of inclusive education in India. The inclusive education and special school concepts are not competitive to each other. In fact, they are complementary to each other. This spirit would go a long way in establishing a base for the harmonious growth of services for persons with disabilities in India.

3.3.2 General Schools

There are more than 5,00,000 schools in India to look after the educational needs of the children in the country. These schools are meant for the normal children. But the constitutional provision to make education compulsory and free for children including disabled ones up to the age of 14 years has compelled the policy makers and administration to make available the facilities of these schools for the education of the disabled children. In this context, these general schools may be grouped into 3 categories :

- **Schools with normal children only;**
- **Schools where disabled children are enrolled but without any special facility of trained teachers or special teaching aids;**
- **Schools where disabled children read along with normal children but trained teachers are there to understand their special needs;**
- **Schools where there are special sections for disabled children.**

Every School has to become a Inclusive/Integrated School to meet Legal Provision

The directive principle of Indian constitution, the National Policy of Education, the RCI Act, the PWD Act, the Sarva Shiksha Abhiyan (SSA 2010) Project, the national goal of India 2020, as well as the international goal of EFA 2015 and HFA 2015 empowers the implementing agencies especially MHRD and SSA Authorities of States to ensure admission, retention and education of all children of the age group of 6 to 14 years including disabled children in the country. No normal school in the country can deny admission to a disabled child. In this context all schools are now inclusive/integrated schools. It has, therefore become obligatory to train at least one teacher from every elementary school tin FC-SEDE Programme to

enable him/her to meet the specific educational requirement of the disabled child/children in the class.

3.3.3 Open Schools

All disabled children cannot be benefited by formal learning system. There are many over-aged children and dropouts who may like to continue education through distance mode. The clients in vocational and rehabilitation centres who want to continue higher educational opportunities may pursue the same through distance learning system. The National Institute of Open Schooling (NIOS) and the Indira Gandhi National Open University (IGNOU) have started special study centres to assist persons with disabilities to meet their specific educational needs and continue higher education. Such distance education opportunities must be used to the maximum possible extent to make more disabled persons educated.

Open Learning

Open learning system is considered as the panacea of the general educational system. When developed nations as well as developing nations are acknowledging the need of open learning as a viable alternative to make any country literate, the special education system, being a part of general education system, needs to examine the feasibility of open learning to make more disabled persons literate. The National Institute of Open Schooling has developed instructional material for adaptation of curriculum in the case of disabled children. It has also started providing accreditation to selected institutes in the country to offer all levels of academic and vocational courses for the benefit of disabled children. The strengths of the National Open School curriculum are its wider range of options for course selection and facility to learn at the pace of the learner. These two aspects suit the requirement of children with disabilities. The children, according to their abilities, may select either academic or vocational courses.

3.3.4 Non Formal Schools

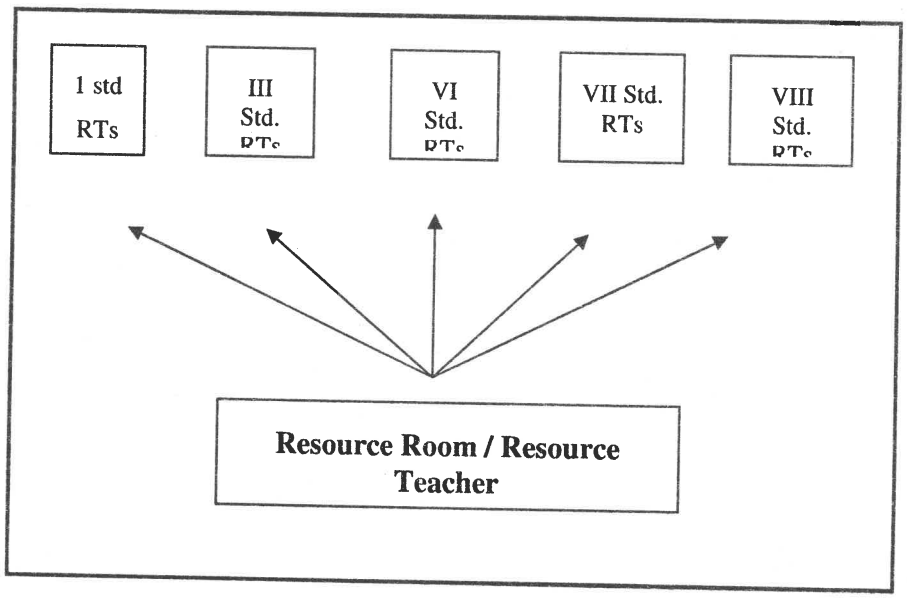
While open learning system may be encouraged for school going and academically capable children, many adult disabled persons may not be benefited by this approach. There is a need to promote non-formal education programmes in the existing community based rehabilitation programmes to provide educational services to these clients. These clients may not opt for higher education, but they may become literate for better living. Adult disabled persons are the potential seekers of non-formal education.

3.4 MODELS OF EDUCATION FOR CHILDREN WITH DISABILITIES

3.4.1 Resource Model

This is an educational plan in which a children with all disability is enrolled in a regular class. Within the building a special teacher called resource teacher is available to the child along with his regular teacher. The regular teacher assumes major responsibility for the children with all disability in general programme. The resource teacher is responsible for instruction in special techniques or skills required of the children with all disability. One full time resource teacher can mange 8-10 children with all disability in the resource programme. As far as possible, the children should be distributed in different classes/ sections, preferably not more than 2 in one class/section.

MODEL PROGRAMME

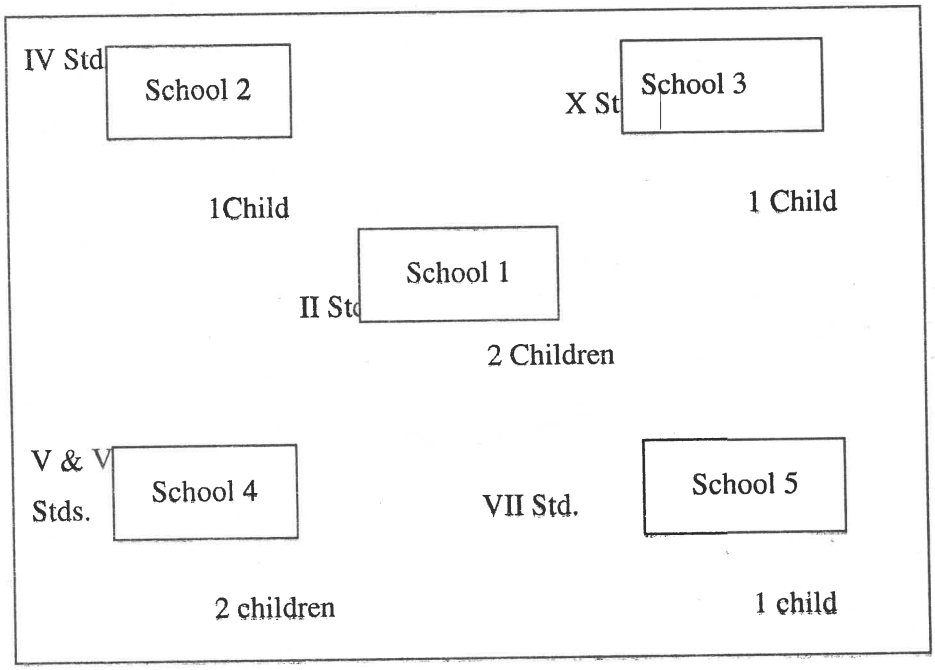


3.4.2 Itinerant Teaching Model

This is an educational plan in which the children with all disability is enrolled in a regular class in his home school where his needs are met

through the combined efforts of the regular teacher and the visiting itinerant teacher qualified to offer special service. The salient features of the itinerant programmes are as follows:

- The children in this programme are distributed in different schools.
- The itinerant teacher has to travel every day to reach the children.
- Each child will be visited by the teacher twice or thrice a week. However, Children with all disability of primary classes should be given frequent visits. In this case, limited number of children with all disability should be enrolled at the primary level especially in the beginning stages of the itinerant programme.



- Each school will not be having a resource room. For the itinerant teacher, a resource kit is advisable.
- The schools selected for the programme can be within a radius of 8 kms. However, this distance depends upon the topography of the locality.

- Depending upon the topography, the itinerant teacher should be provided with transportation arrangements – a bicycle or a motor cycle can be given.

3.4.3 Dual Teaching Model

This is the model which can make the universalisation principle, a reality. Even though resource and itinerant programmes can reach a huge number of children with all disability, there are numerous places where educational services for this population are not existing. For example, an isolated village which has one or two children with all disability can very well go for the dual-teaching plan. This plan is successful only when the number of disabled children is very limited, not more than two for ideal programming. The regular teachers with the support instructional material and limited competency oriented training can look after children with all disability in addition to their regular classroom responsibilities. A token incentive may be provided for their additional work with disabled children. A large number of teachers, at least one teacher per school have to be trained through crash programmes of two to three months duration to serve in the dual-teaching plan. When such arrangements are made, any visually impaired child can avail the educational facility in the local school itself.

3.4.4 Distance Learning Model

All disabled children cannot be benefited by formal learning system. There are many over-aged children and dropouts who may like to continue education through distance mode. The clients in vocational and rehabilitation centres who want to continue higher educational opportunities may pursue the same through distance learning system. The National Institute of Open Schooling and the Indira Gandhi National Open University (IGNOU) have started special study centres to meet the specific educational needs of the persons with disabilities. Such distance education opportunities must be used to the maximum possible extent to make more disabled persons educated. MPBOU and RCI are jointly running B.Ed.-SEDE, FC-SEDE and PGPD-SEDE Programmes in a massive scale to train teachers and prepare professionals to meet the emerging needs of teachers to cater to the educational needs of the disabled children in schools.

3.4.5 Alternative School Model

The possibility of alternative schooling such as night schools, evening schools, package programmes, etc., may also be explored for providing need based services to disabled persons. These programmes are needed

to improve the skills of the disabled individual to become economically as well as educationally rehabilitated. India has great potential for the growth of alternative education models to promote maximum services to all disabled persons.

3.4.6 Home Based Education Model

"This programme is meant for children who are physically handicapped also to the extent that they cannot attend a school, or who live where a school suitable for them is not available." The purpose of this school is that the physical incapacity should not and need not create a "mental vegetable". If the children are unable to attend the school, education can be brought to them.

In this approach, specialised teachers are nominated routinely to minimise interruptions in a student's education caused by short or long time confinement to home. The special teachers in this system are assigned with a caseload, and visit the student in the home on a regular basis. The major responsibility of these teachers is to assist the child's regular classroom teacher in preparing instructional plans and guidelines which can be pursued with the homebound student on one-to-one tutorial basis. It is desirable that the learning environment should be made more compatible to the child's basic physical and emotional needs in this system. The homebound programmes are rarely practised in Indian conditions.

3.5 UNIT SUMMARY

- Education of children in India are catered by mainly four types of schools: special, general, open and non formal.
- There are various Models of Education available for disabled children such as Resource Room Model, Itinerant Teaching Model, Distance Learning Model, Alternative School Model, Home Based Education Model

3.6 CHECK YOUR PROGRESS

1 Name the following :

1.1 Types of schools available in India

1.2 Models of Education available for education of children with disabilities.

2. Give brief notes on the following :

2.1 Special schools

2.2 Itinerant Teaching Model

2.3 Home Based Education Model

3.7 ASSIGNMENTS

Prepare a Report regarding the types of schools and Models of Education available in your Block collecting secondary data from various sources and give your suggestions and recommendations for promotion of education of the children with disability in your Block.

3.8 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

3.8.1 Points for Discussion

3.8.2 Points for Clarification

3.9 REFERENCES/FURTHER READINGS

UNIT 4: WRITING

STRUCTURE

4.1 Introduction

4.2 Objectives

4.3 Curriculum Adaptation for Children with disability.

4.3.1 Curriculum Adaptation for Children with VI

4.3.2 Curriculum Adaptation for Children with MR

4.3.3 Curriculum Adaptation for Children with HI

4.3.4 Curriculum Adaptation for Children with LI & CP

4.3.5 Curriculum Adaptation for children with Learning Difficulties

4.4 Unit Summary

4.5 Check Your Progress

4.6 Assignment

4.7 Points for Discussion and Clarification

4.8 References/Further Readings.

4.1 INTRODUCTION

In this unit, you will study the importance of adapting and organising curricular and co-curricular activities for children with various disabilities. It is important that you as a teacher should realise that children with specific disability can not be taught like normal children. They may need special attention as well as adaptation of curriculum to cater to their specific needs You have to make a conscious effort to structure, modify and develop certain curricular and co-curricular as well as leisure time activities for children with specific disability.

4.2 OBJECTIVES

After studying this Unit, you will be able to

- understand the need for adapting and organising curricular and co-curricular activities for children with various disabilities;
- plan leisure and recreational activities suitable for children with specific disability..
- make normal children to accept participation of children with disability along with them.

4.3 CURRICULUM ADAPTATION FOR CHILDREN WITH DISABILITY

4.3.1 Curriculum Adaptation for Children with VI

These children could be divided into two main types.

Those for whom braille or recorded tapes must be the medium of instruction.

Children with low vision, who can read print with magnification in good and defused lighting.

By and large, in both cases no significant modification is required in the curricular content. However, many boards of secondary education have exempted blind children from appearing in Math & Science in the 10^{th} and 12^{th} class examinations. They are allowed to take music or an additional at language. Therefore, many schools teach science and maths to children from 6^{th} to 8^{th} class but discontinue these subjects from 9^{th} class onwards. This is not absolutely necessary in the light of modern equipment now available. It is possible for a blind child to take 10^{th} or 12^{th} class examination with Math and Science. Over the year changes may come.

Special equipment is needed for teaching Braille, Mathematics and Science. Embossed maps may be necessary for teaching social studies.

It may be necessary for a teacher to adapt his/her teaching strategies to suits the needs particularly of blind children. The following points should be borne in mind.

1. Show models instead of illustration.
2. Orally say, what ever you write on the black board.
3. Assignment should be taken either in braille or on tapes. If both are not possible oral examination may be necessary.

4. Orient the child fully to his classroom and the school building. Do this bit by bit so that an accurate image is formed in the child's mind.
5. It will be preferable to adopt what is sometimes called the buddy system. This means associate one other peers who will take the responsibilities of giving the blind child lecture notes, taking him out when necessary, playing with him on suitable occassions.
6. Remembers that games can be adapted. For example, adapted chess and card are readily available from NIVH, Dehradun. The cricket ball can be adapted by pinching a bell in it so that a blind child can play cricket. International Cricket matches are organised annually for blind people separately. Even the badminton, table can be adapted.
7. Encourage the child to be as mobile as possible within the school campus.
8. Let him use in the classroom, all the equipment he needs for doing all the subjects taught in the school.
9. Given the right environment, equipment and encouragement, the blind child should be expected to perform as well as the rest of the students.
10. Blindness should not be treated as an excuse for post performance.
11. Encourage all the students in the class to interact freely and without inhibition to the blind child.
12. Enforce the same discipline to the blind child as it applies to other children. There should be no positive discrimination in matters of disciplines with blind children.
13. Low vision children usually do not require special methods except perhaps giving them more time for doing assignment. If they have mobility problem, some visual orientation may be given.

Co-Curricular

Blind students can participate in many co-curricular activities. The following examples will illustrate this point.

Adapted chess is available and blind and sight students can play together.

Ordinary playing cards have been adapted and again blind and sighted children can play together.

Cricket ball can be adapted and blind and sighted students can play cricket together. In fact, blind students can also participate in the school tournaments.

Blind students can join in essay writing competition.

Blind students can engage in debating story telling, recitation and other similar activities along-with sighted children.

Blind students can play Kabbadi, Skipping.

With some help, they can engage in running races.

Blind Children can play musical chairs.

Many more activities can be designed by an innovative teachers.

4.3.2 Curriculum Adaptation for Children with MR

For mentally retarded children the curriculum should be adapted to suit their needs. The teacher has to select/develop suitable teaching learning material and involve parents and siblings in planning.

The primary level education has standardized curriculum – may it be Central Board or State Board. Minimum levels of learning (MLL) has also be prescribed by the Education Department so that certain standards can be maintained through out the country. However, children with mental retardation cannot master the primary level educational content. As the evaluation system (examination system) has 35% for a pass mark (only about 1/3 competency) many mildly retarded children seem to pass and manage to go upto 4^{th} or 5^{th} class. If you test their competencies, they may practically function at a much lower level. Letting them to continue in the regular school as long as they cope is the right practice because it helps them to be with non-disabled people and learn a number of coping skills in natural environment. At the same time, we should be cautious to see that the curricular load is not too much beyond their capabilities and the individual needs of the retarded children are not compromised. Let us see here, some ways of developing/adapting curriculum and teaching methods to suit their needs within the classroom.

4.3.2.1 Curriculum

Ability of a mentally retarded person will be upto learning of functional literacy and numeracy skills. Functional refers to reading, writing and math skills that are required for daily living – such as reading and writing name and address, a simple letter, shopping list, calculating

`how many', `how much', `how far', `how long' understanding and using more-less, empty-full, cheap-costly, tall/long-short, that are involved in day-t-o-day activities. If you look at the class books upto 3rd class, you will find most of the above concepts are covered. Chapters in the books which are not relevant to daily living can be given less importance by the teacher when she teaches a retarded child and focuses on those lessons that are relevant and useful to him. This brings us to the first task of **considering existing curriculum** for its relevance to mentally retarded child. After selecting the suitable items, the teacher has to go in a phased manner teaching the child. Remember, retarded children take longer to learn a concept in comparison to a non retarded child. Therefore, the prescribed content for non-retarded children should be reduced – including only the functionally relevant ones. It may even mean teaching upto limited class 3 level curriculum for 5 to 6 years to a retarded child. The focus should be, his learning and applying the learnt concepts in daily living.

After selection of curriculum, `how to teach' should be decided. Mentally retarded children learn better when there is concrete experiences, rather than just lectures. Providing on-hand experiences along with other children helps. Here, peer tutoring helps. Science and social studies, combined to be called as environmental sciences is a good idea for these children. Include only functional chapters such as health and hygiene, cleanliness of self and surroundings, good feeding habits, body and oral hygiene, safe-drinking water and such other useful topics. By this you are confirmed that he learns what he will use. Remember, retarded children have very poor memory and therefore, even if those topics which are not of relevance to daily living is taught he is likely to forget. **Whatever he has learnt should be put to use regularly.**

4.3.2.2 Curricular adaptation

After selection of curricular content, decide: 1. what can be taught directly, 2. what needs adaptation. Adaptation refer to simplifying, using additional teaching learning materials (TLM), physically positioning of the student and arrangements with family and peers for teaching purposes.

While teaching reading, the child with mental retardation might need picture clues in the beginning while the other children may be in a position to read words and sentences. Provide the retarded child with flash cards having picture and words. Teach at his pace of

learning. Do not hurry him to `catch up' with others. Similarly in number work counting and addition may need real objects initially. Follow the sequence. For instance, let us take the most basic counting skills upto 10. It needs the following sequence:

1. Object handling and counting – beads/seeds/pencils/stones – pick up each piece say the number and drop in a container.
2. Objects in a line – * * * * * * count by pointing with fingers without touching – left to right.
3. Objects in line – * * * * * * count without pointing and tell the total.
4. Objects in a cluster – * * * * * * / * * * * / * * * count without pointing and tell the total.
5. Objects drawn on paper – count and tell, later write.
6. Count moving objects – kites, birds, fish, car – as they are moving.

This sequence is necessary for mastering the learning by a retarded child. If we skip steps, he may fail to gain competency. Keep different items for counting on different occasions. It provides variety. It also teaches him whatever is the object, the quantity a `X' number represents is always the same. By going through this concrete experience, a retarded child understands. Give him opportunities to apply the learnt skill in variety of environments. Example, counting children in class, counting plates and glasses at home and so on.

Similarly for reading and writing, the approach used for a retarded child will be a `whole word approach' rather than alphabets and then words. Show him a picture of a word – cow, write cow under it and tell him to identify the written word cow from a group of words shown to him. Later, let him write the word following the sequence of 1. tracing, 2. joining dots, 3. copying, 4. filling one missing letter, 5. filling more missing letters, 6. independent writing. Add more words gradually. Introduce nouns first as they have concrete examples and then action words and abstract words. These two examples in literacy and numeracy areas suggest the kinds of adaptations expected from the teachers in educating retarded children in the regular schools.

Given below are some tips to teachers:

- Multisensory involvement is important for children with mental retardation. Therefore, allow them to see, hear, feel, say and do.

- Initially, you hold the child and help him perform such as your hand on his hand, to demonstrate tooth brushing, self-feeding, writing, buttoning and so on (physical prompt).
- Gradually withdraw your help and watch him perform with your verbal instruction (verbal prompt) or with your gestures (gestural prompt). Allow a classmate of the child to give the prompts under your supervision.
- Appreciate the child for his every attempt towards the objective.
- Keep reminding him of earlier learnt activities while he is on a new task, as children with mental retardation forget easily.
- Allow opportunities to perform learnt tasks in varied environments to generalize the learnt task.
- Imitation learning is a strong characteristic in these children. Provide ample chances for imitating the teachers and peers.
- In preschool years as the abstract and symbolic learning is limited, children with mental retardation benefit when integrated with normal children.
- All the reading, writing and arithmetic readiness activities can be introduced as for normal children. However, the teacher's **attention and repeated instructions are essential for a child with mental retardation.**
- Seat the child in such a way in the class that the teacher has an easy access t him/her.
- When you see signs of fatigue, or signs of getting distracted/losing attention, change activity to sustain attention.
- Do not be disheartened by his slow learning ability. Remember he is progressing at his own pace.

4.3.2.3 Teaching Learning Materials (TLMs)

We have seen that there are not many specific teaching learning materials exclusively for mentally retarded children. In the case of a blind child, Braille and abacus become a necessity. As retarded children learn to use what we generally use in our day-to-day life can be used by a mentally retarded child also. In fact, it is better to use materials as they are in natural setting rather than specialize them. One major difficulty with persons with mental retardation is their ability to generalize, that is, use a skill learnt in one environment in

another situation. Hence, if we specialize their materials to use, they may not be able to adapt to environment without that materials. However, there are certain simple changes and adaptation that can be made so that they function independently. This needs some thinking on suitable selection of materials as well as making minor modification based on individual needs.

- ***Importance of TLM***

If independent living by the retarded child is the ultimate aim, any step towards actualizing it is worth the time and effort. One of them is suitable selection and adaptation of TLMs. While talking about learning by mentally retarded children, we have been constantly referring to concrete examples, as they cannot understand abstractions. This necessitates materials that can be experienced by the five senses, leading to understanding and concept formation. In the classroom or outside, use of actual objects along with verbal explanation is necessary. Allowing the child to experience the new input through appropriate method and materials is the crux of educating the retarded child. Therefore, importance or TLM cannot be under-estimated.

- ***Learning and Functional aids***

While teaching children, we use certain material. Some are used for a short duration, while some are used permanently. We know that mentally retarded persons need concrete experiences and examples for their learning. Once they have learnt, we do not need the material any more. For example, stones, beads, seeds, spoons and such other small objects can be used for teaching counting. After the child has learnt to count and has understood what is 1, 2, 3, 4....9...10 and so on, by looking at the number symbol, the objects are not needed any more for counting. Similarly in reading and writing, initially you may use pictures and help the child to name them, read and write. After accomplishing independent reading of the name, the picture or the object is not needed. Such objects and materials are called **learning aids**. They will not be needed by the child for learning purposes once the concept is understood.

On the other hand, **functional aids** are required for a person with disability to be used all through his life, and it compensates for his disability – hearing aids for persons with hearing impairment, crutches/calipers/wheel chair for locomotor disabled person, cane/Braille materials for a blind person, written name and address

for identity for a mentally retarded person are a few examples of functional aids. One has to be very careful in selection or development of teaching learning materials.

- ***Consideration and selection/development of TLM***

  If well selected, some can be used **as they are** – beads and blocks, garden tools and so on. **Some need modification** for use by retarded person – shirts with Velcro instead of buttons, skirts and pyjamas with elastic instead of tape and **a few need to be exclusively developed** – name cards, sequence of hair braiding to make it easy to difficult steps (for girls). Whether learning or function aids, first check if it can be used by the retarded person as it is. As there is variation in the ability of the retarded persons utility of readymade material as it is, will depend, to a large extent on the user. If after trial you find that it needs modification, then only adapt it. Do not be in a hurry to adapt. The more the object used resembles the regular one, the more chances of generalization by your trainee.

  Examples of functional aids for mentally retarded children include adapted/simple calculator, digital watch, address card, modified brush/towel to scrub/wipe difficult to reach areas while bathing such as centre of the back, pictorial shopping list (if they cannot read), pictorial recipe book and so on.

  While developing or selecting TLMs make sure that the material is

- durable.
- has multipe utility.
- age appropriate.
- affordable.
- accessible by school and family.
- maintenance is easy.
- breakable/non-toxic.
- serves the purpose it is meant for.
- minimizes transfer of training (easy to generalize).
- novelty is maintained.
- updated.
- easily available.

- leads the learner towards independent living skills.

4.3.2.4 Functional programming

The emphasis in a functional programming is that the activity learnt is directly applicable by the individual in daily living situation. For instance, in many special schools it is often seen that the children are trained to put nuts and bolts together, or build a tower of wooden blocks or match shapes. But in our daily life how many times do we put nut and bolt together or build a tower of blocks? It is true that the general belief has been that, training in such skills would improve performance in other tasks requiring such coordination. But in experience it is found that the child does not always apply the skill acquired through these activities in a generalized situation. Instead of anticipating a generalization to occur, the child could be directly trained on a particular activity that he needs to perform more frequently, such as for instance, putting the nuts and bolts together in the carpentry unit with appropriate materials to be held together between the nuts and bolt. Similarly, to train in self feeding skill for a child who doe snot hold food items with fingers, the training should be directly with food items rather than fine motor skills with thread and beads or peg mosaic. The food items with which the training is given should vary, starting from simple ones and proceeding to complex ones such as biscuits, pieces of chappaties, dosas, idlis, small balls of rice and dal, big pieces of vegetables and finally close rice food like curd rice. Thus the training for holding with fingers and directing to mouth is given directly with food items and not with other fine motor activities. Such an activity training is more functional and easily generalizable.

A child who has learnt to add 2 + 3 = 5 in a classroom correctly, for instance should be able to say that Daddy spent Rs.5, if he is told that Daddy has bought bread for Rs.2 and fruits for Rs.3. Often times, one of the observations that the teachers make is that the child is very good with arithmetic in classroom, he does even 2 digit addition, but cannot say how many people are there if there are 3 men and 4 women in a room. Why does this happen? Simply because, the addition taught on paper is not function oriented and the child has not learnt meaningful counting that can be generalized. The teacher, while teaching addition, should take into consideration the functional requirement of it in everyday living and let the child experience it.

Taking into account the need for the skill, age appropriateness, generalizability and ability to maintain, if we take a look at the activities that are carried out for the mentally retarded persons in a classroom, such as putting shapes in form boards, buttoning on button frames or nesting baskets, it is seen that they are inappropriate. If these are replaced by activities directly useful for the child such buttoning on his own self, stacking utensils in kitchen/bricks or wooden blocks in factories or workshops sorting vegetables, food grains, detergent or stationery items and packing or storing them, that will be more useful, generalizable and would lead to domestic or vocational skill training. Similarly, shopping skills and restaurant skills should be given i a shop or restaurant situation respectively so that it is learnt in the right place and is generalizable.

A functional programming, in short, should aim at leading a child towards reduced dependence on others and provide maximum personal, social and occupational competency.

4.3.2.5 Involvement of Family

In special education, parents and family are partners in training. Every training given in school is a step towards independent living. This requires the classroom learning to be extended to home situation. Another good reason why parents should be involved is because it is **their** child. They have a role in decision making as to what is needed for the child. Some times, their expectation may be unrealistic yet, with counseling they are likely to come to terms with reality. Nevertheless, joint decision making by parent and the trainer is likely to get the parental cooperation for planning and implementing programme for the child.

- ***Importance of family Involvement***

The professionals interact with the child fragmentedly during certain time periods in a retarded person's life. Each professional gives his advice, guidance and training tips to parents. It is the parents and family who are always with the child and integrate the various programme schedules given by professional and implement with the child. In addition, as the child grows the needs vary based on his growth, development and interaction with the changing environment. One constant factor is his family. The family members are the ink between the professionals and the child at each stage. No training programme will be successful if family is not involved.

- ***Role of parents***

  As the development is slow in children with mental retardation, they take longer time to learn when compared to other children. Children with mental retardation also have difficulty in transferring what they have learnt in one situation to another situation. To get the maximum benefit of teaching children with mental retardation, it is essential that parents are involved at each stage. Whatever is taught at school, the teacher should make an effort to inform the parent so that similar activities at home environment with household materials can be provided by the parent. For instance, if the teacher has taught colour red with blocks and beads at school and told the parent so, the parent will automatically use tomato or red shirt or red chillies to strengthen the concept learnt in school.

  The teacher should keep herself informed about the child's medical problems, and the medicine she takes so that she can suitably organize activities for them. For instance, those children with epilepsy should be given activities not involving sharp instruments, fire, swimming and such other tasks that are dangerous.

  Creativity and imagination of the teacher is very essential in training the mentally retarded children, as variety sustains the interest of such children. Alertness and observation of the child's reaction to his environment will provide the teacher with clues for training.

  The preschool and primary teachers lay the foundation for education of a child on which his whole life is built. Hence, there is little need to overemphasize the role of the teacher at this age. Her commitment, creativity and ability to teach is of utmost importance for successful integration of disabled persons in the society.

  Following are readiness activities for children with mental retardation. Though some activities are listed in line with the `School Readiness' requirement of normal children, it is cautioned here that all children with mental retardation will not learn at the same pace. The teacher has to aim at ensuring mastery of the skill in the child though children take their own of time to achieve the mastery. Taking suggestions from this guide book, the teacher can develop her own activities.

4.3.2.6 Leisure and Recreational Activities

Leisure and recreational activities have a place in school curriculum apart from regular academic learning. Planning of recreational activities are important for bringing out innate creative abilities in children. A non handicapped child is able to plan and select leisure time activities for himself

at home, at school and in the neighbourhood, apart from the structured, organized leisure activities by the school teachers and family members. Where as a retarded child is not able to either plan or actively participate in activities planned by non disabled children due to the lack of initiation and skills. Generally, the main leisure activity for them is to watch Television or listen to music and sometimes indulge in self-stimulatory activities such as rocking. Hence, there is a need to provide opportunities to children with mental retardation to spend their leisure time at home, at school, and in the neighbourhood and community by planning appropriate activities.

Planning of co-curricular activities is an integral part of school curriculum whether it is for non-handicapped or handicapped children. All of us need some time to spend in leisure and recreational activities such as listening to music, reading novels, magazines, drawing, painting, stitching, seeing pictures, attending musical shows, gardening, etc. Children develop hobbies based on their interest and encouragement from elders and teachers. In case of children with mental retardation, as mentioned earlier, we need to plan suitable activities for them to suit their abilities. Hence, we need to make a conscious effort to plan appropriate games, sports and art and craft activities for children with mental retardation.

4.3.2.7 Sports and Games

There are certain rules that need to be followed when we participate in sports and games. We need to remember the teaching principles and strategies while planning and training children with mental retardation in sports and games.

Points to remember

- Select the simple exercises in the beginning which involve only two steps. Increase the steps gradually as children learn to do two steps.
- To motivate children are give colour flags, colour ribbons to hold while doing exercises. Some times, it may be a distractor for children who are overactive. Avoid using them if you find children are distracted.
- Use a thick rope or draw a white thick chalk line to stand on the line for any type of races when you teach.
- Prepare them to follow different types of instructions to start the race (whistle, flag, saying one, two and three).
- Introduce games with simple rules.

- Modify the games to suit the needs of children. For example, the snakes and ladder game available in the market can only be played by children who knows numerals upto 100. How many children with mental retardation will have that capacity? The same game can be modified in such a way that a child who knows numbers below 100 can also play the game. Similarly other commercially available games can be modified to suit the ability of children with mental retardation.
- Plan games that sharpen concentration and memory, logical reasoning and judgment, sense of sight and touch.

We often hear form parents of children with mental retardation that their children cannot remember for long what they learn and what they are told to do. Varying amount of attention and concentration is required for learning any activity. Concentration means paying attention on an activity for a longer periods of time. No learning takes place if we do not pay attention. You can plan certain games that improve concentration and memory. Some of the games are listed below.

Games that sharpen concentration and memory

1) Picture Observation

Place 20 pictures of considerable variety on a table top and cover them with a cloth. Have your child go to the table for one minute as the cloth is removed and study the pictures. Then cover the pictures again and ask the child to try to identify and describe most accurately what he or she has just seen.

2) Window Judgment

This game is good on a long walk. Have the child look in a shop window for two minutes and then try to memorize as many objects as possible.

3) The Lost One

Have one child in the group leave the room. While that youngster is out, have another child leave the room, too. The first child is called back and has to identify who the missing child is within ten seconds.

4) Hidden Treasure

Give each child pictures of small objects that are hidden throughout a room. The children then have to look and find the objects. The youngster with the longest correct list of objects is the winner.

5) Word Hunt

The object here is to teach children the art of quick recall. Divide the group into two teams. Call off a category (animals, flowers, food items) and then a letter. The first child to call out a word or name that fits into the right category and that begins with the letter mentioned, scores a point for his or her team. The first team to score ten points wins.

Games that faster the development of Logical Reasoning and Judgment

Logical thought is controlled thought and since this is the basis of the application of judgment and reasoning, the child's level of mental ability must be take into consideration, otherwise one may expect either too much or too little for the child. If one attempts to develop self-maintenance skills in the child, the youngster must be taught to utilize judgment effectively in many areas.

Logic is the art of thinking well. The mind, like the body, requires that it be trained before one uses its powers in the most advantageous way.

1) Missing Parts

Draw simple pictures and leave out on essential part. Have your child draw in the missing part. Try a house, a tree, and a person for starters. Then try household articles. Have the child name the part that is missing as well.

2) What is Similar

Here is a quick, simple way to introduce your child to the world of abstract thinking.

Play the game while you cook dinner or when your child is getting dressed, picking up toys, or eating a meal.

"A cup and a glass. What is different about them?"

"A shirt and a shoe. What is similar about them?"

"A pencil and crayon. What is same about them?".

3) What should I do?

Ask the child "What should I do?" For example, ask, "Oh, I am tired, what should I do?" Your child answers: "You should sit down."

Other questions might be: "I am hungry, what should I do?"

"I am thirsty, what should I do?"

Games that improve Kinesthetic abilities and visual motor skills

1) Atlas Walk

Have the child balance a book on his or her head and then walk rapidly to a turning point and back. If the book falls, it may be replaced, but otherwise hands may not touch it. Have the child try to walk a little bit faster the second time.

2) Pick a Card

Prepare a set of cards with a different direction on each card and place the cards face down on a table. Have the child pick a card, read it, place it face down again and then follow the direction given.

Examples of direction you might want to use are:

Drink some water.

Open the door.

Take off your coat.

Do not run, walk.

Fly like a bird.

Games that stimulate the sense of sight

1) What did you see

Prepare a tray of small objects - pen, pencil, button, crayon - and cover the objects with large cloth or sheet of paper. Remove the cover for a few seconds while the child looks at the objects. Replace the cover and say "Tell me one thing you saw". This continues fill all the objects are name.

2) Quick change

Remove an item - toaster etc or change things around - a radio and a clock, when the child is not looking. See if the child spontaneously notes the change. If not, ask: "What looks different in the room?"

3) Window shopping

Take the children for a walk and have them look in the windows of shops that you pass. When you return from the walk, ask the children to describe what they saw.

Games that Stimulate the sense of hearing

1) Knock Knock

Ask your child to close his or her eyes. Then see if the child can distinguish the sounds as you carry out the following actions.

Knock on the floor, on the wall, on a table.

Knock on the refrigerator.

Knock on a box of cereal.

2) Sound Associations

When a visit is made to a restaurant with your child, have the child listen to all the sounds around and then try to match them to the person or object producing the sounds. Give assistance if necessary.

Games that stimulate the sense of Touch

1) Touch and Tell

Put an article in a large paper or cloth bag and tie the bat with a string. Then have the children feel the bag and guess what is inside.

2) Who's Bigger?

Blindfold the child and have the child arrange rubber balls in order of increasing size. Set a time limit.

Outdoor games

- You can teach children to run, hop, jump, which would help them to participate in various types of sports.

- Games such as hide and seek, catching and throwing, musical chairs, basket ball, floor hockey, volley ball, etc. are played by children with mental retardation. The Special Olympics India has been regularly organizing sports and games for persons with mental retardation.

Indoor games

In villages and small towns children play a number of indoor games (eg. Five stones, etc.) in different parts of the country. Compile all those indoor games and teach children so that children with mental retardation can participate in such games along with non-handicapped children in their

neighbourhood. You can also plan a number of card games, bingo, trader game for children.

4. 3.2. 8 Gardening

Gardening is another leisure time activity. Children can see seeds growing into plants, flowering, etc. Every one is interested in making their surroundings clean and green. Kitchen gardens, indoor plants, flowering plants can be grown in premises of centers/homes to utilize the leisure time of children. Infact, for some gardening skills can become an occupation.

4. 3.2. 9 Art and craft activities

- Fix a long brown paper/while paper on the wall. Let children draw, colour, paint what they would like to. Guide them in between in selecting the colour or mixing colours.
- Use old magazines, newspapers, invitation cards to cut pictures which can be used for making a collage. A lot of waste material can be used to bring out a beautiful collage work. This can be a team work.
- Use clay to make different things.
- Use cardboard cartoons, plastic bottles, bottle tops, straws, ice-cream cups, wooden scapulus, plastic wire, spools, rubber bands, corks, lids, etc. to make various things. It brings out the innate talents of children.
- Collect waste papers, envelops for making paper mache.
- Take children for a nature walk. Collect leaves, flowers, sticks, stones, shells, etc. which can be used for making cards, collage work, wall hangers, etc.

The above listed leisure and recreational activities are a few to give you an idea. You can create or frame several games. There are a number of games played locally in every part of our country. List those games, and simplify them if necessary for children to play. Similarly depending on the local resources, various art and craft activities are popular in different areas. Hence, it is left to the trainer to identify the leisure activities popular in their own areas to teach children.

4.3.2.10 Community participation

Any rehabilitation programme aims at preparing an individual with disability to be a contributing member of the society within his/her capacity. This

requires participation of persons with disabilities in various activities that are taking place in neighbourhood and community. For this, we need to bring an awareness among general public regarding the positive aspects of persons with disabilities, which would promote healthy relationship between handicapped and non-handicapped persons. As people are not aware of the abilities of persons with disability, often we tend to underestimate their capabilities.

As a community worker, you need to educate the children, young people and adults about children with mental retardation and what they are capable of. Follow the strategies given below:

- Take children with mental retardation to the parties, temples, theatres, functions, community festivals along with you. Introduce them to non-handicapped children. Identify a task which a non-handicapped child can do along with retarded child. Guide them in handling the retarded child. Often it is noticed that normal children show a lot of patience, interest and perseverance in training a retarded child (peertutoring).
- There are youth clubs (in small towns and villages also), who undertake a lot of community activities, games and sports, cultural activities. Let young people with mental retardation be a part of those clubs. The association with non-handicapped persons helps them to learn socially accepted behaviors and better communication skills.

4.3.3 Curriculum Adaptation For Children With HI

4.3.3.1 HEARING HANDICAPPED

Hearing impairment is a great barrier to the normal development of language. This child is at a distinct disadvantage in virtually all aspects of language development. Language being a very powerful tool of learning its importance in academic achievement cannot be undermined. A significant number of educators of the deaf individuals behave that many of the problems of the hearing impaired people related to social and intellectual development are primarily due to their deficiencies in language. Therefore, to help hearing impaired individual develop optimally in all aspects of learning i.e. social, emotional and cognitive, it is imperative that early interventation begins with the identification of the hearing impaired child, the correspondence text is divided into two parts the education of the Pre-School Child and the education of the School Aged Child.

4.3.3.2 *Education of the Pre-School Child*

Pre-school programs are important for children with hearing impairments especially for those who severe and profound hearing losses. Equally important are programs for families of these children. Parents need to know how to help their child acquire language and communication skills, as well as a positive self-concept. They are primarily responsible for the child's integration into the family neighbourhood, school and community. The training, that families require can best come from professionals at an infant or pre-school program. They can help parents cope with a range of issues from understanding the social and language development of their child to the proper care and fitting of hearing – aids.

Young children, particularly those who are deaf, and their families, need intensive educational efforts during infancy and pre-school year (Appell 1982). Many families choose to learn some form of sign language or manual communication system, so that they can communicate more fully with their child. Some professionals propose that both infants and their families be taught sign language(SL) and the manual system and try to develop language "naturally"

Today, even infants can wear hearing aids and learning to take care of such equipment is an important part of their growth process. The need to use sophisticated equipment and incorporate it into their daily living need to begin early in life.

What should a good pre-school program have?

The early intervention curriculum should be comprehensive and have 3 main foci

a) the total development of the child within the context of his family i.e. physical, mental, social emotional and cognitive.

b) Parental knowledge of normal child development and their child' hearing abilities.

c) Support and skills to assist the child's assimilation into the family system (Bodner-Johnson 1987)

These programs are most effective when an audiologist, an educator, and often a person who is deaf is included.

- Children who do not get used to hearing aids early in life learn to "tune out" sounds. So, hearing aids should be introduced as early as possible.

- Training with prerecorded environmental sounds with their corresponding pictures.
- Everyday speech and high frequency words to be taught in the natural environment i.e. amidst naturally occurring noise and sounds.

4.3.3.4 Speech Reading

Speech reading involves using visual information to understand what is being said. There are 3 kinds of visual information (Sunders 1982).

- Stimuli from the environment i.e. the context sound coming from the kitchen or hall.
- Stimuli associated with the message but not part of the speech e.g. action of stirring milk with the words used.
- Stimuli directly connected with the population of speech e.g. relevant lip and tongue movements.

4.3.3.5 Total Communication

A number of research studies have found that deaf children of deaf parents who had been exposed to manual methods, which compared to deaf children of hearing parents who had not been so exposed, were superior in language skills, academic achievement, reading, writing and social maturity.

Oral and manual language should be taught at the pre-school level.

The problems facing the educators of children with hearing impairments and formidable. One major problem is communication.

Programs with oral emphasis view speech as essential for the deaf persons integration into his 'hearing world'. Much emphasis is given to amplification, auditory training, speech reading and above all talking Oral Techniques.

a) Auditory Training - is a procedure of teaching the deaf or hard of hearing child to make use of what hearing the possesses. The benefits of auditory training have been augmented by rapid technological advances in the development of hearing aids.

b) Speech – Reading - sometimes inappropriately called lipreading – involves teaching hearing impaired children to use visual

information to understand what is being said to them. Other visual stimuli can help the hearing impaired person to understand spoken messages.

Auditory Training involves 3 major goals –

a. Development of awareness of sound.

b. Development of the ability to make gross discriminations among environmental sound e.g. telephone ring and bicycle ring.

c. Development of the ability to discriminate among speech sounds e.g. sound B. K etc.

Total communication (T.C) using a variety of methods to assist the deaf child in expression and language development. Speech to be supplemented by one or more manual communication techniques, and meaningful communication to be encouraged between teacher and students and among students.

Sign language i.e. using gestures to represent words and concepts. The shape, position, and movement of hands, the facial expression and the intensity with which the motions are made all communicate meaning in sign language. (SL)

Finger Spelling to be used inconjuction with other methods of communication. Uses of sign language and finger spelling particularly to spell out proper names for which no sign exists and to clarify meaning which is not clear.

Cued Speech is a method for supplementing speech reading by using hand signals. 8 hand shapes (cues) are used in 4 different positions near the lips the hand serves to identify sounds that cannot be distinguished by speech reading alone. The cues are neither signs nor finger spelling.

Thus, T.C. encourages the deaf child to develop expressive and receptive language by using several channels of communication simultaneously. Teachers and students practicing T.C. generally express themselves by speaking and signing and understand others their speech readig, auditory training and finger spelling. T.C. provides a reliable, receptive, expressive symbol system in the pre-school years (Denton 1972).

In short, every hearing impaired child should have access to a good program of communication that will be appropriate to his or her own unique abilities and needs.

4.3.3.6 *Education of the School Age Child*

a) The educational needs of two groups of students with hearing impairment are very different from each other. The challenges that hard of hearing students face are different from those of students who have substantial hearing losses. Differences exist in the way they are taught, what they are taught, and for some of these students, where they are taught. Therefore, a classification of students with mild to moderate hearing losses and students with severe to profound hearing losses needs to be made.

Children with Mild to Moderate hearing Loss : mainstreaming seems to work well for students with mild to moderate hearing loss. Most students with hearing impairment can hear satisfactorily with amplification (i.e. hearing aid) and therefore, can attend school and function well with their non-handicapped peers. Children with mild to moderate hearing impairment need to be taught well with information presented orally and a combinationn of textbooks, lectures and class – discussions.

Along with educational benefits, students with hearing impairment need to acquire social skills in a regular classroom. All children learn to interact positively. Teachers need to encourage support and create opportunities for such interactions to occur. Using tactics like the puzzle technique result in better understanding of the content assigned. Sharing, discussing, and modeling for each other the steps students follow to clarify comprehend and arrive at the correct solutions help student comprehend matter conceptually.

With certain modifications, students with hearing impairment can benefit from regular classes. There are a number of simple techniques and procedures like attending the lip movements, using cued speech help students with mild to moderate hearing impairment to profit more in oral communication situations (Burrow 1983, Kampfe 1984, Teitelbaum 1981,Yater 1977)

b) Children with Profound Hearing Losses : Three different approaches are used to teach students who are deaf -

- Speech only (oral communication)
- Sign only (manual communication)
- Speech and sign together (total communication)

With the oral approach, children must be taught to use as much of the residual hearing as possible (Ling 1984 b). Learn about amplification, how

to speech read (lip read) and how to speak. For the basic oral approach believe that indurduals who are deaf must live and work in a word where most people hear normally and communicate through their oral expression. In doing so, the hearing impaired can become part of mainstream society.

However, oral approach programs have problems (ling 1984a). Some children can benefit but not all "for some children with severe and profound sensorineural hearing losses, the attainment of intelligible speeches are an unreachable goal". Even those who attain intelligible speech the process is arduous, slow and different.

The second education approach is manual communication Sign Language (SL) which is structured and formal,with its own linguistic rules and patterns is one cudely-used form of manual communication SL is not used by most teachers in elementary and secondary school settings. Only 3 % of teachers for the deaf use ASL in their classes. A study (Woodward 1988) found that 35% of the students with hearing impairments use oral communication in their classes. Differences in the use of oral communication related to the individuals degree of hearing loss. (11% with profound losses, 78% with less than severe losses). Oral communication is used depending on degree of hearing loss often finger spelling(FS) a form which closely matches the grammatical form and language and structure of standard English. In F.S. each alphabet has a sign. Words are spelled out.

Liddell and Erting (1989) advocate the use of SL at home and at school for children with severe hearing impairments.

4.3.4 Curriculum Adaptation For Children With LI & CP

4.3.4.1 Adaptation in curricular programme activities and transaction.

As far as the children with locomotor impairments are concerned, they suffer from three major problems loss of limb, deformity of the limb and weakness of the limb. These problems may hinder in his activity of daily living, in terms of, moving, lifting object etc. As far as their other faculties are concerned, like hearing, speaking, mental abilities, they are normal. Therefore, they can pursue the normal curricular programme as the other able bodied children can do. They also do not require any adaptation in the training learning material.

In case, when the locomotor impairment is associated with other disabilities like hearing, speech, mental retardation or learning with difficulty, they will require adaptation in the curriculum which is given in the respective unit.

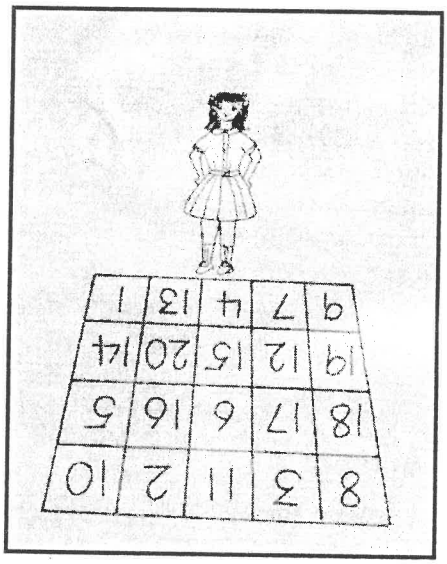
4.3.4.2 Adaptation in Co-curricular programme activities and transaction

As far as co-curricular programme activities are concerned, these children need to be encouraged to undertake as many of them as possible. At the same time, taking into account the safety of the child provide them a disabled friendly physical environment so that their mobility is not interfered with as far as possible.

4.3.5 Curriculum Adaptation for Children with Learning Difficulties

4.3.5.1 Teaching Strategies

This section deals with the teaching strategies, both general and specific, required by children with learning disabilities



Time Telling Test

The ability to tell time is essential for all students to function independently while in school and later as adults. This skill is particularly useful for any child with a special need, who is mainstreamed or entering vocational preparation. The checklist or the time-telling test, providing the teacher with a quick survey of student's ability to tell time. The test is arranged in ascending order of difficulty, that is, each succeeding section requires a

higher skill level. In addition, within section requires a higher skill level. In addition, within sections, items are arranged in the order of increasing difficulty. This format is designed to prevent the tester from frustrating students with continuing wrong answers.

Name _____ Date _____

School _____ Examiner _____

Grade _____ Classroom _____

Teacher _____

TIME-TELLING TEST

Response | Correct | Incorrect | Student's

Part 1 Events in Time

Questions:

What time do you get up?

What time does school start?

What time do you eat lunch?

What time does your favourite TV show come at?

What time do you go to bed?

Part-II Recognition of Time to the Hour

12:00

4:00

1:00

9:00

11:00

3:00

Part-III Recognition of Time to Half Hour

2:30

5:30

12:30

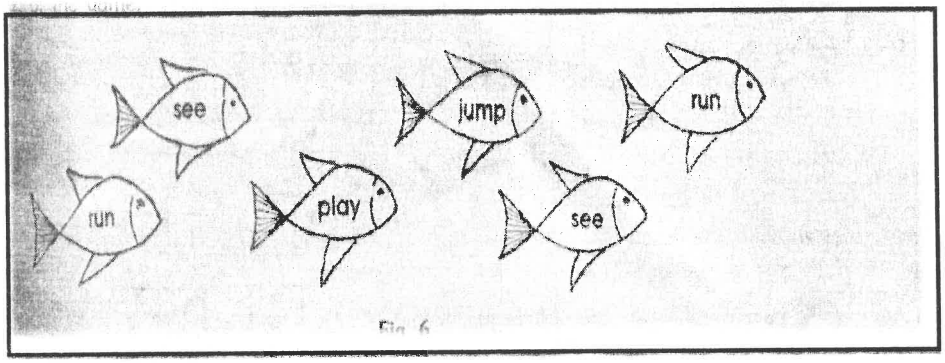
8:30

Part-V Recognition of Time to Ten Minutes	
12:10	
5:40	
2:20	
6:50	
Part-VI Recognition of Time to the Minutes	
4:02	
7:16	
9:43	
11:36	
Part VII Time Problems	
Given	Questions
1. Clock at 1:00	1. How much time until 2:30?
2. Clock at 12:15	2. How much time until 4:45?
3. Clock at 6:27	3. How much time until 6:30?

Games for reading:

Fish: Place the words on coloured paper cut-outs of fish and scatter on the floor. If a student is only assigned four to five new words, make multiple copies of each word.

A student is allowed to continue fishing (picking up the paper fish) as long as he/she can pronounce the words. Count the number of fish caught by each student at the end of the game.

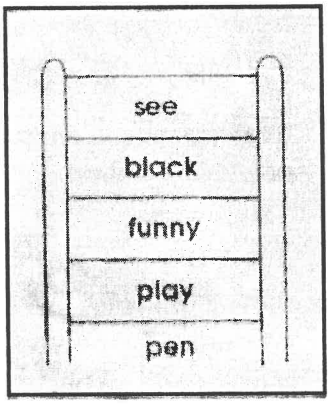


Variation:

Attach metal paper clips to each fish and use a fishing pole stick and string with a magnet attached to the end. When a fish is "caught", the student must correctly pronounce the word or throw back the fish.

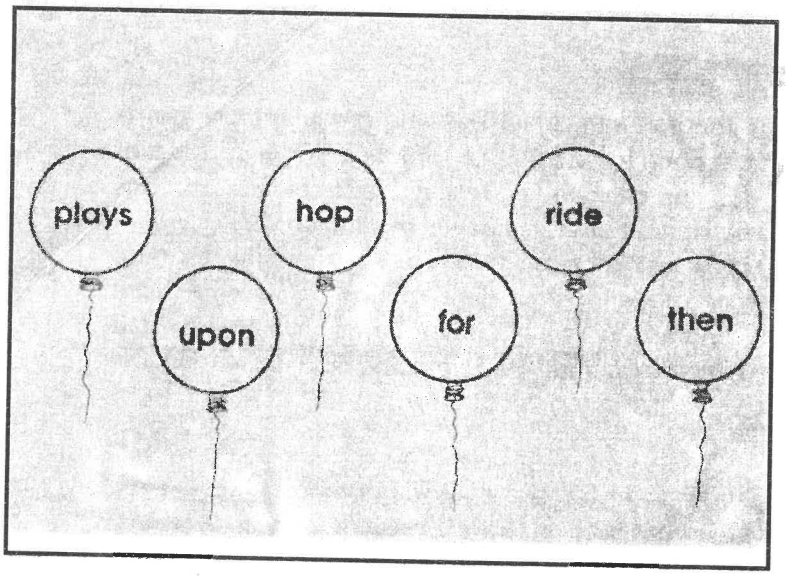
Climb the ladder:

Draw a ladder on paper and fill the spaces with words. A student points to and pronounces each word as he/she "climbs the ladder"



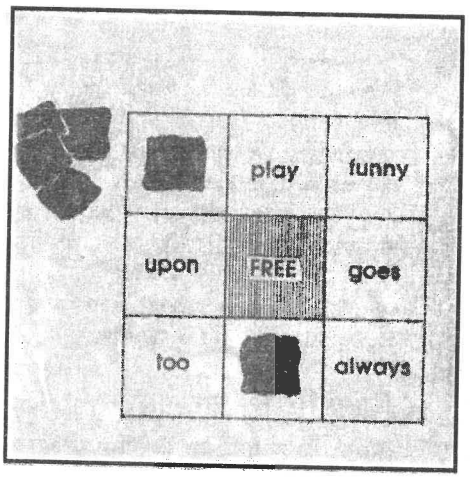
Balloon Pop:

Draw circles on the background and write a word in each of them. As the student pronounces each word, a string is drawn. Reverse the procedure by erasing (popping) the balloons as each word is correctly pronounced.



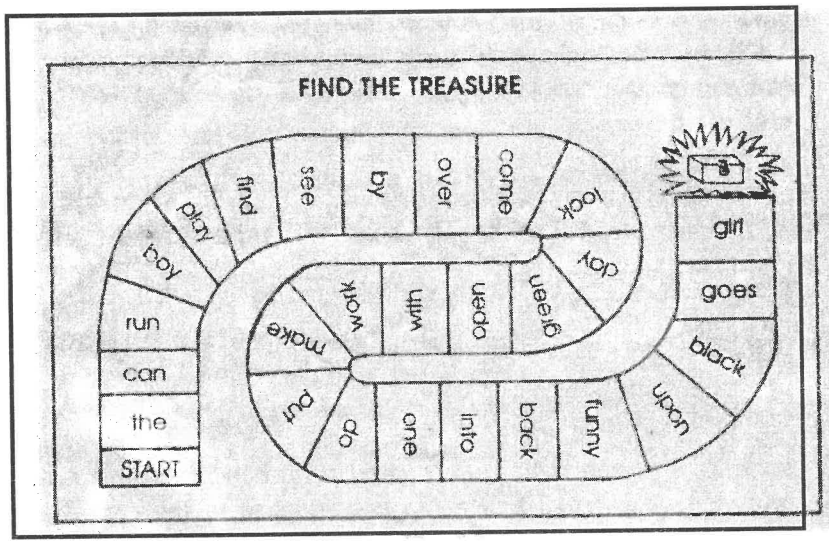
Word Bingo:

Construct Bingo cards with words written in each square. Have a larger pool of words than spaces on the cards so that no two students cards are alike. The caller calls out the matching words on their cards with coloured paper. All squares on a Bingo card must be covered before the game is won.



Game Board:

Adapt game boards to word lists and use a pair of dice or spinners. The student throws the dice and then moves the number of spaces and pronounces each word as the maker is moved. For example: The dice shows four. The student, pronounces the words, the, can, run, boy, before placing the make on that space. The first player to reach the treasure chest wins. If a word is missed, the student returns the maker to the previous position.



Psycho-social Supports:

This section deals with the role of teachers, parent's and peers

Role of parents:

No parent is ever prepared to be the parent of a handicapped child. The parent primarily learns about the child through the experience of family living and professionals working with the parents must focus on these learning experiences.

Although parents may share common problems and reactions, the combinations of reactions that are possible, the intensity of the reactions, and the duration of the reactions are some factors that necessitate that each family be considered individually. For e.g. parents' reactions to the diagnosis of a learning disability in their child may be similar to feelings of grief and be characterized by shock, denial, blame and/or guilt, anger, and sorrow. Initial feelings of shock, denial and disbelief may be followed by feelings of guilt, anger, or depression before the parent reaches acceptance and makes constructive attempts to seek services and incorporate the disability into the reality of daily life.

Parental adjustment might comprise of the following:

- Awareness of a problem
- Recognition of the problem
- Search for a cause
- Search for a cure, and
- Acceptance of the child.

4.3.5.2 Role of Parents, Teachers and Peers

Role of parents:

- Foster feelings of self-esteem in your child
- Do not compare the performance of this child with other siblings
- All children have strengths and competencies and these strengths must be identified and reinforced
- Parents who convey hope provide a major force in helping children overcome adversity and become resilient

- Parents can help children develop a feeling of responsibility and sense of making a contribution to the family and the word
- Parents can provide opportunities for their child to make choices and decisions and promote self-discipline
- Parents can help children deal effectively with mistakes and failures
- If possible, parents should attend training programmes with community.

Role of the General Teacher:

The regular teacher should bear the following in mind:

- Do not let the other children make derogatory remarks against this child.
- Always check his / her work like that of other children. The teacher should tell very clearly to the learning disabled what he/ she has achieved, what are the accomplishments and what are the areas that need improvement.
- Avoid labelling as the child's self perception may be effected by this
- Work in collaboration with the family and resource teachers. The child needs support from everybody
- Many children with learning problems may feel inferior and have a low self-concept. They need a lot of encouragement, praise and support to feel confident about themselves
- Be sympathetic. Avoid harsh comments
- Do not compare the performance of this child with other children in the class
- Make sure that the child is not ridiculed or led to feel let down
- Discuss the problems of the child with the family
- The regular teacher should not consider these children to be only resource teacher's responsibility. She should take care of their special needs as much as she can in the regular classrooms.
- It is apparent that this teacher has an enormous responsibility. It is important that these cooperative and capable people receive preparation and support. For example, teacher assistance teams or coaching are useful types of support.

Role of a resource teacher:

The resource teacher has the following functions:

- Functional assessment
- Preparation of teaching learning material
- Suggesting curricular adaptation
- Make important suggestions and recommendations
- Modify academic assignments
- Co-teach general classrooms
- Provide spot tutoring
- Do remedial teaching
- Parental counselling
- Design specific teaching activities
- Prepare Individual Educational Plan
- Regular monitoring.

Both the special teacher and the general teacher should show the following competencies:

- Have the ability to take advantage of every child's individual interests
- Use a child's internal motivation for developing needed skills
- Should be able to structure the environment in a way so that students are motivated and are actively engaged
- Believe that every child in the class is their responsibility
- Find out how to work with each child, rather than assuring that someone else will tell them how to educate a child
- Know about different instructional strategies and how to use them effectively. This also includes the ability to adapt materials
- Learn what skills a child need and to provide appropriate teaching approach
- Show flexibility and high level of tolerance for ambiguity
- View each child in the classroom as an opportunity to become a better teacher rather than a problem to cope with

- Have excellent observational skills to see as to what caused the behavioural problem
- Above all, all teachers need to believe that `All children can learn.'

Role of peers:

- Encourage the peers to play with this child and not think him to be lazy, stupid or a trouble maker
- Encourage the peers to help this child in learning
- It is very important that peers do not call this child stupid or idiot. As they might already be aware of their problem, such comments would further create psychological problems in them
- Techniques like peer tutoring, small group instruction or cooperative learning help all children learn to live, learn and relate to each other in a positive manner
- Give this child a buddy who is good in academic skills
- Peers should not compare the performance of this child with that of others in the classroom.

4.4 UNIT SUMMARY

- Children with disabilities can not be taught like normal children.
- Curricular adaptation is essential for education of children with disabilities.
- Specific adaptation is required for specific disability. They may need special attention as well as adaptation of curriculum to cater to their specific needs
- The teacher has to.make a conscious effort to structure, modify and develop certain curricular and co-curricular as well as leisure time activities for children with specific disability.

Children with learning disabilities have the ability to learn. Teachers need to emphasize those approaches to teaching that promote active student learning and encourage students to direct their own learning. The focus of instruction should be to stimulate and nourish a students' own mental ability for acquiring knowledge. Some of the key principles of learning are:

- Learning is a constructive process
- Learning is linking new information to previous knowledge

- Learning is strategic
- Learning requires motivation.

Students with learning disabilities need instruction to help them focus, take responsibility for their own learning and learn strategies that they can use to manage their own learning. They must become independent, rather than dependent, learners.

Teachers, principals and resource teachers should find ways to provide the necessary support services to educate all children. The regular education teacher can provide good role models and high expectations for students with particular challenges. But this is only possible if general teacher, resource teacher, school administrators, parents and community all work as a team. Thus, the key to success lies in shared ownership. Teachers will want to realize that all of the children in their schools are "all of our children" and work within a collaborative framework to meet the unique needs of all children.

4.5 CHECK YOUR PROGRESS

1. Give an outline of the salient features of curricular adaptation for any of the following disabled children :
   - VI
   - HI
   - LI & CP
2. What recreational activities can be planned for VI children?

Why do you have to plan leisure and recreational activities for children with mental retardation?

_____

_____

_____

_____

_____

_____

3. List the indoor and outdoor games that can be played by children with mental retardation that are not mentioned in the unit.

4. Compile the locally played games. Design atleast three games which can suit a child with severe mental retardation.

5. Plan two art and craft activities which facilitate participation of children with all severity levels (group activity).

6. Among children with mental retardation the largest in number are

a) severely retarded

b) moderately retarded

c) mildly retarded

7. The children with _____ retardation can be integrated in regular schools

   a) mild

   b) moderate

   c) severe

8. Home based training is best suited for children with

   a) borderline intelligence

   b) mild retardation

   c) profound retardation

9. State true or false.

a)	The curriculum and teaching are same for blind, deaf, and mentally retarded children.	True / False
b)	Peer group cannot be used for teaching retarded children.	True / False
c)	The social competency of retarded children improve with regular schooling.	True / False
d)	The mentally retarded children need special equipment and classroom arrangement.	True / False
e)	Mentally retarded children learnt at a slower pace than non retarded children.	True / False
f)	Environmental sciences include science and social studies.	True / False

10. Write the sequence in teaching writing.

a) _____

b) _____

c) _____

d) _____

e) _____

f) _____

11. Fill in the blanks.

1. Inability to read effectively is called _____
2. Gross motor skills includes activities like _____, _____, _____
3. A child who is always on the move has problems in paying _____
4. reading with peers/parents is called _____
5. There are _____ types of learning disabilities
6. Problems related to maths are called _____

12. Short Answers

1. Explain the term dysgraphia?
2. Give 3 symptoms of children with learning disabilities?
3. Mention 5 teaching strategies that you will use with these children?
4. Define Joyful Learning?

4.6 ASSIGNMENT

Plan leisure and recreational activities suitable for children with specific disability (VI/MR/HI/LI)..

Prepare a report how normal children can be made to accept participation of children with disability along with them.

Prepare a case study of a child with a learning disability

4.7 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

4.7.1 Points for Discussion

4.7.2 Points for Clarification

4.8 REFERENCES

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UNIT 5: MATHEMATICS

STRUCTURE

5.1 Introduction
5.2 Objectives
5.3 Equipment and TLM needed in Resource Room
5.3.1 For Children with VI
5.3.2 For Children with MR
5.3.3 For Children with HI
5.3.4 For Children with LI & CP
5.4 Unit Summary
5.5 Check Your Progress
5.6 Assignment
5.7 Points for Discussion and Clarification
5.8 References/Further Readings

5.1 INTRODUCTION

In teaching, most children particularly those with severe disabilities considerable amount of equipment and special TLM are required. Without them no effective teaching will be possible. The purpose of this unit is to indicate what types of equipment and TLM are needed for children with various disabilities.

5.2 OBJECTIVES

After reading this Unit, you will be able to :

- understand what equipment to use with different kinds of disability and in what situations;
- gain a general understanding of equipment available in the country for children with different disabilities;.
- understand when and where to use particular types of equipment;
- know how to make local TLM..

5.3 EQUIPMENT AND TLM NEEDED IN RESOURCE ROOM

5.3.1 Equipment and TLM for Children with Visual Impairment

A simple geometry device can be locally made. Put a rubber mat on a wooden board, place polythin sheet on the rubber band and draw with a ordinary ball point pen. Braille ruler protector and special compass are available indigenously. With this equipment, a blind chiid can be enabled to draw any diagram in geometry.

Low vision children require magnification. Hand-held table, spectacle, magnifiers can be obtained. They can be lighted or unlighted.

India has recently developed aspheric censes, the advantage of these causes is that they minimize the peripheral distention that occurs owing to high magnification.

No magnifier magnify more than 4 to 6 times should be used because the field of vision of the child will be so reduced that he/she may have difficulty in smooth reading. It greater magnification is required, close circuit TV or overhead projector should be used.

Braille Slate

This is usually a wooden board with holes on either sides, a metal guide is fitted in these holes and brought down as writing progresses.

Each cell in the guide has six notches representing six dotes in braille. On the top there is a clamp with pins to hold the paper in position. This is the simplest appliance used for writing Braille.

Brailler

Brailler is shaped like a type writer, but has six keys and a spacer. It is used more or less in the same way as the type writer. A Brailler is shown in the following picture.

Taylore Frame

This is a sheet of plastic or metal with octagonal holes. In these holes are fixed types which have a line on one side and two dotes on the other. Different positions of the type stands for different figures.

Abacus

Abacus is an oblong frame having 13 to 15 column. Each column is separated by a bar technically known as centre bar. Hold the abacus straight. The bottom portion of the Centre bar contains 4 beads in each column and the upper portion of the centre bar contains one bead in each column.

The abacus is to be held in such a way that the 4 beads below the centre bar are at the bottom, and the single bead above the centre bar is at the top.

Each bead in the lower portion of the abacus denote one unit and the bead above the center bar denotes 5. Each column denotes the position of the umber it represents.

The extreme right column is the units column the second column from the right is the tens column from the right is

the hundreds column, the fourth column from the right is the thousands column and so on and so forth.

5.3.2 Teaching Learning Materials (TLMs) for Children with Mental Retardation

We have seen that there are not many specific teaching learning materials exclusively for mentally retarded children. In the case of a blind child, Braille and abacus become a necessity. What we normal people generally use in our day-to-day life a mentally retarded child also can use. In fact, it is better to use materials as they are in natural setting rather than specialize them. One major difficulty with persons with mental retardation is their ability to generalize, that is, use a skill learnt in one environment in another situation. Hence, if we specialize their materials to use, they may not be able to adapt to environment without that materials. However, there are certain simple changes and adaptation that can be made so that they function independently. This needs some thinking on suitable selection of materials as well as making minor modification based on individual needs.

Importance

If independent living by the retarded child is the ultimate aim, any step towards actualizing it is worth the time and effort. One of them is suitable selection and adaptation of TLMs. While talking about learning by mentally retarded children, we have been constantly referring to concrete examples, as they cannot understand abstractions. This necessitates materials that can be experienced by the five senses, leading to understanding and concept formation. In the classroom or outside, use of actual objects along with verbal explanation is necessary. Allowing the child to experience the new input through appropriate method and materials is the crux of educating the retarded child. Therefore, importance or TLM cannot be under-estimated.

Learning and Functional aids

While teaching children, we use certain material. Some are used for a short duration, while some are used permanently. We know that mentally retarded persons need concrete experiences and examples for their learning. Once they have learnt, we do not need the material

any more. For example, stones, beads, seeds, spoons and such other small objects can be used for teaching counting. After the child has learnt to count and has understood what is 1, 2, 3, 4....9...10 and so on, by looking at the number symbol, the objects are not needed any more for counting. Similarly in reading and writing, initially you may use pictures and help the child to name them, read and write. After accomplishing independent reading of the name, the picture or the object is not needed. Such objects and materials are called **learning aids**. They will not be needed by the child for learning purposes once the concept is understood.

On the other hand, **functional aids** are required for a person with disability to be used all through his life, and it compensates for his disability – hearing aids for persons with hearing impairment, crutches/calipers/wheel chair for locomotor disabled person, cane/Braille materials for a blind person, written name and address for identity for a mentally retarded person are a few examples of functional aids. One has to be very careful in selection or development of teaching learning materials.

Consideration and Selection/Development of TLM

If well selected, some can be used **as they are** – beads and blocks, garden tools and so on. **Some need modification** for use by retarded person – shirts with Velcro instead of buttons, skirts and pyjamas with elastic instead of tape and **a few need to be exclusively developed** – name cards, sequence of hair braiding to make it easy to difficult steps (for girls). Whether learning or function aids, first check if it can be used by the retarded person as it is. As there is variation in the ability of the retarded persons utility of readymade material as it is, will depend, to a large extent on the user. If after trial you find that it needs modification, then only adapt it. Do not be in a hurry to adapt. The more the object used resembles the regular one, the more chances of generalization by your trainee.

Examples of functional aids for mentally retarded children include adapted/simple calculator, digital watch, address card, modified brush/towel to scrub/wipe difficult to reach areas while bathing such as centre of the back, pictorial shopping list (if they cannot read), pictorial recipe book and so on.

While developing or selecting TLMs make sure that the material is

- durable.
- has multipe utility.

- age appropriate.
- affordable.
- accessible by school and family.
- maintenance is easy.
- breakable/non-toxic.
- serves the purpose it is meant for.
- minimizes transfer of training (easy to generalize).
- novelty is maintained.
- updated.
- easily available.
- leads the learner towards independent living skills.

5.3.3 Equipment and TLM for Children with HI

During speech production, speakers primarily use their sense of hearing (audition) to monitor what is being spoken and how it is spoken. However, either at a conscious or unconscious level they can also feel the different places within the oral cavity where the tongue touches. Not only this, the speaker also receives a feedback about the way in which the different speech organs move in relation to each other (kinesthesis). In short, speakers make use of **auditory, tactile and kinesthetic feedback** in order to monitor speech production. However, normal hearing individuals do not realize the contributions made by touch and kinesthesis as hearing is readily available to them for monitoring speech. In case of hearing impaired individuals, however, as the sense of hearing is not available for monitoring their speech production, other senses have to be used more. During teaching or correcting the speech of the hearing-impaired, use of all sense modalities is thus very important. There are a number of **teaching aids and equipment** that have been developed to facilitate use of audition, vision, touch and kinesthesis for providing feedback during teaching of speech to the hearing-impaired. Let us look at a few of these.

Hearing Aids - the most important TLM

The first and foremost teaching-learning material required for a HI child is a suitable hearing aid. This is to be used at all stages of teaching-learning and preferably throughout ones life time if one is comfortable with it and finds it useful. A lot will depend upon not only his type and degree of hearing loss

but also on how well he has been trained to use the hearing aid from early childhood. The use and care of the hearing aid is covered under the unit on Amplification Devices (Refer Block-4, Unit-1 for details). The important THING IS THAT THE HEARING AID MUST BE IN GOOD WORKING CONDITION ALL THE TIME.

1) **Auditory aids:** Auditory aids are those that facilitate optimal use of residual hearing by the hearing-impaired individual. A number of such aids are available. You must have already read about these in the section on Audiology. These aids include

- PERSONAL HEARING-AIDS OF ALL TYPES
- Group amplification systems such as hard-wire systems, induction loop systems, FM systems etc.
- Speech trainers

We will discuss auditory speech trainers in brief here.

Speech trainer: Various types of speech trainers are commercially available. Some of these make use of auditory and tactile modalities while some make use of the auditory modality only. Basically, a speech trainer consists of an external **microphone, amplifier and headphones.** The instrument has controls that can adjust the intensity of the output signal. This can be done separately for the two ears. A **tone control** is also available on some instruments. Also, some instruments have a **vibrator** that can be used simultaneously with the headphones. Thus, the speech trainer with a vibrator allows the hearing-impaired individual to use the auditory as well as tactile modality for learning to speak.

2) **Visual aids:** Visual aids are ones that provide visual feedback about the aspects of speech production. Use of vision is very important for the hearing-impaired for the purpose of understanding speech (speech reading). Not only this, visual feedback is also valuable for explaining the various aspects of speech production to the hearing-impaired. **Simpler ways** of providing visual feedback include

- Using a **mirror** for showing placement of the articulators for certain speech sounds,
- Using **pictures and diagrams** of the oral cavity to show the placement of the various articulators,

- Using **hand positions** and movements to demonstrate placement of active and passive articulators,
- Using visual **prompts** to indicate vocal pitch and loudness,
- Using **written markers** to indicate prosodic features of speech, etc.

With improvement in technology, various electronic and computerized equipment is available for maximizing visual feedback during speech production. Most of these equipment have a microphone **that picks up the speech signal. This speech signal is** processed and displayed **on a visual monitor or screen in the form of a waveform. Types of information that can be displayed include fundamental frequency, intensity, duration, voicing, frication, various prosodic features, etc. The visual screen can be divided into two parts** (split-screen). **The teacher can use the upper part of the screen to model the correct production. The second part can be used for recording the child's production. The child has to look at the teacher's pattern and try to match his own production to it. The teacher must highlight the feature that is being dealt with and explain the strategy of its production. The child can practice for a number of times, keeping the model production constant.** Examples **of visual equipment available commercially include Visi-pitch, Vocal II, Vaghmi, Speech Spectrographic Display (SSD) and PM Pitch Analyzer.**

3) Tactile Aids: **Tactile aids are the ones that make use of the modality of** touch **for providing feedback about speech production. A simple way of providing tactile feedback to the hearing-impaired child is to place his hand on the** neck, cheeks or the nose **of the teacher and draw his attention to the vibrations occurring while different sounds are produced. There are also a number of instruments/aids that are designed to provide tactile feedback to the hearing-impaired**

individual. These aids consist of a microphone that picks up the speech signal, a processor that converts this signal to a tactile signal and a transducer that carries this tactile information to the hearing-impaired individual. The user usually wears the transducer of a tactile aid (vibrator) on the inner part of the wrist. Some researchers also recommend the fingertips for stimulation. Tactile aids are usually of two types: vibrotactile and electrotactile. In vibrotactile aids, the speech signal is presented to the skin of the user using mechanical transducers or a vibrator. In electrotactile aids, the speech signals are presented to the skin as an electrical current. Research has shown that tactile aids are useful as a supplemental aid for speech reading and in speech training. These aids help the hearing-impaired user in sound detection, in discriminating sounds differing in duration, in tracking connected discourse, and in developing awareness to speech. Tactile aids have not been useful in developing discrimination between finer aspects of speech production. These are shown to be helpful for individuals with profound hearing-impairment who do not appear to receive adequate help from conventional amplification. Examples of tactile aids available commercially include Mini Fonator, Fonator Speech Trainer and Fonator Auditory Speech Trainer.

You will get an opportunity to get acquainted with some of the teaching aids used for providing feedback during teaching and correction of speech.

5.3.4 Equipment and TLM for Children with LI & CP

A Resource Room having all the equipment, learning aids and materials may be provided . According to the NCERT handbook, in case of locomotor disabled, provision is to be made for adjustable furniture, special writing thick pen and

improvised prosthetics/orthotics. Availability of requisite teaching learnig material for the disabled is vital for successful implementation of the scheme.

The majority of children with locomotor impairment do not require special education. They can participate and profit from general education even in regular school. But the school need to be made barrier free. Class Room should be located on the ground floor so that the children can alight from the school bus and reach their class room with a minimum of difficulty. If that is non fisible the school should have ample elevator service and /or inclined ramps specially for children who use wheel chair for their mobility, built environment needs to incorporate level access, ramps, lifts/elevators, handrails and grab bars, larger toilet cubicles, adequate wide paths, doors, entrances etc. Desk and chairs should be constructed so as to make each child as physically comfortable as possible.

In addition to specially designed classrooms, specially designed instructional equipment should be provided such as large caryons or pencils to easily manipulate for those children who find difficulty with standard sizes.. Also a disabled child who can not manage to write with pencil or pen may be provided the use of electric typewriter.. For a crippled child an ideal arrangement may be for each class room to be accompanied by a second room equipped with cut for taking rest he generally needs. .

5.3.5 Equipment and TLM for Children with Learning Difficulties

Refer to Section 4.3.5.1 of Unit-4 in this Block.

5.4 UNIT SUMMARY

- Education of children with disabilities requires special equipment and TLM,.
- Braille ruler protector and special compass can enable a blind child to draw any diagram in geometry. Low vision children require

magnification. .In the case of a blind child, Braille and abacus become a necessity.

- The majority of children with locomotor impairment do not require special education. They can participate and profit from general education even in regular school. But the school need to be made barrier free. According to the NCERT handbook, provision is to be made for adjustable furniture, special writing thick pen and improvised prosthetics/orthotics.

5.6 CHECK YOUR PROGRESS

1. Name the equipment required to teach the children with (a):Visual Impairment;(b) Hearing Impairment.
2. Suggest how you can prepare TLM from locally available materials for teaching children with:

   Mental Retardation
3. Briefly describe when and where to use particular types of equipment;

5.6 ASSIGNMENT

What type of TLM is required for children with MR, Give your suggestion how you can develop TLM for them from locally available materials.

5.7 POINTS FOR DISCUSSION AND CLARIFICATION

After going through the Unit you may like to have further discussion on some points and clarification on other. Note down those points below:

5.7.1 Points for Discussion

5.7.2 Points for Clarification

5.8 REFERENCES/FURTHER READINGS (UNIT-1 TO 5)

- *MPBOU, B.Ed. SEDE Programme, SIM Series, Bhopal*

- *SESL-01 : Introduction to Locomotor Impairment and Basic Anatomy,* Block-4 : Normal Child Development

- *SESL-02 : Locomotor Impairment And Spinal Cord Conditions,* Block-3 : Enabling Environment, Block-4 : Resources Support for Locomotor Impaired Child in School, Block-5 : Classroom Management Techniques and Strategies.

- *SESL-03 : Cerebral Palsy,* Block-2 : Assessment – Physical & Functional, Block-3 : Communication: Speech & Hearing Disorder & Its Assessment, Block-4 : Education for Children with Cerebral Palsy

- *SESH-01 : Foundation of Education for the Hearing Impaired,* Block-2 : All about language and Hearing Impaired, Block-3 : Other Educational Aspects

- SESH-03 : Methodology of Teaching Language and Other Subjects to H.I., Block-1 : Education of the H.I. at all Levels, Block-2 : Reading and the Hearing Impaired

- *SESM-01 : Identification and Assessment of Persons with Mental Retardation,* Block-1 : Mental Retardation : Nature and Needs, Block-2 : Assessment and Evaluation, Block-3 : Social Perspective of Mental Retardation and working with Parents, Family and Community.

- *SESM-03 : Curriculum and Teaching Strategies,* Block-1 : Curriculum Guidelines in Mental Retardation , Block-2 : Teaching Strategies , Block-3 : Co-curricular Activities, Block-4 : Educational Provisions: Organisation and Administration.

- *SESV-01 : Introduction to the Education of Visually Impaired Children,* Block-1 : Nature of Visual Impairment and Education of

Visually Impaired Children, Block-3 : Education of Low Vision Children.

- *SESV-02 : Educational Perspective on Visual Impairment,* Block-3 : Curricular Adaptation and Transaction, Block-4 : Education for Rehabilitation

MADHYA PRADESH BHOJ (OPEN) UNIVERSITY

RAJA BHOJ MARG (KOLAR ROAD), BHOPAL- 462016