

UNIT-II : UNDERSTANDING DISABILITIES AND ITS EDUCATIONAL IMPLICATIONS

Understanding disabilities; types, causes and characteristics of disabilities as per RPWD Act 2016 - Physical disability; Intellectual disability; Mental behaviour; Chronic Neurological Conditions; Blood disorder; Multiple Disabilities; Educational implications and needs of Persons with Disabilities

UNIT-II UNDERSTANDING DISABILITIES AND THEIR EDUCATIONAL IMPLICATIONS

Understanding disabilities

Education is a lifelong process involving many planned and unplanned experiences that enable children and adults alike to develop and learn through interaction with the society and culture in which they live. It involves experiences at all stages of life, from infancy through to old age.

Education also involves adaptations to society and culture. With all the combinations of life events, adaptation will mean that each person is subject to a unique set of learning and problem-solving experiences that constitute an understanding of the world and the events that take place in it.

However, if we limit our attendance to intentional learning and instruction of children across the time from preschool to tertiary education, this would involve learning from a curriculum that has been determined by the central or state education authority. There are many children who, for some reason, are unable to take full advantage of the school curriculum as it is normally offered.

For these children, special arrangements must be made to ensure that they receive the opportunities and experiences, which will help them to learn and develop to the extent of their capabilities. To help us to deal

with the question of who these children may be, we need first to understand a few adjectives which you will, no doubt, encounter in your reading about children with special needs. These adjectives are 'impaired', 'disabled', and 'handicapped'.

Over the years, these terms have often been used interchangeably and at times carelessly. However, they have specific meanings and conceptual differences, which are important for us to know.

World Health Organisation (WHO) 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 relationship between these dimensions.

Definitions of Impairment, Disability, Handicap

Impairment

According to the ICIDH, impairment is any loss or abnormality of psychological, physiological or anatomical structure or functions, generally taken to be at organ level. Impairment is damage to tissue due to disease or trauma. A person with poor or no vision due to damage to the retina or optic nerve may have a visual impairment. Impairment represents exteriorization of a pathological state and occurs at tissue level.

Disability:

Disability has been defined as any restriction or lack of ability (resulting from an impairment) 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 refers to excesses or deficiencies of customarily expected activity, performance, and behavior, and is located at the level of the person.

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 require the use of eyesight.

Handicap:

The ICIDH defines Handicap as a disadvantage for an individual, resulting from an impairment or disability, which limits or prevents the fulfillment of a role that is normal (depending on age, sex social-cultural factors) for that individual. Handicap reflects the consequences for the individual - cultural, social, economic, and environmental - that stem from the presence of impairment and disability

Types of Disabilities

The RPwD Act, 2016 was enacted on 28.12.2016 which came into force from 19.04.2017. The salient features of the Act are:-

✓ Responsibility has been cast upon the appropriate governments to take effective measures to ensure that the persons with disabilities enjoy their rights equally with others.

✓ Disability has been defined based on an evolving and dynamic concept.

✓ The Act covers the following specified disabilities:-

1. Physical Disability

a. Locomotor Disability

- i. Leprosy-Cured Person
- ii. Cerebral Palsy



- iii. Dwarfism
- iv. Muscular Dystrophy
- v. Acid Attack Victims

b. Visual Impairment

- i. low vision
- ii. blind

c. Hearing Impairment

- i. Deaf
- ii. Hard of Hearing

d. Speech and Language Disability

2. Intellectual Disability

- a. Specific Learning Disabilities
- b. Autism Spectrum Disorder

3. Mental Behaviour (Mental Illness)

4. Disability caused due to

a. Chronic Neurological Conditions

- i. Multiple Sclerosis
- ii. Parkinson's Disease

b. Blood Disorder

- i. Haemophilia
- ii. Thalassemia
- iii. Sickle Cell Disease

5. Multiple Disabilities

Benchmark disability refers to having at least 40% disability of any type recognized under the RPWD Act 2016. So, to be in the category of having a benchmark disability, a person has to have at least 40% disability as mentioned on her disability certificate or UDID Card.

Causes of Disabilities Risk factors for the disabilities:

✓ **Communicable diseases (Infectious diseases)** - lymphatic filariasis, tuberculosis, HIV/AIDS, and other sexually transmitted diseases; neurological consequences of some diseases such as encephalitis, meningitis, and childhood cluster diseases (such as measles, mumps, and poliomyelitis) contribute to disability.

✓ **Non-communicable diseases (NCDs)** – Chronic diseases such as diabetes, cardiovascular disease, arthritis, and cancer cause the majority of long-term disabilities. The increase in NCDs observed in all parts of the world, will have a profound effect on disability. ·

○ Lifestyle choices and personal behavior such as obesity, physical inactivity, tobacco use, alcohol consumption, and illicit drugs that lead to non-communicable diseases are also becoming major contributing factors;

○ Air pollution, occupational disease, poor water supply, sanitation, and personal and domestic hygiene, malnutrition also contribute for disability

✓ **Injuries** due to road traffic accidents, occupational injury, violence, conflicts, falls and landmines have long been recognized as contributors to disability.

✓ **Mental health problems**– mental health retardation and mental illness are the causes of mental disability. In more than 50% of cases, mental retardation has been reported to be caused by serious illness or head injury in childhood and birth defects.

✓ **Mental retardation** was observed mostly at birth or at very early ages of life while the problem of mental illness is more of an old age problem. Those with lower education levels, lower incomes, and those who are unemployed were also more likely to suffer a disability. There is a higher risk of disability at older ages.

Prevention of Disabilities

✓ **Primary Prevention** – Action taken prior to the onset of the disease/disability, which will remove the possibility that a disease/disability will occur.

✓ **Secondary Prevention** – Action, which halts the progress of the disease/disability at its incipient stage and prevents complications. The specific interventions are early diagnosis and adequate treatment.

✓ **Tertiary Prevention** – All measures available to reduce or limit impairments and disabilities, and minimize suffering caused by existing disability. This phase is also called rehabilitation, which includes physical, psychosocial and vocational measures taken to restore the patient back to normal or near normal condition

It is extremely important that the women undertake adequate and effective preventive measures during their pregnancy and immediate postnatal period and also for their children especially during the early childhood period, in order to significantly reduce the incidence of impairment and disabilities in them.

Characteristics of Disabilities as per RPWD Act 2016

Physical disability

Physically Challenged individuals are those who have non-sensory physical limitations i.e. limitations not because of sense organs like eyes or ears, but because of other organs like limbs, bones, joints, or muscles.

The physical challenge is relatively visible and it becomes more so by the society's prejudices toward a disfigured body. The person who doesn't appear normal is an applied label, which makes his adjustment difficult. Though society has modernized enough to accept disability Notes and work out ways to face these challenges, these facilities have not reached everywhere.

School is one of the mechanisms of adjustment for the physically challenged because they usually have normal functioning brains. It is only in their physical stature that problems are there and there are various devices to aid their adjustment to the environment. The teachers' training curriculum to prepares the teachers for teaching special children in regular classrooms.

There are the following types of physical disabilities:

a. Locomotor Disability

✓ **Leprosy-Cured Person**

Leprosy, also known as Hansen's disease (HD), is a chronic infectious disease caused by a bacteria called Mycobacterium leprae. The disease mainly affects the skin, peripheral nerves, mucosal surfaces of the upper respiratory tract, and the eyes. Leprosy is known to occur at all ages ranging from early infancy to very old age. About 95% of people who contact M. Leprea do not develop the disease.



✓ **Cerebral Palsy**

Cerebral Palsy (CP) is a disabling physical condition in which muscle coordination is impaired due to damage to the brain. It occurs at or before childbirth. Cerebral Palsy is not a progressive condition; meaning it does not get worse with time. However, muscle disuse could increase the extent of disability over a period of time. At present, there is no cure available for this condition. Thus, Cerebral Palsy is an incurable and life-long condition, at present.



✓ **Dwarfism**





Dwarfism is a growth disorder characterized by shorter than average body height.

✓ **Muscular Dystrophy**

Muscular Dystrophy (MD) is a group of neuromuscular genetic disorders that cause muscle weakness and overall loss of muscle mass. MD is a progressive condition; meaning that it gets worse with the passage of time.

✓ **Acid Attack Victims**

An acid attack victim means a person disfigured due to violent assaults by throwing acid or a similarly corrosive substance.

b. Visual Impairment

✓ **Low Vision**

Low-vision means a condition where a person has any of the following conditions, namely: 1. visual acuity not exceeding 6/18 or less than 20/60 up to 3/60 or up to 10/200 (Snellen) in the better eye with best possible corrections, or 2. limitation of the field of vision subtending an angle of less than 40 degrees up to 10 degrees.

✓ **Blind**

Blindness is defined as the state of being sightless. A blind individual is unable to see. In a strict sense, the word blindness denotes the condition of total blackness of vision with the inability of a person to distinguish darkness from bright light in either eye.

c. Hearing Impairment

Hearing impairment is a partial or total inability to hear. It is a disability that is subdivided into two categories deaf and hard of hearing. Deaf means persons having 70 dB hearing loss in speech frequencies in both ears. “Hard of hearing” means the person having 60 dB to 70 dB hearing loss in speech frequencies in both ears.

✓ **Deaf**

✓ **Hard of Hearing**

d. **Speech and Language Disability** A permanent disability arising out of conditions such as laryngectomy or aphasia affecting one or more components of speech and language due to organic or neurological causes.

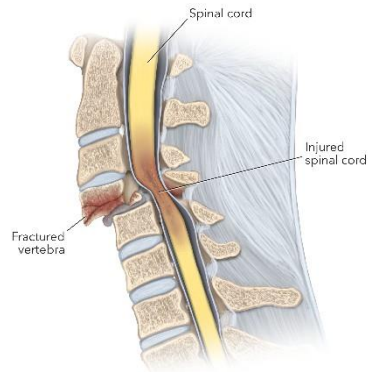
a. **Locomotor Disability** means a problem in moving from one place to another — i.e. disability in legs. But, in general, it is taken as a disability related to bones, joints, and muscles. It causes problems in a person's movements (like walking, picking or holding things in hand, etc.)

✓ **Impairment in mobility** is a category of disability that includes people with varying types of physical disabilities. This type of disability includes upper limb disability, manual dexterity, and disability in coordination with different organs of the body. Disability in mobility can either be congenital or acquired with age problems. This problem could also be the consequence of some diseases. People who have broken skeletal structures also fall into this category of disability.

✓ **Spinal cord disability** is another consequence of spinal cord injuries which can sometimes lead even to lifelong disabilities. This kind of skeletal injury mostly occurs due to severe accidents. The spinal injury can be complete or incomplete. In an incomplete type of spinal injury, the messages conveyed by the spinal cord are not completely lost; whereas a complete injury results in a total malfunctioning of the sensory organs. In the rarest of cases, spinal cord impairment can be a birth defect though.

✓ **Brain Disability** is a disability that occurs in the brain due to a brain injury. The degree of brain injury can range from mild, moderate, and severe.

✓ There are broadly two types of brain injuries; Acquired Brain Injury (ABI) and Traumatic Brain Injury (TBI).



✓ **Acquired Brain Injury** is not a hereditary type of disability but is the degeneration that occurs after birth. The causes of such disabled cases of injury are many and are mainly because of external forces applied to the body parts.

✓ **Traumatic Brain Injury** results in emotional malfunctioning and certain behavioral disturbances.

✓ **Vision Disability** is another type of physical impairment. There are hundreds of thousands of people that greatly suffer from minor to various serious vision injuries or impairments. These types of injuries can also result in some severe problems or diseases like blindness and ocular trauma, to name a few.

✓ Some of the common types of vision impairment include scratched cornea, scratches on the sclera, diabetes-related eye conditions, dry eyes, and corneal graft.

✓ **Hearing disability** is the category of physical impairment that includes people that are completely or partially deaf. People who are partly dumb can use hearing-aid to do away with their hearing problems. But this type of situation is worse if the deafness is complete.

Intellectual disability, also known as general learning disability and mental retardation (MR), is a condition characterized by significant limitations both in intellectual functioning (reasoning, learning, problem-solving) and in adaptive behavior which covers a range of every day, social and practical skills.

✓ **Specific Learning Disabilities**

Specific Learning Disabilities are a group of disabling conditions that hampers a person's ability to listen, think, speak, write, spell, or do mathematical calculations. One or more of these abilities may be hampered.

✓ **Autism Spectrum Disorder**

Autism Spectrum Disorder (ASD) is a neurological and developmental disorder that affects communication and behavior. Autism can be diagnosed at any age. But still, it is called a “developmental disorder” because symptoms generally appear in the first two years of life. Autism affects the overall cognitive, emotional, social, and physical health of the affected individual.

Mental behavior

✓ **Mental Illness**

Mental illness or mental disorder refers to a substantial disorder of thinking, mood, perception, orientation, or memory that grossly impairs judgment, behavior, capacity to recognize reality, or ability to meet the ordinary demands of life. But it does not include retardation which is a condition of arrested or incomplete development of the mind of a person, especially characterized by sub-normality of intelligence.

✓ **Mental Retardation**

The American Association of Mental Deficiency states that mental retardation exists when there is significant sub-average general intellectual functioning existing concurrently with the deficit in adaptive behavior and is manifested during the developmental period. This means that people classified as mentally retarded can range from those who can be trained to work and function with little special attention to those who are virtually unattainable and do not develop speech and the rest of the motor functions.

✓ **Mild Mental Retardation (IQ 50-70)** This is the largest group of people comprising 80% retarded population. They are educable and do not show the signs of brain pathology or other physical defects. Their retardation, therefore, is not identified, at times, even after reaching school, although their early development is often slower than normal. It can become apparent only when the child starts lagging behind their peers in school work. With early detection, parental assistance, and appropriate training, these students can reach a third to sixth-grade

educational level. Although they cannot carry out complex intellectual tasks, they are able to take up manual jobs and jobs involving inferior skills and function quite successfully and independently and become self-supporting citizens.

✓ **Moderate Mental Retardation (IQ 35-49)** This group consists of about 12% of retarded population. These are trainable and their retardation is evident early in their lives. They are slow to develop language skills and their motor development is also affected. Some of these students could be taught to read and write and speak some broken language. Physically, they are clumsy and suffer from poor motor coordination.

✓ **Severe Mental Retardation(IQ 20 -34)** This is the group of dependent retarded consisting of 7% of retarded population. These are the children with severe problems of speech retardation and sensory defects and motor handicaps are common.

✓ **Profound Mental Retardation (IQ under 20)** They belong to the category of life support mental retardation consisting of 1% of the retarded population. Most of these are severely deficient in adaptive and unable to do the simplest task.

Chronic Neurological Conditions

✓ **Alzheimer's disease and Dementia**

Alzheimer's disease is the most common type of dementia. It is a progressive disease beginning with mild memory loss and possibly leading to loss of the ability to carry on a conversation and respond to the environment. Alzheimer's disease involves parts of the brain that control thought, memory, and language.

Parkinson's disease

Parkinson's disease (PD) is a Central Nervous System disorder that affects movement. Parkinson's disease is characterized by tremors and stiffness. It is a progressive disease, which means that it worsens with time. There is no cure

available at present. The government of India uses the term benchmark disability quite often in official communications regarding persons with

disabilities.

✓ **Dystonia**

Dystonia is a movement disorder that causes the muscles to contract involuntarily. This can cause repetitive or twisting movements. The condition can affect one part of your body (focal dystonia), two or more adjacent parts (segmental dystonia), or all parts of your body

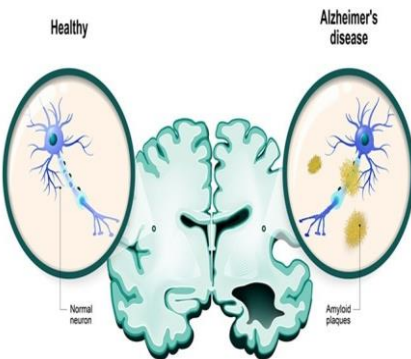
(general dystonia).

✓ **ALS (Lou Gehrig's disease)**

Amyotrophic lateral sclerosis (ALS) is a rare neurological disease that primarily affects the nerve cells (neurons) responsible for controlling voluntary muscle movement (those muscles we choose to move). Voluntary muscles produce movements like chewing, walking, and talking.

✓ **Huntington's disease**

Huntington's disease is a rare, inherited disease that causes the progressive breakdown (degeneration) of nerve cells in the brain.



Huntington's disease has a wide impact on a person's functional abilities and usually results in movement, thinking (cognitive), and psychiatric disorders.

✓ **Neuromuscular disease**

Neuromuscular diseases affect the function of muscles due to problems with the nerves and muscles in your body. The most common sign of these diseases is muscle weakness.

✓ **Multiple sclerosis**

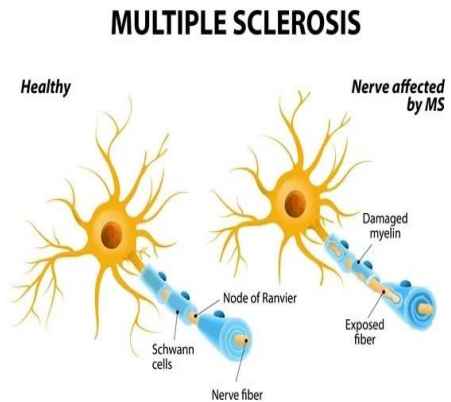
In Multiple Sclerosis (MS), the immune system of the body attacks the Central Nervous System, which includes the brain and spinal cord. As a result of MS, the myelin sheath covering neurons gets damaged. This exposes the nerve fiber and causes problems in the information flow through nerves. With time, MS can lead to permanent damage to nerves.

✓ **Epilepsy**

Epilepsy is a common long-term brain condition. It causes seizures, which are bursts of electricity in the brain. There are four main types of epilepsy: focal, generalized, combination focal and generalized, and unknown. A person's seizure type determines what kind of epilepsy they have.

✓ **Stroke**

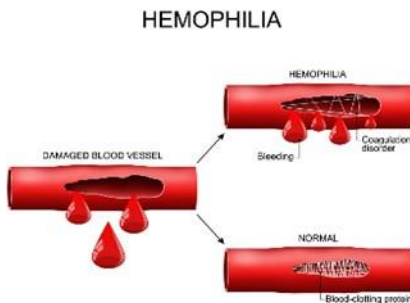
A **stroke** occurs when a blood vessel in the brain ruptures and bleeds, or when there's a blockage in the blood supply to the brain. There are different types of strokes, and they include hemorrhagic and ischemic strokes. Hemorrhagic strokes occur as a result of bleeding within or around the brain. Ischemic strokes occur as a result of a blood clot or a lack of blood flow to the brain.



Blood disorder

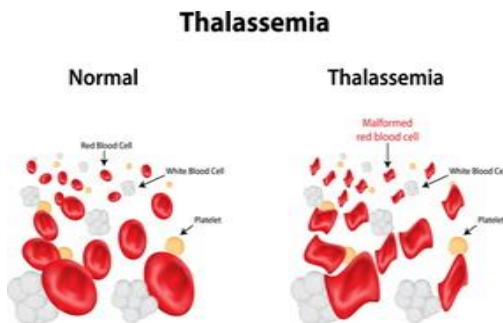
✓ Haemophilia

Hemophilia is a blood disorder characterized by the lack of blood clotting proteins. In the absence of these proteins, bleeding goes on for a longer time than normal. Hemophilia almost always occurs in males and they get it from their mothers. Females are rarely affected by hemophilia.



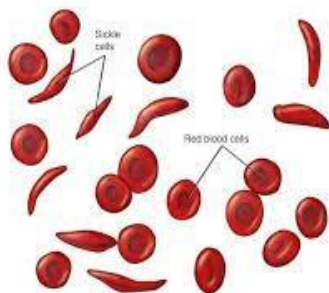
✓ Thalassemia

Thalassemia is a genetically inherited blood disorder that is characterized by the production of less or abnormal hemoglobin. As we know, hemoglobin is a protein found in Red Blood Cells. Hemoglobin is responsible for carrying oxygen around the body. Thalassemia results in large numbers of red blood cells being destroyed, which leads to anemia. As a result of anemia person affected with Thalassemia will have pale skin, fatigue, and dark coloration of urine.



✓ Sickle Cell Disease

Sickle Cell Disease is a group of blood disorders that causes red blood cells (RBCs) to become sickle-shaped, misshapen, and break down. The oxygen-carrying capacity of such misshapen RBCs reduces significantly. It is a genetically transferred disease. Red Blood Cells contain a protein called hemoglobin. This is the protein that binds oxygen and carries it to all the parts of the body.



Multiple Disabilities

Multiple Disabilities is the simultaneous occurrence of two or more disabling conditions that affect learning or other important life functions. These disabilities could be a combination of both motor and sensory nature.

Educational implications and needs of Persons with Disabilities

Locomotor Disabilities

Children with Loco-motor Disabilities can learn like their peer group in regular class only if they are provided appropriate educational teaching strategies, guidance and support of assistive technology. They may benefit from Teaching aids that suit visual, auditory and kinaesthetic learning styles. Negotiating in physical surroundings and environment through movement can be challenging.

Implications:

- ✓ Mobility restriction in exploring their physical environment and learning from it can be challenging.
- ✓ Speech may be impaired.
- ✓ May have difficulty using conventional chairs / tables in class / lab.
- ✓ Difficulty in finishing assignments / tests in prescribed time limit.
- ✓ Experiences fatigue when speaking to a person for a long.
- ✓ Requires additional time, support of compatible assistive technology and exemptions for coping with curricular demands.
- ✓ Student need specialized furniture or transport means.
- ✓ Difficulty in using regular writing tools like holding a pen to write for continuously for long time. Activities involving use of hands like turning pages, writing, taking out books from bag can be difficult hence have to be adapted suitably.
- ✓ Challenges with input, output and information processing when working on assignments, tests, and /or exams.

- ✓ Both Visual and Hearing Impairment are termed as Sensory Disabilities

Visual Impairment

Visual impairment when present from birth will have more impact on learning than visual impairment that is acquired later in life. Some may have low or distorted vision while others may have no vision at all. Children with Visual impairment are usually auditory learners. They also learn through touch and by practically doing a task. Type of assistance required for learning, will vary according to the degree and nature of their impairment.

Implications:

- ✓ Difficulty in learning when long passages are read and from visual inputs.
- ✓ Taking more time to interpret meaning as reading on Braille mode, requires longer time and involves higher degree of memorizing and synthesizing from wholeness of phrases, sentences etc.
- ✓ Difficulty in comprehending from verbal content, including geographical terms and concepts, like - latitude, longitudes, physical directions etc.
- ✓ Graphic and visual descriptions like map-reading, graphs, diagrams, paintings, inscriptions, symbols and monumental architecture.
- ✓ Poor in observing environment and space - land, climate, vegetation and wildlife, distribution of resources and services.
- ✓ Poor in developing spatial concepts and understanding the relationships between spatial concepts.
- ✓ Poor understanding of three-dimensional objects transformed into two dimensional forms.
- ✓ Difficulty in understanding special characters (symbols) used in Mathematics.
- ✓ Difficulty in audio recording of mathematical text, for eg., equations, formulas etc.

- ✓ Difficulty in transcribing and reading mathematical text in Braille because of spatial arrangement and colour codes.
- ✓ Difficulty in learning of Nemeth or any other Mathematical Braille Code.
- ✓ Difficulty in comprehending abstract concepts.
- ✓ Difficulty in comprehending science experiments, especially in Chemistry.
- ✓ Require longer time for performing academic tasks.

Hearing Impairment

Students with hearing impairment are often visual learners. Hearing impairment may be congenital or acquired; some may have complete hearing loss, may have residual hearing. Impact on learning will depend on the degree of the impairment and cause of hearing loss.

Implications:

- ✓ Problem in taking meaningful notes.
- ✓ Poor or unintelligible reading.
- ✓ Difficulty in understanding verbal questions.
- ✓ Poor Vocabulary.
- ✓ Problem in responding to oral tests.
- ✓ Difficulty in following verbal / group conversations.
- ✓ Problem in understanding abstract concepts and figurative language (like similes, metaphors and idioms).
- ✓ Problem in reading and learning spellings (because of difficulty in phonemic awareness and speech / sound discrimination).
- ✓ Challenge in organizing or composing ideas.
- ✓ Deficits in communicating ideas due to restricted vocabulary
- ✓ Problem in comprehending new vocabulary.
- ✓ Poor in discriminating difference between sounds and words.
- ✓ Problem in understanding / using phrases / words with multiple meanings, terminologies/technical terms, abstract concepts, facts,
- ✓ Challenge in forming connections between ideas or concepts
- ✓ Challenge in grammar usage and sentence construction.

- ✓ Poor in understanding of comparisons, cause effect relationships and chronology of events.
- ✓ Poor in reading heavy text and making inferences from text.
- ✓ Delay in linguistic growth, leading to lack of general vocabulary and technical vocabulary of mathematics and mathematical problems.
- ✓ Inadequate in distinguishing mathematical words while student is reading verbally.
- ✓ Limited use of cognitive strategies to select relevant information and approaches necessary for solving problems.
- ✓ Poor in solving problems that involve more than one dimension.

Speech and Language

Disorders Inability to communicate in classroom can be very challenging for a student, as they struggle academically and experience socialization problems. These children will learn best using tactile, visual and auditory cues.

Implications

- ✓ Difficulty in thinking skills including perception, memory, awareness, reasoning, judgment, intellect and imagination.
- ✓ Problem due to stuttering which may interruption of the flow of speech that may include hesitations, repetitions, prolongations of sounds or words.
- ✓ May struggle with reading, due to difficulty in understanding and expressing language.
- ✓ Misunderstands social cues.
- ✓ Avoids attending school.
- ✓ Shows poor judgment.
- ✓ Difficulty with taking tests.
- ✓ Reluctance to contribute during discussions.
- ✓ Difficulty in organizing ideas.
- ✓ Difficulty in producing sounds.
- ✓ Failure to follow directions.

- ✓ Difficulty in finding the right word for things.
- ✓ Reluctance to interact with other children.
- ✓ Problems in negotiating with rules for games
- ✓ Difficulty in organizing information for recall.
- ✓ Slow in responding.
- ✓ Inattentiveness

Intellectual Disabilities, including Specific Learning Disabilities & Autism Spectrum Disorder

Intellectual disability

A student with intellectual disability learns and understands at a much slower pace than the average peer. Their intellectual development will always be significantly lagging behind due to intellectual impairment. Use of real objects in natural environments is an essential component in teaching students with intellectual disabilities. Visual supports and learning by practical tasks will help facilitate learning, among persons with intellectual disabilities.

Implications:

- ✓ Difficulty in understanding and learning from new experiences and information.
- ✓ Short attention span
- ✓ Difficulty with memory retention
- ✓ Lack of ability to learn from incidental experiences.
- ✓ Difficulty in transferring learning from routine experiences to new situations.
- ✓ Difficulty with communication and social skills.
- ✓ Slow in cognitive processing time.
- ✓ Difficulty in sequential processing of information, planning, organizing and generalizing.
- ✓ Slow in comprehending abstract concepts.
- ✓ Poor in listening, expressing ideas / speaking fluently and coherently.

- ✓ Poor reading including decoding, phonetic knowledge and word recognition.
- ✓ Poor in eye-hand coordination and writing skills.
- ✓ Poor language comprehension.
- ✓ Poor in understanding figurative language - idioms, metaphors, similes etc.
- ✓ Difficulty in accessing written work, illustrations, charts, graphs and maps.
- ✓ Challenge in extracting relevant information from bulk information.
- ✓ Poor in mathematical calculations (computations), copying problems etc.
- ✓ Difficulty in sequencing, step wise problem solving and comprehending number place value
- ✓ Confusion in mathematics operational symbols.
- ✓ Poor comprehension of word problems.
- ✓ Slow in understanding technical language.
- ✓ Poor in inferring meaningful linkages/relationships between concepts.

Learning Disabilities

Common types of Specific Learning Disabilities: Perceptual Disorders, Dyslexia, Dyscalculia, Dysgraphia, Dyspraxia, Aphasia. They are visual, auditory and kinaesthetic learners.

Implications:

- ✓ Language processing disabilities can make reading and writing slow and challenging,
- ✓ Have memory deficits. Need more time to process information before answering questions or replying when spoken to, which can result in difficulties contributing to classroom or group discussions.
- ✓ May also have difficulty in paying attention.
- ✓ Poor in organizing and planning § Difficulty in tracking assignments or supplies and submitting work on time.

- ✓ Inability to organize and interpret information coming through visual or auditory input.
- ✓ Inability to monitor and evaluate performance.
- ✓ Difficulty in reading and spelling, word analysis, fluency and reading comprehension.
- ✓ Poor in understanding underlying meanings, such as ironical or figurative language and adjusting language for different uses and purposes.
- ✓ May skip words, lose place, mistake one word for another, reversals of pronouncing words etc.
- ✓ Difficulty in writing due to inadequate planning and organizing sentence structure
- ✓ Limited and repetitive use of vocabulary; unnecessary or unrelated information or details; commits errors in spelling, punctuation, grammar, and handwriting.
- ✓ Difficulty with numbers, remembering facts and sequencing, comprehending concepts related to direction, place value, decimals, fractions and time.
- ✓ Poor comprehension of word problems.

Autism Spectrum Disorder

Children with Autism Spectrum Disorder (ASD) have deficits in social and communication skills, thought / behaviour and sensory processing. Learning is best facilitated when exposed to various appropriate teaching methods and teaching learning materials suitable for respective learning styles and teaching methods. Since students with ASD are visual learners and concrete thinkers, they learn best with use of visual cues and supports. There are few who are good auditory learners.

Implications:

- ✓ Difficulty in communication skills, social skills, thought and behaviour and sensory processing.

- ✓ Challenge in motor planning and organizational skills.
- ✓ Short Attention Span.
- ✓ Poor imitative skills.
- ✓ Difficulty in comprehension.
- ✓ Challenge with social environment of the school.
- ✓ Weak on motor skills.
- ✓ Conventional behavior management techniques may not work.
- ✓ Poor verbal abilities, but inability to report / description of a problem / answer / converse.
- ✓ They are detailed learners, they may see a part but not perceive whole picture.
- ✓ Poor auditory learners and reading comprehension. § Difficulty in generalizing.
- ✓ Difficulty in adapting to language used at home, when it different from one used in school.
- ✓ Understanding of abstract concepts and figurative language (like similes, metaphors and idioms).
- ✓ Slow in acquiring pre-academic concepts.
- ✓ Lack of motivation.
- ✓ May not comprehend academic concepts taught.
- ✓ Difficulty in understanding / adhering to behaviors necessary for academic learning.
- ✓ Excellent rote memory skills, but difficulty in comprehending meaning.
- ✓ Sensory processing challenges may hinder the way they learn.

Mental Behaviour

Mental Behaviour (Mental Illness)

Mental behaviour or mental illness disorder has varying degrees of symptoms. Well-planned and well implemented social and emotional programming can have positive effects on academic outcomes. As each individual is different, it is important to address students learning styles

(auditory, visual, kinaesthetic or a combination of styles). Incorporating experiential learning activities will help increase learning outcomes.

Implications:

- ✓ Inability to filter environmental stimuli such as sounds, sights or smells.
- ✓ Inability to concentrate due to feeling of restlessness, short attention span, easily distracted, or have difficulty in remembering verbal directions.
- ✓ May not have enough energy to spend a whole day in school or do an activity for a long time at a stretch due to drowsiness from medication.
- ✓ Difficulty handling time based deadlines, pressures and multiple tasks, managing assignments, setting priorities or meeting deadlines.
- ✓ Difficulty in interacting with others.
- ✓ Difficulty in handling negative feedback, understanding and interpreting criticism.
- ✓ Difficulty in responding to change.
- ✓ May refuse to begin due to fear of not being able to do anything right.
- ✓ May experience fluctuations in mood, energy and motivation.
- ✓ Has difficulty in taking notes during class.
- ✓ Submits late or incomplete assignments with careless mistakes.
- ✓ Repeated absenteeism.
- ✓ High level of anxiety and frustration.
- ✓ Student is easily fatigued or exhausted.
- ✓ Worries about getting everything right, as a result take longer to complete given tasks.
- ✓ Refusal to begin tasks or avoidance of classes /school out of fear of failure.

Disabilities due to Neurological Chronic Conditions

In Neurological Chronic Conditions it is important to address differential learning styles (auditory, visual, kinaesthetic or a combination of styles) and find each individual's learning style, as each case will be different from the next.

Multiple Sclerosis

Implications

- ✓ Schooling may be interrupted by relapses
- ✓ Difficulties with concentration, memory, emotional expression and self-control
- ✓ Vision may be blurry or may have double vision which will impact reading, writing or attention.
- ✓ A child's attention span and thinking abilities - such as the ability to reason and process and remember information - may be hindered / impacted.
- ✓ Writing can be affected due to acute attacks or lingering symptoms that can cause numbness, weakness, fatigue, poor posture or coordination difficulties.
- ✓ Trouble socializing because of their physical symptoms

Parkinson's disease

There will be educational implications students who have juvenile Parkinson's disease (onset before age 20 years) which is rare and is also usually an inherited form of Parkinson's disease.

Implications:

- ✓ Tremors and dystonia
- ✓ Falls and postural instability.
- ✓ Rigidity, muscle tension and spasms.
- ✓ Weakness in hands and poor dexterity.
- ✓ Cognitive skills may be affected.

Multiple Disabilities including Deaf blindness

Multiple Disability Children with multiple disabilities may learn best visually and by doing. However as multiple-disability is a combination

of two or more disabilities, their learning styles will be determined by their nature and severity of disability condition and combinations.

Implications:

- ✓ Challenge in mobility like walking, standing or bending.
- ✓ Communication difficulties in child's ability to effectively communicate with teachers, support staff and peers.
- ✓ Poor thinking and focusing ability.
- ✓ Cognitive impairment.
- ✓ Challenge in identifying suitable instructional setting to match intelligence level.
- ✓ Challenge to function in the classroom.
- ✓ Problem in providing appropriate assessment and compensating instructional strategies for visual or hearing impairments.
- ✓ Deficits in motor development.
- ✓ Sensory impairments.
- ✓ May have difficulty attaining skills and memorizing / transferring learnt skills from routine to life situations.

Deafblind

Deafblind condition is a combination of visual and hearing impairment. Students with Deafblind condition have unique educational needs. They cannot learn by sight or hearing, they can only learn by doing and with tactile mode.

Implications:

- ✓ Cannot understand conventional classroom lectures.
- ✓ Challenge for participation in class discussions.
- ✓ Challenge in presenting oral reports.
- ✓ Problem in fulfilling reading assignments.
- ✓ Difficulty with communication.
- ✓ Distorted perception.

- ✓ Difficulty in imaging the whole picture or relating an element to the whole.
- ✓ Anticipation: Difficulty in knowing what is going to happen next.
- ✓ Motivation: The motivating factors may be missing from a situation, going unseen or unheard.