

# ***INTRODUCTORY MODULE ON LEARNING DISABILITIES***



**Samarthanam Trust for the Disabled®**

**AUGUST 2018**

# Introduction to Learning Disabilities

*As per the Rights of Persons With Disabilities Act, 2016 "Specific learning disabilities" means a heterogeneous group of conditions wherein there is a deficit in processing language, spoken or written, that may manifest itself as a difficulty to comprehend, speak, read, write, spell, or to do mathematical calculations and includes such conditions as perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia and developmental aphasia.*

## Introduction

A learning disability, or specific developmental disorder, is a disorder that inhibits or interferes with the skills of learning. Learning disabilities are life disabilities; they are seen in children as well as adults. The impairment may be so subtle that it may go undetected throughout the life. These disabilities create a gap between the true potential and day-to-day productivity and performance. The same learning disabilities that interfere with reading, writing and arithmetic interfere with cricket, football, getting dressed, keeping the room tidy and with every aspect of life. If an individual does not benefit from a regular education programme and is not socially disadvantaged, intellectually limited or pedagogically deprived and shows no evidence for hard sign of any disorder, then that individual is characterized as learning disabled. The child who has difficulty in expressing or understanding and cannot read, write or do mathematics within the criterion range as established per school norms is learning disabled.

These children have average or above-average intelligence. Their eye sight and hearing capacity are in the normal range. They are not physically handicapped, mentally retarded or emotionally disturbed. They exhibit difficulties in basic psychological processes responsible for listening, speaking, reading, writing and arithmetic. They face greater difficulty in language than in non-language areas. Teachers are likely to assume that they cannot learn or are mildly mentally retarded, when in fact they are not. **Hence, this module will help in de mystifying many myths about learning disabilities in teachers. The specific objectives of this module are as follows.**

## Objectives of the Module

### This module will

- Help teachers to understand and identify learning disabilities
- Expose teachers to a variety of learning disabilities including their symptoms and interventions
- Give teachers information on some associated disorders
- Provide tips to parents and teachers on how to deal with children with learning disabilities.

## About Learning Disabilities

Imagine a child having important ideas and need to communicate them, but being unable to express them or perhaps being bombarded by sights and sounds, but unable to focus his/her attention. Or trying to read or add, but unable to make sense of letter or numerals. The problems of these children who fail to cope up with academics is not new. ***These children are identified by a variety of labels such as dyslexic, slow learners, brain damaged, learning disabled, always***

*on the move, educationally handicapped, intellectually retarded and poor readers.* It is commonly believed that the identification of learning disabilities arose in response to the unique needs of a group of children for whom school is especially challenging.

There are two parts to a learning disability. **First having a learning disability means that the brain “processes” information differently than most other students.** Certain kinds of information get stuck or lost while travelling through the brain. Information processing refers to how the brain:

- Takes in information,
- Uses this information,
- Stores the information in memory,
- Retrieves the information from memory, and
- Expresses the information.

**Second, having a learning disability causes a “discrepancy” between your ability and achievement. This means that a child is lot smarter than he/ she performs in school.** A child with learning disabilities might be just as smart as someone sitting next to him/her in class, but the child’s performance in certain areas isn’t as good. This isn’t because the child is stupid, lazy, or anything else bad. The child just learns differently.

*A child with learning disability is like a cricket player who has the “ability” to hit home runs but is given a broken bat to use. S/he doesn’t have the chance to prove how great s/he really is.*

### **CASE STUDY OF SUNNY**

Sunny was a 2nd grade student. He found it difficult to match alphabets to their sounds or combine alphabets to create words. This led him to be a little frustrated and disturbed in class and he had difficulty completing his class work. When the class teacher informed Sunny’s parents, they replied that their son was intelligent and would gradually pick these things as time passed. However, when the results came, Sunny had received C and D grades in various subjects and this got the parents worried. This time, the teacher gently insisted that the parents approach a clinical psychologist for an evaluation of his learning difficulties and they complied.

The psychologist educated the parents about Learning Disability (LD) and explained that there are standardized assessments available for assessing this condition. He explained the various tests and the functions they measure. As the tests were administered and the results emerged, the parents were able to obtain a better understanding of the difficulty Sunny faced. This psychological assessment proved that Sunny has a mild level of LD. The details of the type of LD were also evident on these tests. A detailed assessment was done by the psychologist and a psychiatrist to rule out other medical, neurological and psychological disorders commonly associated with LD. Fortunately, in Sunny’s case there was no evidence of any such associated condition.

Parents were advised to take help from a special educator. As time passed, with the help of the special educator, Sunny made substantial progress. Presently he is almost at par with his peers. He is motivated to put in the extra work and his grades have improved.

## Definition of Learning Disabilities

As per the Rights of Persons With Disabilities Act (RPWD, 2016) "specific learning disabilities" means a heterogeneous group of conditions wherein there is a deficit in processing language, spoken or written, that may manifest itself as a difficulty to comprehend, speak, read, write, spell, or to do mathematical calculations and includes such conditions as perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia 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.***

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 child looks like any other child 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.

## Screening / Identifying Children with Learning Disabilities

Identifying children with a learning disability can be tricky because it can be confused with a lack of interest in a school subject. In this lesson, we will look at how learning disabilities can be identified and the three most common learning disabilities: dyscalculia, dysgraphia and dyslexia. How can a parent or a teacher tell the difference between a child who just doesn't like school or a particular subject and a child who has a learning disability? A teacher and a parent can look at the grades / marks of a child, and if they are failing in an area, that could be an indication that they may have a learning disability in that subject.

However, their failing grade could simply be from a lack of interest in the subject, or they could be developmentally delayed in their learning ability. If they are developmentally delayed, they typically are able to catch up with their peers once they are given additional tutoring in the subject. However, if tutoring doesn't help the child, and the student is consistently struggling in one or more subject areas, the parent or the teacher may request that the child be given a **diagnostic achievement test**. This test is used to determine a student's strengths and weaknesses. A teacher or a parent should also look at the behavior of the student.

### Right to Education Act, 2009

In August 2009, Parliament passed the historic Right of Children to Free and Compulsory Education (RTE) Act, 2009. This Act must be seen from the perspective of children. It provides a justiciable legal framework that entitles all children between the ages of 6-14 years to an education of reasonable quality, based on principles of equity and non-discrimination. It provides for children's right to free and compulsory admission, attendance and completion of elementary education.

The following provisions are given to **ALL** children with disabilities under the Act:

- Provision of free education
- Access to neighbourhood school
- Barrier free access
- Transport and/or escort, if needed
- Admission without any kind of fees or charge
- Books, newspapers and magazines in the library
- Sports equipment and play material
- Textbooks
- Special training for age-appropriate enrolment
- No capitation fees
- No denial of admission
- Non detention and non - expulsion
- No affidavits at the time of admission
- No screening procedures
- Age appropriate admission

The Act provides for the child's right to education that is free from fear, stress and anxiety. There are several provisions in the Act, including for example, provisions prohibiting corporal punishment and expulsion which support the education of children with learning disabilities.

**The following checklist can be used by teacher to screen child with learning disabilities in a classroom:**

<b>Symptom</b>	<b>Yes</b>	<b>No</b>
Is the child so destructively restless that he/ she is unable to complete the task in the same time as his/ her age peers?		
Is the child easily distracted by the irrelevant activities taking place at home/ school?		
Does the child reverses letters or symbols too frequently as compared to his/her age peers while reading (example b as d, saw as was)?		
Does the child show problems in following routines and directions?		
Does the child have great problems with pronunciation, vocabulary and trouble finding the right word?		
Does the child have problems in learning shapes, colours, days of the week, numbers and alphabets?		
Does the child lose place, or repeat/ insert/ substitute/omit words too frequently while reading?		
Does the child reverse numbers too frequently while reading or writing (example 31 as 13, 6 as 9)?		
Does the child confuse arithmetic signs (+ and x, < and >)		
Is the child excessively poor in calculations?		
Does the child have problem copying from other sources correctly (book/ blackboard), even though he has normal vision?		
Does the child write letters or words too close or too far (spacing problems)?		
Does the child seem to understand everything what is taught, but is not able to answer when questioned?		

**Note :**

**If the child shows any of the above 3-5 symptoms consistently, he/ she should be carefully examined by a qualified psychologist/special educator. The child should also exhibit these behaviours in at least 2 situations (classroom, social or home). Moreover these symptoms become a reason for concern only if he/ she exhibits these till the age of 7. The problems as mentioned above may be in various combinations and it is also not necessary that all symptoms must be present. Any one of these signs present need not necessarily mean that the child has a learning disability. There may be several reasons for his inability to learn. There may be additional problems. It is possible that the child is unable to learn because he has hearing difficulty, is a slow learner or is hyperactive. Therefore, before concluding that a child has a learning disability it is important to look all the different aspects of development in the child.**

**Slow Learners:**

**Note: If the child has IQ between 89-70, it indicates problem of slow learning. If IQ report not available, then the underlined statements indicate problem of slow learning.**

- Does the child has history of poor attention before the age of 6 year in spite of no history of significant developmental delay, illness, head injury or fits
- Does the child take longer to complete a task when compared to peer group/classmates
- Does the child score consistently between 40 - 55% in spite of individual instructional support
- Does the child have limited vocabulary in using words yet communicate comfortably to express needs with parents, teachers and peer group
- Does the child need repeated instructions with practical examples and instructions in a smaller group to cope with lesson content
- Does the child engage frequently in impulsive actions, aggressive reaction, abusive expression when frustrated or angry with his/her classmates
- Does the child have better performance using oral medium when compared to written performance at a given class
- Does the child consistently write untidily and illegibly?

## Types of Learning Disability

### Dyslexia

The term dyslexia, also referred sometimes as reading retardation, is used to identify children who have severe difficulty in learning to read. The child may even be two years behind his / her expected level of reading. This is a child who has been unable to learn to read through the regular classroom methods.

A child with this problem might have difficulty blending sounds into words, have problems remembering auditory sequences and also manifest more speech and language difficulties. Thus they have great difficulty with spelling. They cannot interpret accurately what they see. The child might see certain letters backward and upside down and also see parts of words in reverse.

### A simple checklist that can help a teacher identify a child with dyslexia is provided below:

- Does the child frequently reverses letters (b as d)
- Does the child frequently reverses words (was as saw)
- Does the child read a word inconsistently (girl as gril)
- Does the child frequently reverses numbers (6 as 9)
- Does the child repeat words while reading?
- Does the child have trouble following written or oral directions?

### Signs and Symptoms of Dyslexia are

- Reads slowly and painfully
- Experiences decoding errors, especially with the order of letters

An I.Q between 90 and 110 is considered average; over 120, superior. Roughly 68% of the population has an IQ between 85 and 115. The average range between 70 and 130 represents about 95% of the population.

- Over 140 - Genius or near genius
- 120 - 140 - Very superior intelligence
- 110 - 119 - Superior intelligence
- 90 - 109 - Normal or average intelligence
- 80 - 89 - Dullness
- 70 - 79 - Borderline deficiency
- Under 70 - Definite feeble-mindedness.

- Has trouble with spelling
- May have difficulty with handwriting
- Exhibits difficulty recalling known words
- Has difficulty with written language
- May experience difficulty with math computations
- Complains of dizziness, headaches or stomach aches while reading.
- Confused by letters, numbers, words, sequences, or verbal explanations.
- Reading or writing shows repetitions, additions, transpositions, omissions, substitutions, and reversals in letters, numbers and/or words.
- Reads and rereads with little comprehension.
- Spells inconsistently.

### **Strategies for Intervention**

- Provide a quiet area for activities like reading, answering comprehension questions
- Use books on tape
- Use books with large print and big spaces between lines
- Provide a copy of lecture notes
- Don't count spelling on history, science or other similar tests
- Allow alternative forms for book reports
- Allow the use of a laptop or other computer for in-class essays
- Use multi-sensory teaching methods
- Don't teach using rote memory
- Present material in small units.
- Use lot of praise with these children
- Don't give a punishment for forgetting books
- Don't use the word lazy
- Expect less written work
- Prepare a printout of homework and stick it in their book
- Do not ask them to copy text from a board or book
- Accept homework created on a computer
- Give the opportunity to answer questions orally.

### **Dysgraphia**

It is a specific learning disability that affects a child's handwriting ability and fine motor skills. Dysgraphia is the inability to write properly, despite a student, being given adequate time and attention. The cause of this disorder is still unknown but is thought it could be due to a language disorder and or damage to the motor system. The main sign of dysgraphia is a student's handwriting will barely be legible. The writing will appear incorrect or distorted and have letters of different size and spaces.

A learning disabled child with writing disorders has problem planning, organizing and writing his thoughts; has problem explaining the sequence of activities. For example, what is happening in the story / picture. S/he exhibits problems in describing events/ people/ objects (i.e. in

answering questions like how does it look like?). A child has no idea of paragraph formation and is untidy in his/ her written work.

*A checklist is to help teachers in identifying writing errors in children with learning disabilities is given below:*

- Does the child write too large or too small?
- Does the child write the letter or word too close or too far apart?
- Does the child very untidy in the written work?
- Does the child make frequent grammatical, punctuation and spelling errors?
- Does the child omits or adds parts of letters?
- Does the child write numbers inconsistently or reverses them (31 as 13, 6 as 9)?
- Does the child reverse forms or shapes of letters while writing (b as d)?

### **MULTIPLE INTELLIGENCE THEORY**

**Verbal-linguistic intelligence:** has to do with words, spoken or written. People with verbal-linguistic intelligence display a facility with words and languages. They are typically good at reading, writing, telling stories, and memorizing words and dates. **Logical- Mathematical:** This area has to do with logic and numbers. This intelligence naturally excel in mathematics, chess, computer programming. **Spatial:** People with strong visual-spatial intelligence are typically very good at visualizing and mentally manipulating objects. They have a strong visual memory and are often artistically inclined. **Bodily- Kinesthetic:** This area has to do with movement and doing. In this category, people are generally adept at physical activities such as sports or dance and often prefer activities which utilize movement. They may enjoy acting or performing, and in general they are good at building and making things. **Musical:** Those who have a high level of musical-rhythmic intelligence display greater sensitivity to sounds, rhythms, tones, and music. **Naturalistic:** This area has to do with nature, nurturing, and classification. **Interpersonal:** This area has to do with interaction with others. People in this category are usually extroverts and are characterized by their sensitivity to others' moods, feelings, temperaments, and motivations and their ability to cooperate in order to work as part of a group. **Intrapersonal:** This area has to do with introspective and self-reflective capacities. Those who are strongest in this intelligence are typically introverts and prefer to work alone.

### **Signs and Symptoms of Dysgraphia**

- May have illegible printing and cursive writing (despite appropriate time and attention given the task)
- Shows inconsistencies like mixtures of print and cursive, upper and lower case, or irregular sizes, shapes or slant of letters
- Writes unfinished words or letters, omitted words
- Inconsistent spacing between words and letters
- Exhibits strange wrist, body or paper position
- Has difficulty in letter formation
- Copying or writing is slow or labored
- Has cramped or unusual grip / may complain of sore hand
- Has great difficulty thinking and writing at the same time (taking notes, creative writing).

### **Strategies for Intervention**

- Suggest use of word processor

- Avoid penalizing student for sloppy, careless work
- Use oral exams
- Allow use of tape recorder for lectures
- Allow the use of a note taker
- Provide notes or outlines to reduce the amount of writing required
- Reduce copying aspects of work (pre-printed math problems)
- Allow use of wide rule paper and graph paper
- Suggest use of pencil grips and or specially designed writing aids
- Provide alternatives to written assignments (video-taped reports, audio-taped reports)

## **Dyscalculia**

It is a specific learning disability that affects a person's ability to understand numbers and learn math facts. Dyscalculia is a specific learning difficulty in mathematics. Like dyslexia, dyscalculia can be caused by a visual perceptual deficit. Dyscalculia refers specifically to the inability to perform operations in math or arithmetic. It could be described as an extreme difficulty with numbers. Dyscalculia does not have the same stigma surrounding it, but it is very important to recognize it as soon as possible, before it impacts on a child's self esteem. Just as there is no single set of signs that characterize all dyslexics, there is no one cause of dyscalculia. 'Dys' comes from the Greek word meaning 'difficulty with'. 'Calculia' means calculations. Hence, dyscalculia means difficulty with calculations / mathematics.

A child with Dyscalculia has difficulties in spatial relationships (up, down, high, low, far, near) size relationships (big, small, more, less). Further, the child shows left to right confusion (disorientation with regard to number sequence). Even mild learning disabled children have difficulty in performing basic math skills. Math disability comprise (I) computational problems, or (ii) conceptual problems. The computational problems include: (i) poor addition, subtraction, multiplication and division, and (ii) failure in application of math rules. The conceptual problems are developmental in nature and include: (i) poor understanding of questions, (ii) difficulty in discriminating between the relevant and irrelevant aspects of math problems, (iii) poor discrimination between different shapes, sizes and quantities, (iv) poor number sense, (v) poor spatial orientation (e.g., difference between 'top' and 'bottom', 'beginning' and 'end'), and (vi) poor problem solving.

## **Signs and Symptoms of Dyscalculia**

- Shows difficulty understanding concepts of place value, and quantity, number lines, positive and negative value, carrying and borrowing
- Has difficulty understanding and doing word problems
- Has difficulty sequencing information or events
- Exhibits difficulty using steps involved in math operations
- Shows difficulty understanding fractions
- Is challenged handling money
- Displays difficulty recognizing patterns when adding, subtracting, multiplying, or dividing
- Has difficulty putting language to math processes

- Has difficulty understanding concepts related to time such as days, weeks, months, seasons, quarters, etc.
- Exhibits difficulty organizing problems on the page, keeping numbers lined up, following through on long division problems

### Strategies for Interventions

- Allow use of fingers and scratch paper
- Use diagrams and draw math concepts
- Provide peer assistance
- Draw pictures of word problems
- Use mnemonic devices to learn steps of a math concept
- Schedule computer time for the student for drill and practice

**Universal Design for Learning** embraces the concept of improved access for everyone and applies it to curriculum materials and teaching methods.

- Multiple methods of presentation
- Multiple options for participation
- Multiple means of expression

- Use concrete material to teach children how to count such as buttons and beads;
- Teacher should use a lot of visual aids to teach simple mathematical operations and concepts
- Tactile materials such as embossed numerals, symbols should be used to teach simple concepts such as more or less, short or long. Various lengths and sizes could be taught by tactile presentations
- Concepts such as time and money should be linked to day-to-day events. Use of meaningful vocabulary which includes phrases as tomorrow, in five minutes, as soon as possible will help the child in increasing his/her awareness about concepts related to time
- Worksheet activities are also useful in teaching math/math problems to children with learning disability having difficulty in math
- Give smaller number of problems to these children. These children can also be given some extra time to complete math assignments
- Playing cards can be used to teach computation skills to children. Some simple games could also be developed with the help of playing cards
- Blocks, puzzles and word games are always helpful in making the process of learning mathematical concepts more joyful for the child
- Use of colours again can give some useful hints. Highlighters can be used to specify directionality and signs (+, x)
- Display charts that explain the process, signs and tell what key words indicate in word problems are also of help these pupils
- Apply the basic concept in activities that could be practiced in and outside the classroom
- Have students estimate distance, weights, and sizes etc.
- Have students use an abacus to facilitate counting, calculations etc.
- Teach students to use rules (e.g. any number times 2 is double that number)
- Difficult problems should be taught with flash cards
- Play instructional math games
- Teach students the relationships between addition and subtraction or multiplication and division
- Use of colours (green means multiplication and red means addition) can prevent the children from being confused between number, symbols and signs

- Use the method of attack strategy training. In this method the child uses certain strategies for specific academic problems. Arithmetic computations can be taught with this method.

## **Dyspraxia**

Dyspraxia is a difficulty with thinking out, planning and carrying out sensory/ motor tasks. It is an immaturity of the brain resulting in messages not being properly transmitted to the body. The child with dyspraxia may have a combination of several problems in varying degrees.

### **Symptoms of Dyspraxia**

- Poor fine and gross motor coordination
- Motor planning and perception problems
- Tactile dysfunction
- Poor awareness of body in space
- Difficulty with reading, writing and speech
- Poor social skills
- Poor sense of direction like finding rooms across the campus
- Poorly developed organizational skills
- Easy tiredness
- Problems with awareness of time
- Confusion over handedness
- Lack of awareness of potential danger

### **Identification of Dyspraxia**

Children with dyspraxia may be present with some or all of the following:

**The pre-school child:** Late rolling, crawling, walking, difficulty with steps, clumping, puzzles, difficulty with eye movements may move head instead of eyes; difficulty with learning new skills instinctively and slow to develop speech.

### **The older child exhibits the following:**

- Difficulty dressing
- Tying shoe laces
- Using cutlery
- Poor balance
- Difficulty with riding a bike
- Poor reading skills
- Poor handwriting
- Copying from blackboard
- Ability to express themselves.

### **Interventions to deal with Dyspraxia**

The following can help dealing with dyspraxia:

- Break down tasks into smaller manageable slices
- Allow the child to finish a task before moving on
- Don't force the child to take part in team games
- Ensure they are aided to find their way round, they will forget where they should be
- Don't expect them to copy large chunks from the board or books, coordinating eyes, brain and hand are not easy for most of us, for these children it can be impossible
- Don't set them to fail. Do be aware of what you are asking them to achieve
- Ask them to repeat any series of instructions given, it helps to internalize it
- Never allow a child with Dyspraxia to be compared to an able child. Not by teachers or peers.
- Praise every effort and every small accomplishment. A Dyspraxic child has been used to failure repeatedly: every effort must be made to raise their self-esteem.
- Remember that they have difficulty in taking on board information during lessons. Allow them extra time: teach in small bursts, allowing opportunity's to rest, if necessary.
- Ensure that the child has understood what is being taught, repeat if needed. Check that they are not falling behind because they cannot copy from the blackboard.
- Teach on a one to one level, with few distractions, when appropriate. If there is a learning support worker available, allow them to assist the child so they are taught at the same pace alongside their peers. Children with Dyspraxia so better in a relaxed environment with one to one support.
- Establish a parent- professional link

## **Aphasia**

**Aphasia** is an inability to comprehend and formulate language because of damage to specific brain regions. To be diagnosed with aphasia, a person's speech or language must be significantly impaired in one (or several) of the four communication modalities. The four communication modalities are auditory comprehension, verbal expression, reading and writing, and functional communication.

The difficulties of people with aphasia can range from occasional trouble finding words to losing the ability to speak, read, or write; intelligence, however, is unaffected. Expressive language and receptive language can both be affected as well. Aphasia also affects visual language such as sign language. One prevalent deficit in the aphasias is anomia, which is a deficit in word finding ability. Often those with aphasia will try to hide their inability to name objects by using words like *thing*. So when asked to name a pencil they may say it is a thing used to write.

Difference between dyslexia and aphasia is that dyslexia is a learning disability in which a person finds it difficult to read and write while aphasia is a partial or total loss of language skills due to brain damage.

## **Signs & Symptoms**

- Having difficulty finding words (**anomia**)

- Speaking haltingly or with effort
- Speaking in single words (e.g., names of objects)
- Speaking in short, fragmented phrases
- Putting words in the wrong order
- Inability to comprehend language
- Inability to pronounce, not due to muscle paralysis or weakness
- Inability to speak spontaneously
- Inability to form words
- Inability to name objects (anomia)
- Poor enunciation
- Excessive creation and use of personal neologisms
- Inability to repeat a phrase
- Persistent repetition of one syllable, word, or phrase (stereotypies).

### **Interventions**

- Structure the learning environment to minimize distractions for your students with aphasia.
- Use simple language and uncomplicated sentences when communicating with students with aphasia.
- Repeat words as necessary when speaking with students with aphasia
- Present information using multiple modalities (e.g., orally, visually, kinesthetically)
- When teaching vocabulary, provide written words, definitions, synonyms, antonyms, examples of usage and pictorial representations
- Explicitly teach semantics and syntax concepts. Simplify them as much as possible
- Break concepts down into small steps and repeat them as often as necessary to ensure your student comprehends them
- Allow students with aphasia as much time as necessary, without interruption, to express themselves verbally
- Create word choice boards
- Use flashcards / index cards to build vocabulary
- Encourage your students with aphasia to use any type of communication they are comfortable with (e.g., writing, drawing, pointing, gesturing, picture systems, sign language, augmentative communication devices)
- Have your student repeat and explain concepts, directions and expectations to you after you've presented them to her
- Partner with your school's speech therapist and special education case manager to identify possible augmentative communication and assistive technology devices for your students with aphasia.

### **Related Disorders**

**Attention Deficit Hyperactive Disorders (ADHD)** constitutes a condition characterised by inappropriate attention skills, impulsivity, and, in some cases, hyperactivity. Attention Deficit hyperactive disorders affect children in all areas of their lives. Characteristics of ADHD are evident on a daily basis in all of their environments-at home, in school, and with peers. At home, parents often report that their children have difficulty accommodating to home routines and

parental expectations. Children with ADHD may resist going to bed, refuse to eat, or break toys during play. At school, they may be extremely restless and easily distracted. They have trouble completing work in class, often missing valuable information because of their underdeveloped attention capacity. They speak aloud out of turn and find themselves in trouble for their behavior. Their inattention, impulsivity, and hyperactivity can also be detrimental to their social lives, hampering their ability to make and keep friends. Thus, ADHD interferes significantly with all major life activities, disrupting the child's home life, education, behavior, and social adjustments.

## **Characteristics**

Individuals with ADHD have difficulty focusing their attention and concentrating on tasks. Described as rash, driven, easily distracted, they tend to race from one idea or interest to another. The three primary characteristics of ADHD are:

- inattention
- impulsivity
- hyperactivity

## **Symptoms of ADHD**

- Often fidgets with hands or feet or squirms in seat (in adolescence may be limited to feelings of restlessness).
- Has difficulty remaining seated when required to do so.
- Is easily distracted by extraneous stimuli.
- Has difficulty awaiting turn in games or group situations.
- Often blurts out answers to questions before they have been completed.
- Has difficulty following through on instructions from others, e.g. fails to finish chores.
- Has difficulty sustaining attention in teaching or play activities.
- Often shifts from one uncompleted activity to another.
- Has difficulty playing quietly.
- Often talks excessively.
- Often interrupts or intrudes on others (e.g., butts into other children's games).
- Often does not seem to listen to what is being said.
- Often loses things necessary for tasks or activities at school or at home (e.g., toys, pencils, books, assignments).
- Often engages in physically dangerous activities without considering possible consequences (not for the purpose of thrill-seeking), e.g., runs into street without looking.

## **Symptoms of Inattention**

- Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities.
- Often has difficulty sustaining attention in tasks or play activities.
- Often does not seem to listen to what is being said to him or her.
- Often does not follow through on instruction and fails to finish schoolwork, chores, or duties

in the workplace

- Often has difficulties organising tasks and activities.
- Often avoids or strongly dislikes tasks such as schoolwork or homework that requires sustained mental effort.
- Often loses things necessary for tasks or activities (e.g., school assignments, pencils, books, tools, or toys).
- Is often easily distracted by extraneous stimuli.
- Often forgetful in daily activities.

### **Symptoms of Hyperactivity**

- Often fidgets with hands or feet or squirms in seat.
- Leaves seat in classroom or in other situations in which remaining seated is expected.
- Often runs about or climbs excessively in situations where it is inappropriate
- Often has difficulty playing or engaging in leisure activities quietly.
- Often talks excessively.
- Often acts as if "driven by a motor" and cannot remain still.

### **Symptoms of Impulsivity**

- Often blurts out answers to questions before the questions have been completed.
- Often has difficulty waiting in lines or awaiting his or her turn in games or group situations.
- Often interrupts or intrudes on others.

### **Educational interventions**

**Cruickshank (1961)** noted that four elements comprise the essentials in a good teaching environment for brain-injured children with hyperactivity. These elements put forward by Cruickshank were:

- Reduction in environmental stimuli
- Reduced space
- A structured school program and life plan
- Increased stimulus value of teaching materials (organised stimulation to call attention to specific teaching or learning materials).

### **Remedial strategies to reduce hyperactivity**

#### **Modification**

Modification in the instruction in the following ways helps the students with ADHD :

- Altering the way information is presented :
  - Textbooks recorded on audiotape
  - Highlighted readings
- Altering the way information is assessed:

- Alternative test formats (matching instead of essay, for example)
- Shorter tests
- Oral presentations and responses
- Redesigned tests
- Managing academics and behaviour:
  - Specifically prescribed classroom alternations for certain students (seating, individual instruction, and so on)
  - Behaviour management techniques (positive reinforcement, student conferences, behaviour contracts, and so on)
  - Student partners/mentors.

### **Creating a stimulating learning environment**

Students with ADHD respond well to novelty. Students with ADHD benefit from increased stimulation and novelty on easy and repetitive tasks but not on new or difficult ones. Simple modifications can increase the novelty and stimulation of tasks presented to students with ADHD. For example, adding shape, colour, or texture to an activity increases its novelty value. With a stimulating learning environment, students attend better to the learning activity. Other relatively simple modifications that make activities more stimulating include :

- Eliminate unnecessary repetition of tasks.
- Add action to the task (for example, have the student work with others, talk, move materials).
- Shorten assignments.
- Develop routines aimed at completing the task (for example, establish a specific place to put finished material).

### **Increased sustained attention**

Students with ADHD are likely to have a short attention span. They may initially attend to a task, but their attention soon begins to wander. Teachers can take steps to keep such students' attention, and prolong their concentration on the tasks at hand. **These include shortening the task, making tasks more interesting and increasing the novelty of the task.**

### **Shorten the task**

Teachers can accommodate students with attentional problems by shortening tasks. Some ways of achieving this are : break one task into smaller parts to be completed at different times; allow quiet talking during work; give two tasks, with the task the student prefers to be completed after the less preferred task; assign fewer problems; (for example, fewer spelling words or mathematics problems); try to use fewer words when explaining tasks; give concise verbal directions; use distributed practice rather than massed practice for rote tasks; that is, set up more short, spaced practice sessions and give fewer and shorter assignments.

### **Make tasks more interesting**

When students are intensely interested in something, their attention span can be amazingly long. For example, a child will spend hours at a favourite hobby. Remember that obtaining “on-task”

behaviour is not in itself a useful goal. Attention should be a natural result, not a goal to be observed, so change the nature of the task or the learning environment as needed. The following strategies make tasks more engaging.

- Encourage children to work with partners, in small groups, or at interest centres;
- Alternate highly interesting and less interesting tasks;
- Use visual aids (such as an overhead projector) when teaching.

### Increase the novelty of the task

Tasks that are new, unique, or unusual are inherently more appealing and more likely to capture a child's attention. For longer tasks or tasks that are necessarily repetitive, increasing the novelty value is especially important. To add novelty, try using a game format for the task. Games add fun and novelty to learning, especially when material must be overlearned to develop automaticity (such as with word recognition or math facts).

### Teaching strategies

Many parts of the curriculum can readily be changed, modified, or adapted, without sacrificing the integrity of the basic curriculum. In many cases, even small changes will greatly benefit students with ADHD, who in general, need a stimulating, active curriculum that will captivate their attention and motivate them to complete the activity at hand. General teaching guidelines are:

- Use high-interest curriculum materials
- Check the difficulty level of the reading material and text-books to make sure it is appropriate for the child's reading level. A level that is too easy leads to boredom and a level that is too difficult leads to frustration
- Select manipulables, hands-on material whenever possible
- Establish a solid, concrete experiential base before teaching abstract concepts.
- Demonstrate how new information relates to material already learned
- Introduce new vocabulary before beginning a lesson

### Interventions for Specific Learning Disabilities

Below are just a few examples of ways teachers can help children with specific learning disabilities.

#### Dyslexia

- **Special teaching techniques.** These can include helping a child learn through multisensory experiences and by providing immediate feedback to strengthen a child's ability to recognize words.
- **Classroom modifications.** For example, teachers can give students with dyslexia extra time to finish tasks and provide taped tests that allow the child to hear the questions instead of reading them.
- **Use of technology.** Children with dyslexia may benefit from listening to books on tape or using word-processing programs with spell-check features.

#### Dysgraphia

- **Special tools.** Teachers can offer oral exams, provide a note-taker, and/or allow the child to videotape reports instead of writing them.
- **Use of technology.** A child with dysgraphia can be taught to use word-processing programs or an audio recorder instead of writing by hand.
- **Other ways of reducing the need for writing.** Teachers can provide notes, outlines, and preprinted study sheets.

#### Dyscalculia

- **Visual techniques.** For example, teachers can draw pictures of word problems and show the student how to use colored pencils to differentiate parts of problems.
- **Use of memory aids.** Rhymes and music are among the techniques that can be used to help a child remember math concepts.
- **Use of computers.** A child with dyscalculia can use a computer for drills and practice.

#### Dyspraxia

- **Quiet learning environment.** To help a child deal with sensitivity to noise and distractions, educators can provide the youngster with a quiet place for tests, silent reading, and other tasks that require concentration.
- **Alerting the child in advance.** For example, a child who is sensitive to noise may benefit from knowing in advance about such events as fire drills and assemblies.
- **Occupational therapy.** Exercises that focus on the tasks of daily living can help a child with poor coordination.

- Use visual aids to supplement oral and written information
- Use learning aids to structure learning and increase motivation
- Create curriculum activities that require active participation, such as talking through problems and acting out steps
- Use multiple modalities when presenting information. For example, combining a visual-tactile approach with verbal information
- Modify curriculum worksheets so there is less material on each page.
- Use colour-coded worksheets to attract attention and increase the novelty of the task
- Break assignments into smaller chunks
- Give feedback on each one immediately
- Avoid pressures of speed and accuracy.

### **Psychosocial Support**

Many parents and teachers of children with learning disabilities ask what they can do to help them. Generally, the first step is to try to understand the child's difficulties and to consider how these weaknesses might impact on self-help skills, communication, discipline, play and independence; however, above all, focus on the child's strengths in order to build self-esteem and to help them become an integral part of the school and family.

### **Role of parents**

- Do not neglect the child's education
- Encourage the child in all situations.
- Do not compare the performance of this child with other children
- All children have strengths and these should be focused upon
- Have reasonable expectations of your child.
- Develop a feeling of responsibility in the child
- Believe in the productive potential of the child
- Provide opportunities for the child to make appropriate choices and decisions
- Help the child deal effectively with his/her mistakes and failures
- Take advice of the competent experts
- Do not be overawed by negative community reactions.

### **Effective teachers of students with learning disabilities**

Lowenthal and Lerner (1995) in their book "Attention Deficit Disorders: Assessment and Teaching" describe the following characteristics of effective teachers:

- Strongly engage students within academically focused, teacher-directed classrooms, using sequenced, structured materials.
- Focus on academic matters using activities with goals that are clear to students.
- Allocate sufficient time for instruction.
- Frequently monitor student performance and check student work.
- Plan lessons and questions to obtain many correct responses from students.

- Offer immediate feedback to students on academic tasks.

Teachers who work successfully with students with learning disabilities also possess the following characteristics:

- Positive attitude towards mainstreaming and integration. Teacher must believe that children can benefit from being in an integrated learning environment. Such teachers welcome diversity among the children in their classes and help their students learn to appreciate the contributions that each child has. The teachers are willing to be flexible and modify their instruction to meet unique needs of students with learning disabilities so that they can succeed in the regular class. A student's success or failure may depend on small changes in a teacher's approach.
- The ability to collaborate with resource teachers and parents as a team: Children with learning disabilities need the support and collaborative efforts of regular and special educators. Effective classroom teachers are also effective team members. They know how to work with others.
- Knowledge of behavior management techniques: Children with learning disabilities having attention problems need behavior management to learn how to control their inattention, impulsivity and hyperactivity. Classroom teachers should understand the concepts underlying the basic principles of reinforcement and behavior theory and be able to apply behavior management strategies.
- Personal characteristics: Teachers who work well with children with learning disabilities are fair, firm, warm, and responsive, have patience and a sense of humor, and are able to establish a rapport with pupils. Rapport refers to a harmonious relationship between the teacher and the child, a feature of paramount importance. Effective teachers provide structure and expectations for students that students realize are fair and just. Effective teachers know that learning may take a long time and requires many repetitions, but they have the patience to wait as the child learns. Finally, teaching children with learning disabilities is hard work. Teachers need a good sense of humor to maintain their diligence and forbearance.

**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 resource 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 behavioral problem
- Above all, all teachers need to believe that "*All children can learn.*"

## **Peer Sensitization**

Peer sensitization can be brought about in the following ways:

- Role playing situations
- The general teacher in collaboration with the resource teacher can also organise some lectures in making or the peers understand the problem.
- A resource teacher or any person with enough experience in this area can give a talk to the class using pictures, charts. Then hold a question-answer session and let students express their feelings and fears.
- For peers to be sensitized, the classroom may also have charts that re reminders of specific rules concerning the do's and dont's of this disability.

## **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.

## **After reading this module, it is expected that the teachers**

- Will have a better understanding of the concept of learning disabilities
- Would be able to differentiate between slow learners and leaning disabilities
- Know about various types of learning disabilities, generally found in children
- Gain knowledge on strategies to be used with these children
- Will be able to utilize the support of other children
- Would be able to provide some guidance to parents.

## **Conclusion**

Children with learning disabilities and disorders can learn strategies for coping with their disabilities. Getting help earlier increases the likelihood for success in school and later in life. If learning disabilities remain untreated, a child may begin to feel frustrated with schoolwork, which can lead to low self-esteem, depression, and other problems. Hence, teachers should work to help a child learn skills by building on the child's strengths and developing ways to compensate for the child's weaknesses. Interventions may vary depending on the nature and extent of the disability. It is hoped that this module will be a step forward in the direction of helping teachers identify, deal and manage children with learning disabilities.