

ASSESSMENT OF LEARNING DISABILITY

Definition of Specific Learning Disability - IDEA (2004)

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

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

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

Learning Disability

- A heterogeneous group of disorders
- Affects the acquisition and use of listening, speaking, reading, writing, reasoning and mathematical abilities
- May affect social skills also
- Disorders are intrinsic to the individual
- LD may occur concomitantly with other conditions
- Children with LD have normal intelligence
- Found in both – boys and girls
- Found in children as well as adults
- Can be diagnosed at any age
- Affects academic as well as non-academic skills
- Approximately 7% - 10% of school-going children have some learning disability
- LD cannot be cured

Learning disabilities are not caused by:

- Economic disadvantage
- Environmental factors
- Cultural or differences
- Poor parenting

Areas of Difficulty:

- | | | |
|--------------------------|---------------|-----------------|
| ▪ Attention | ▪ Reading | ▪ Motor Skills |
| ▪ Reasoning and Thinking | ▪ Writing | ▪ Social Skills |
| ▪ Memory | ▪ Spelling | |
| ▪ Oral Communication | ▪ Mathematics | |

Secondary Problems

- Low motivation
- Poor Self-Esteem
- Behavioral Concerns
- Physical Effects
- Self-Critical & Critical of Others

Specific Learning Disability: Learning Disabilities is an “umbrella” term describing a number of other, more specific learning disabilities: Dyslexia, Dysgraphia, Dyscalculia, Non Verbal Learning Disorder.

Dyslexia

- Reversal of letters and numbers
- Reading words backwards
- Not seeing punctuation marks
- Omissions of words while reading, or choppy reading
- Inserting or substituting words when reading
- Difficulty reading different styles of type
- Headaches, dizziness, stiff neck, etc. when reading
- Difficulty comprehending what is read

Dysgraphia

- Slow written production.
- Poor penmanship
- Inability to copy correctly from a book or the blackboard.
- Writing words backwards
- Writing letters out of order or reversing letters and numbers
- Difficulty writing in sequence Lots of spelling errors
- Difficulty with punctuation
- Difficulty planning a topic and organizing thoughts on paper
- Difficulty effectively proofreading written work
- Compositions are often limited in length
- Difficulty in spontaneous creative writing

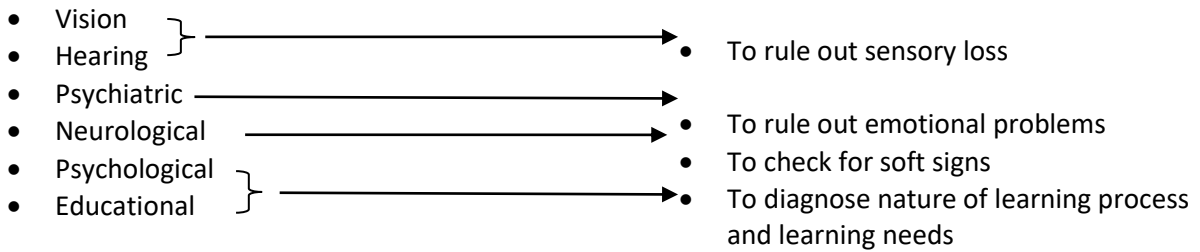
Dyscalculia

- Inability to perform simple math operations
- Difficulty solving math word problems
- Reversals of numbers
- Difficulty in remembering sequencing in math problems
- Difficulty in remembering simple math facts
- Difficulty in remembering formulae in math calculations
- Reading a clock and telling time
- Calculating basic amounts like bills
- Learning multiplication tables

Non-verbal Learning Disability

- Called 'right-brain learning disability'
- Above-grade vocabulary, memory, and reading skills
- Excel in auditory processing and retention skills
- Problems with coordination, balance, and "graphomotor" skills (writing/cursive) – motor problems
- Difficulties with larger concepts, problem-solving, and cause-and-effect relationships - Conceptual Skills
- Problems with visual imagery, visual processing, and spatial relations - Visual-Spatial difficulties
- Poor peer interaction, nonverbal communication, and dealing with new situations – social skill deficits

Assessment For Diagnosis Of Learning Disability



Psychological Assessment

- Overall potential (IQ)
- Understands nature of processing skills
- Indicates how well the brain processes information
- Measure of different types of cognitive abilities

Seeks to answer the question: WHAT IS THE CHILD'S ABILITY TO DO TASKS?

Educational Assessment

- Measure of learning in school
- Measure of learning in daily life
- Indicates how brain processing impacts academic achievement

Seeks to answer the question: HOW MUCH HAS THE CHILD LEARNT?

PSYCHOLOGICAL TESTS : OVERALL CAPACITY

WISC-IV

- Individual administration
- 6 yrs to 16 yrs 11 months
- 15 subtests
- Standard scores obtained for five composite areas
 - Verbal comprehension Index
 - Perceptual reasoning index
 - Working memory index
 - Processing speed index
 - Full Scale IQ

STANFORD-BINET INTELLIGENCE SCALES

- Individual administration
- 2 yrs to 23 yrs
- 15 subtests
- Four composite scores obtained
 - Verbal reasoning
 - Abstract / visual reasoning
 - Quantitative reasoning
 - Short-term memory
 - Global IQ

BANGOR DYSLEXIA TEST

- Administration individual
- 8 yrs to adult
- Indicates whether Dyslexia is the likely cause of learning difficulties
- Assessment areas covered
 - Directionality
 - Repetition of polysyllabic words
 - Long term and short term memory

EDUCATIONAL ASSESSMENT

STANFORD DIAGNOSTIC READING TEST

- Group administered
- Grades K through 12
- Assesses reading skills components:
 - Vocabulary
 - comprehension
 - phonemic awareness
 - phonics

fluency

STANFORD DIAGNOSTIC MATHEMATICS TEST

- Group administered
- Grades 1.5 through 13
- Measures competence in :
 - basic concepts and skills
 - problem-solving
 - problem-solving strategies

PSYCHO-EDUCATIONAL TESTS

WOODCOCK-JOHNSON PSYCHO-EDUCATIONAL BATTERY

- Individual assessment
- 2 yrs through 90 yrs
- Assesses cognitive and academic achievement skills
- Nine tests indicate level of cognitive processing and 11 academic achievement

- Areas covered:
 - Academic skills – reading, writing and maths
 - Cognitive skills – phonemic awareness, concept formation, comprehension, visual perception and memory

DYSLEXIA SCREENING TEST

- Individual administration
- Two levels
- DST-Junior and DST-Secondary
- Age range 6.6 yrs to 11.5 yrs and 11.6 yrs to 16.5 yrs
- Measures cognitive markers of dyslexia viz. rapid naming, phonemic segmentation, reading, spelling, writing fluency, pseudo-word passage

reading

ASTON INDEX

- Individual administration
- Age 5 yrs to 14 yrs
- Contains 16 tests to assess language difficulties
- Assess general underlying ability and attainment
- Tests focus on visual aid and auditory discrimination, motor co-ordination, written language, reading and spelling

WIDE RANGE ACHIEVEMENT TEST (WRAT)

- Individual and/or group administration
- Age 5-11 and 12 + (two levels)
- Assesses three skills - Spelling, Arithmetic computation, Reading

Subtests: Recognizing and naming letters, Word reading, Writing letters and words from dictation, Sentence comprehension, Spelling, Counting, Reading number symbols ,Oral and written math computation

TESTS DEVELOPED IN INDIA

1. Behaviour Checklist for Screening the Learning Disabled
2. Diagnostic Test Of Learning Disability
3. Diagnostic Test Of Reading Disorders
4. Learning Disability Detection Test (vernacular languages)
5. Test Of Thinking Strategies
6. Grade Level Assessment Device

BEHAVIOURAL CHECKLIST FOR SCREENING THE LEARNING DISABLED (BCSLD)

- Behavioural Checklist
- Aim : screening and not diagnosis of LD
- Meant for classroom teachers
- 30 items
 - Negative and positive

Items in eight areas known to be symptomatic of LD

Administration

- Individual
- Meant to be used for children with academic underachievement and manifest problems caused by deficits inner processes linked to learning
- Read each of the 30 statements and checkmark for the presence (Yes) or absence (No) of the behaviour. Mark doubtful (?), if unsure of the behaviour.

Scoring

- Negative items
 - Yes 2
 - No 0
 - ? 1
- Positive items
 - Yes 0
 - No 2
 - ? 1

Add all score to get raw score. Max score is 60

Interpretation

- Children with score above 43 points are “at-risk” for learning disability. Referral be given for further assessment.

DIAGNOSTIC TEST OF LEARNING DISABILITY

Test Description

- Diagnostic test
- Age range 8 yrs to 11 yrs
- Can be group and individually administered
- Criterion-referenced test
- Includes assessment of 10 areas
- Six areas are at perceptual level and 4 are at cognitive functioning level

Description of areas

- 1) Eye- Hand Co-ordination : Ability to co-ordinate vision with the movements of the hands
- 2) Figure-ground Perception: Ability to selectively attend to a stimulus and ignore the background.
- 3) Figure Constancy: Ability to identify symbols, figures, shapes despite its apparent change in size, direction and position.
- 4) Position in Space: Ability to perceive the relationship between the observer and the object in space.
- 5) Spatial Relations: Ability to see a relationship between two or more objects in relation to self and in relation to each other.
- 6) Auditory Perception: Ability to provide meaning to auditory stimuli.
- 7) Cognitive Abilities: Ability to use higher level cognitive processes to process information.
- 8) Memory: Ability to retrieve information from long term.
- 9) Receptive Language: Ability to comprehend information when read out to or read by self.
- 10) Expressive Language: Ability to use language to communicate.

Administration

- Individual administration is preferred
- Group administration can be done except for auditory perception subtest
- The subtests may be administered in any sequence, preferable to alternate perception based tests and cognition based
- Ask the child to read instructions from the booklet and perform the task
- If the child cannot read...
 - Make a note of this behaviour
 - Read the instructions aloud to the child and ask him/her to perform
 - Do not explain the instructions

Scoring and interpretation

- Strictly adhere to the scoring pattern given in manual
- Maximum achievable score is 10 on each subtest
- Interpretation:
 - Scores on each subarea are considered for interpretation
 - Helps in developing profile for the child
 - Score 8-10: relatively strong area
 - Score 6-7 : consider them in relation to other scores
 - Score 5: mild problems
 - Score 4: moderate problems
 - Score 3 and less: severe problems

DIAGNOSTIC TEST OF READING DISORDERS

Test Description

- Diagnostic test
- Age range 8 yrs to 11 yrs
- Criterion-referenced test
- Not a timed test
- Includes assessment of 16 areas ; 8 areas at two levels

Level I:

- i. Sound Symbol Association
- ii. Blending Sounds
- iii. Phonemic Analysis

- iv. Visual Conditioning
- v. Semantic Closure
- vi. Lexical Processing
- vii. Language Internalization
- viii. Copy Writing

Level II:

- i. Grapheme Phoneme Association
- ii. Verbal Phonetic Coding
- iii. Phonemic Synthesis
- iv. Verbal-visual Correspondence
- v. Verbal Memory
- vi. Listening Comprehension
- vii. Reading Comprehension-aloud
- viii. Reading Comprehension - Silent

Administration

- Individual administration
- Use the reusable booklet, response sheet, recording sheet
 - Reusable booklet – for the assessor to use for test administration , giving / reading the instructions
 - Response sheet – for the student to write in
 - Recording sheet – for the assessor to record student responses
 - Completion of level I is essential for administration of level II

Scoring and interpretation

Level 1		Level 2	
Item	Score	Item	score
SSA	10	GPA	10
BS	5	VPC	10
PA	5	PS	10
VC	10	VVC	10
SC	20	VM	10
LP	20	LC	10
LI	10	RC-A	20
CW	20	RC-S	20

- Maximum obtainable score = 100 for each level
- Maximum obtainable score on the test = 200
- Score below 40% of max. score on the item indicative of deficit
- Total score below 20 : assessment required for ADHD and perceptual deficits

SWARUP-MEHTA TEST OF THINKING STRATEGIES

Test Description

- ✘ Assessment of 4 subareas of thinking skills
 - + Memory (associative)
 - + Concept Development
 - + Reasoning

- + Problem Solving
- + Not a timed test
- ✗ Students in age range 9-11 years

Test sub-Areas

- ✗ Memory : assesses associative memory of 5 different types (25 sub-items in all , 5 of each type)
 - ✗ Verbal-verbal symbols
 - ✗ Verbal-nonverbal symbols
 - ✗ Abstract-concrete symbols
 - ✗ Non-sense syllables – abstract symbols
 - ✗ Non-verbal symbols- meaningful words
- ✗ Concept Development: Concepts of objects and relational concepts included (6 items - 15 sub-items)
- ✗ Reasoning: Deductive and inductive reasoning assessed (8 items)
- ✗ Problem solving : Problems of social, mathematical and figural types are included(6 items)

Administration

- ✗ Individual administration
- ✗ Can be group administered
- ✗ Approximately 1 hr taken to complete the test

Scoring and interpretation

area	No. of items	score
Memory	5 – 25 sub items	25
Concept development	6 - 15 sub items	25
Reasoning	8	25
Problem solving	6	25
	Total score	100

Interpretation of the scores is done in relation to each other to determine the areas of relative strengths and weaknesses