

Assessment for Learning Difficulties

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ABSTRACT

Learning disabilities are neurological problems in one or more learning processes. 14 to 31 percent of school-age children struggle with a learning disability in India. 80 percent of those with learning disorders have reading disorders. Learning disabilities are ongoing problems in three areas: reading, writing and math. Difficulties with these skills may cause problems in learning subjects such as history, math, science, and social studies and may impact everyday activities. Learning disorders, if not recognized and managed, can cause problems throughout a person's life beyond having lower academic achievement. These problems include an increased risk of greater psychological distress, poorer overall mental health, unemployment/under-employment and dropping out of school. **Assessment Tool for Learning Disabilities** is digitalized screening tool validated and compared with 3 major psychological assessments which are NIMHANS Battery for Learning Disability, Vanderbilt ADHD Rating scale for Attention Deficit Hyperactivity Disorder and Childhood Autism Rating Scale (CARS) for Autism. The idea behind this is to make the assessments available to common people to identify neurodivergent like LD, ADHD, and ASD. The parameters which we have included are based on their behaviour pattern categorized into reading, writing, spelling, attention, memory, behaviour, and emotional wellness. These assessments are extremely helpful for teachers at school and parents at home to identify and acknowledge the problem that child is facing and then they can take the next step to provide remediation. The main purpose of the screening tool is to identify and create awareness about the disabilities, problems that the children are facing and remove the stigma around disabilities. The tool was applied and tested in 3 phases through the schoolteachers of different mediums of schools, tested reliability validation useability, errors and mistakes, and speed. Test-retest reliability of Assessment Tool for Learning Disabilities was determined by comparing assessment and post assessment scores using Intra Correlation Coefficient (ICC). Criterion validity was computed by comparing the Teacher's rating and Clinical rating with the child's assessment done by the Parents and Teachers who are assessing the child. Keeping the difficulties in mind, Assessment Tool for Learning Disability was developed. It has a modest goal of screening children with Learning Disability, or any other type of academic problems and it can be used for subtyping of Learning Disability or for those who would respond to intervention. Based on the test and retest and the sample size of 790 students in all the 3 phases we can deduce that with Assessment Tool for Learning Disabilities helps in identifying students with different types of learning difficulties and can be extremely helpful with providing the remediation and intervention.

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Received: June 09, 2023; Revision Received: June 14, 2023; Accepted: June 16, 2023

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Keywords: *Assessment, Learning Difficulties*

Learning is the process of acquiring new understanding, knowledge, behaviour, skills, values, attitudes, and preferences. Human learning at birth (even before) and continues until death because of ongoing interactions between people and their environment.

The interactive component of the learning process specifically concerning school education: attention, memory, language, processing and organizing, graphomotor (writing) and higher order thinking. These processes interact not only with each other, but also with emotion, classroom climate, behaviour, social skills, teachers, and family.

There are many students who continually fail in school yet are not intellectually disabled. These children may have a problem with learning. Learning disabilities are neurological problems in one or more learning processes affecting academic skills and school performances. The concept of learning disabilities has undergone distinct phases of development in history.

Specific learning disorder (often referred to as learning disorder or learning disability, see note on terminology) is a neurodevelopmental disorder that begins during school-age, although may not be recognized until adulthood. Learning disabilities refers to ongoing problems in one of three areas, reading, writing and math, which are foundational to one's ability to learn.

An estimated 14 to 31 percent of school-age children struggle with a learning disability. An estimated 80 percent of those with learning disorders have reading disorder (commonly referred to as dyslexia). One-third of people with learning disabilities are estimated to also have attention-deficit hyperactivity disorder (ADHD).

Other specific skills that may be impacted include the ability to put thoughts into written words, spelling, reading comprehension, math calculation and math problem solving. Difficulties with these skills may cause problems in learning subjects such as history, math, science, and social studies and may impact everyday activities.

Learning disorders, if not recognized and managed, can cause problems throughout a person's life beyond having lower academic achievement. These problems include an increased risk of greater psychological distress, poorer overall mental health, unemployment/under-employment and dropping out of school. (DSM V)

Characteristics of learning disabilities: *(NIMHANS Battery)*

- 1. Discrepancy factor** – A discrepancy exists between a child's ability and academic performance across one or all skills.
- 2. Academic Learning difficulty** – Academic problems exist around reading, writing, spelling, and mathematics.
- 3. Perceptual disorder** – Perceptual problems include the inability to recognize, discriminate and interpret sensation. It can be around the auditory channel or/and visual channel.
- 4. Metacognitive deficits** – Metacognitive abilities involve the ability to use self-regulatory mechanisms such as planning moves, evaluating the effectiveness of ongoing activities, checking the outcome, and remediating errors.

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5. **Memory problems** – Most students complain of poor memory. Students with learning disabilities fail to use strategies that nondisabled students readily use.
6. **Phonological deficits** – Students with reading, and spelling difficulties often have poor phonological skills.
7. **Motor disorders** – Children with this problem are clumsy, and unable to skip or hop. Some exhibit fine motor difficulties such as in cutting with scissors.
8. **Attention problems and hyperactivity** – Many researchers have documented that many learning-disabled children have short attention span, distractibility, and impulsivity. Some are restless and hyperactive.
9. **Social emotional problems** – The prevalence rate of psychological disturbance is high among learning disabled children compared to the normal population. Continuous failure in academics results in poor self-concept and self-esteem.

Implication of Assessment Tool for Learning Disabilities Digitalised Assessment Tool

1. The ATLD is the first ever tool to include items of learning: reading, writing, spelling, attention, gross motor skills, fine motor skills, sensitivity, attention, memory, and behaviour on an online platform for a self-test in multiple languages.
2. The ATLD is validated against Indian and western tool with established reliability and validity. Yet it goes beyond NIMHANS Battery and Aston Index, CARS and Vanderbilt ADHD Scale and anchor points to symptoms relevant in Indian context. The Tool includes Learning disorders, ADHD, and ASD apart from emotional, conduct and behaviour problems.
3. A simple tool based on Indian culture, exposure has a provision on psychological and social dimensions in addition to studying competency. A comprehensive tool that can be used across age, gender, languages, syllabuses, and academic problems.
4. ATLD can be used for purposes of identification, diagnosis, and planning of interventions. The tool goes one step ahead of providing remediation suggestions to help the child overcome their weakness and problems wherever required. The tool provides instant results and will not have personal subjectivity and is supported by the professional knowledge of clinical and educational psychologists.

Advantages of Assessment Tool for Learning Disabilities

1. Increased awareness or understanding of students neurocognitive functioning, behaviour, emotional state, and school performance.
2. Better understanding of the different causes of the student's learning processes and create a better and effective teaching methodology. Identification of learning difficulties of the students that will help advocate for appropriate supports/interventions.
3. Provides specific recommendations for remediation based on the exact need of the students.
4. Psychological assessment at your fingertips. Identification of learning difficulties of the students.
5. This Tool gives a flexibility to different assessment tests that can help find the cause of academic weaknesses.
6. This Tool is very cost effective and time effective. The App is multilingual, easy to use, simple yet comprehensive.
7. Though the assessments are based on the psychological, neurological, and clinical assessments; the aim of the Tool is not to label the student but to identify the weakness of the student and their strengths.

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8. As the Tool is used by the respective schoolteacher it helps in keeping the perspective of the standard and cultural differences in mind and is less biased by the generalized standards.
9. The Tool helps in creating a census based on demographics, region and syllabus which will help in formulating future accommodations and concession for children in the country.
10. This Tool can be used to identify which school and which teacher is doing well and to identify the effective teaching methodology.
11. Eliminates the need for physical visits by psychologists to schools to assess learning disability in children.

THE TOOL

Introduction

Learning Disability (LD) is an umbrella term. LD are disorders that affect the ability to read, speak, write, listen visual, mathematical calculations, coordinate movements and attention. When we talk about these problems, children have problems in processing and understanding it sometimes they understand all wrong, which directly affect in their academics. The learning disability can occur in very young children, but the disorders are generally not recognised until the child starts attending school.

1. Child has attentional problems.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
2. Generally disorganised
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
3. Frequently distracted in the classroom
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
4. Cannot get things done on time.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
5. Has difficulty in following rules/instructions.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
6. Poor attention span- No sustained focus.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
7. Has a habit of daydreaming.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
8. Difficulty in carrying more than one instruction at a time.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
9. Seems hyperactive or easily distracted while doing academics
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
10. Loses his school things like a pencil box, pencil, arises, books or keeps searching for them most of the time. (a) Always (b) Often (c) Sometimes (d) Rarely I Never
11. Forgets what s/he studies very easily.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
12. Remembers things that have happened long ago but not recent events.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
13. Has excellent memory for things experienced, faces, places but not something just read.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
14. Poor memory for things not experienced.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
15. Forgetting steps in division or addition or carry forward.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never

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16. Easily distracted moving from one activity to the other without completing any activity.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
17. Difficulty in remembering the order of doing things.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
18. Forgets the key points of the story just told to them.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
19. Forgets to get books, material or write down the instructions for homework.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
20. Misplaces pencils, colours, books, pencil box, eraser, or toys.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
21. Easily Frustrated and Discouraged
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
22. Child lacks confidence
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
23. Child has behaviour problems
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
24. Has mood swings
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
- 25 . Complains about headaches or stomach pain while studying or for doing homework.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
- 26 . Likes to go to school but not studying.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
27. Examination Fear
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
28. Has a habit of delaying, avoiding or giving excuses when told to do some task
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
- 29 . Very emotional, can't take any criticism.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
- 30 . Looks and feels sad or depressed.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
31. Difficulty in understanding direction and position concepts/ confusion in left/right, up/down
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
- 32 . Problem with following directions (go straight, turn left then right, get the key and keep these inside and lock it, open the page 32 2nd verse, 2nd line)
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
33. Is scared/avoids sports and outdoor games
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
- 34 . Is clumsy or uncoordinated.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
- 35 . Has difficulty in tying shoelaces/buttoning shirt.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
- 36 . Odd posture while standing, sitting or walking.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
37. Uses different hands to do different activities (left for some right for some)
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
38. Keeps falling, tripping or gets hurt very frequently (hitting the table, chair, stubbing the toes, banding into things or people)
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
39. Difficulty following rhythm.

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- (a) Always (b) Often (c) Sometimes (d) Rarely I Never
40. Has problem with gross motor skills.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
41. Cannot read the word
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
42. Guesses the word from the first letter while reading.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
43. Does not know phonics (sounds of letters)
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
44. Cannot write the word
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
45. Does not know the spelling rules.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
46. Gets confused between similar sounding words
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
47. Reads the words but has difficulty writing the words
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
48. Becomes slow in writing because of spelling confusions.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
49. Does not hear the sequence of sounds in a word
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
50. పదమును సరిగా పలుకును
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
51. Can't remember frequently used words spellings.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
52. Does not hear the difference in words.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
53. Confuses b, d, p, q, m, w.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
54. Confuses the order of letters.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
55. Difficulty or missing alphabets in sequence
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
56. Can't write before after of alphabets e.g., __K__
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
57. Cannot read age appropriately
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
58. Reads slowly
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
59. Struggles while reading
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
60. Reads word by word
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
61. Uses finger while reading.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
62. Loses the place on a page when reading.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
63. Needs to search the line when reading
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
64. Spells the words while reading

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- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
65. Rereads line/skips lines or words
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
66. Reads without expression, ignores punctuation.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
67. Can't remember common words from one day to the next.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
68. Guesses the words while reading
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
69. Omits words while reading
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
70. Reverses words while reading
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
71. Confuses similar words
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
72. Adds letters or words while reading.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
73. Changes order of words in a sentence
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
74. Avoids reading loud
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
75. Makes sounds while reading amm, ouh... takes long pauses.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
76. Yawns while reading
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
77. Does not understand what s/he is reading
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
78. Reading tires, the child
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
79. Looks confused when a question is asked
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
80. Response time is very slow.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
81. Forgets closed clan words- Us, were, says.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
82. Does not read ('s) in the words
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
83. If he/she doesn't know a word- says I don't – or has no systematic way to figure it out
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
84. Mispronounces the words.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
85. Slow in sharing their thoughts or ideas.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
86. Does not understand the concept of rhyming.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
87. Was a left hander and forced to write with right hand?
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
88. Difficulty in task involving fine motor skills.
- | | | | | |
|------------|-----------|---------------|------------|---------|
| (a) Always | (b) Often | (c) Sometimes | (d) Rarely | I Never |
|------------|-----------|---------------|------------|---------|
89. Bad/awkward pencil/pen grip.

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- (a) Always (b) Often (c) Sometimes (d) Rarely I Never
90. Holds the pencil too tightly, often breaks pencil point/ crayons.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
91. Puts too much of pressure while writing.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
92. Bad handwriting/Illegible handwriting
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
93. Leaves no margins
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
94. Letters not on the line. Can't write within the lines.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
95. Can't write without ruled paper
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
96. Spacing is poor, No space between words
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
97. Forms letters in a strange way
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
98. Writes letters backwards
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
99. Mixes small and capital letters
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
100. No size consistency, Writes too small or too big.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
101. Can't remember the letter formation.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
102. Can't write the letter unless says the whole sequence of letters from A to Z.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
103. Writes beautifully- copies beautifully but don't know what he/she is writing.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
104. Perfectionist tendencies each letter must be perfectly formed, making writing slow.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
105. Erases/ strikes/ corrects several times.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
106. Poor word alignment
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
107. Unsteady while tracing
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
108. Reversals/Mirror writing
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
109. Failure to close letters
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
110. Illegible in involving letters p, q, e, b, d
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
111. Incorrect directions of letters and numbers with too little or too much slant.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
112. Incomplete written work
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
113. Incomplete answer sheets especially short answer and essay type.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
114. Takes too long to write.

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- (a) Always (b) Often (c) Sometimes (d) Rarely I Never
115. Can't write for a long time.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
116. Tries to avoid writing
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
117. Writes very slowly
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
118. Making child do the homework is the biggest problem
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
119. No punctuations while writing
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
120. Difficulty in copying from the board
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
121. Huge differences in oral and written work.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
122. Tries to avoid writing as much as possible.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
123. Takes too long to write in exams.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
124. Only answer's objective questions in the paper
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
125. Avoids or can't write short answers more than 3 lines or essay answers in exams.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
126. Has problem writing what he/she thinks
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
127. Problem in expressing in a written format
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
128. Can express ideas/views and thoughts in words(verbally) but can't do it in writing.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
129. Switches between cursive and print while writing
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
130. Is the child smart/ intelligent but has difficulty with math?
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
131. Cannot differentiate between different sizes
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
132. Does the child have difficulty/confusion in telling number names
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
133. Misses numbers while counting or writing
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
134. Does the child have problem in counting
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
135. Can count but has difficulty counting objects
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
136. Counts on his fingers even after eight years
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
137. Does not know the math symbols and terms
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
138. Does not know place value of numbers (Ones, tens, hundreds etc)
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
139. Reads the numbers in reverse 32 as 23

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- (a) Always (b) Often (c) Sometimes (d) Rarely I Never
140. Child reverses numbers while writing
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
141. Confuses + and –
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
142. Confuses left and right, above and below
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
143. Misplacing digits while copying or writing
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
144. Cannot recognize patterns in addition, subtraction or sequence
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
145. Difficulty understanding what to do in word problems
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
146. Can the child recognize colours
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
147. Understands money concept
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
148. Have you taught the child money concept
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
149. Can the child count money
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
150. Can the child buy some basic things and count back the change
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
151. Does the child get confused between dates, days of the week or months of the year
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
152. Can the child tell time in an analog clock
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
153. Child has problem managing time
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
154. Does the child have problem or get confused when asked to do things in a specific order
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
155. Has difficulty remembering multiplication tables
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
156. Problem in identifying similarities and dissimilarities
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
157. Missing steps in division
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
158. Difficulty in understanding abstract concepts
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
159. Has trouble reading charts or graphs
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
160. Solves problem left to right instead of right to left.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
161. Poor in mental math.
(a) Always (b) Often (c) Sometimes (d) Rarely I Never
162. Can do mental sums but fails to write that in proper method/steps
(a) Always (b) Often (c) Sometimes (d) Rarely I Never

TESTING

We have applied and tested ATLD in 3 phases through the schoolteachers of different medium of schools, tested reliability validation useability, errors and mistakes, speed.

Phase 1:

40 students from different cities of Tamil Nadu who came for consultation in person or online with problem of poor academics and have been tested on ATLD along with the NIMHANS battery done by psychologist Ms. Manasi. All the children reported to be scoring poor marks in different subjects and the parents felt the children were not performing at their optimal level.

Table 1.1 *Sample(N=40)*

Variable	No of Students	Percentage
Normal	7	17.5%
Learning Disabilities	18	45%
ADHD	12	30%
Autism	3	7.5%

Table 1.2 *Sample (N=40)*

Gender	Male	32	80%
	Female	8	20%
Age	3-6	5	12.5%
	7-10	12	30%
	11-13	11	27.5%
	13-15	2	5%
Medium	English	40	100%
Class	Kinder Garten	6	15%
	Primary	19	47.5%
	Middle	13	32.5%
	High	2	5%
Place	Chennai	10	25%
	Trichy	11	27.5%
	Coimbatore	2	5%
	Dindugul	3	7.5%
	Thanjavur	6	15%
	Manargudi	2	5%
	Madhurai	1	2.5%
	Karaikal	3	7.5%
	Tirunvali	2	5%
Syllabus	State	20	50%
	CBSE	16	40%
	ICSE	4	10%

Table 1.3

Variable	LD	Percentage	Adequate	Percentage
ATLD	33	82.5%	7	17.5%
NIMHANS Battery	32	80%	8	20%
Teacher Rating	40	100%	-	0
Parent Rating	38	95%	2	5%

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Statistical Analysis

The children were poor in academics, and they were forced by their respective schools to get an IQ assessment and submit the report therefore consulted the psychologist in the first place. The IQ Assessment showed that all the 40 children had average and some above average IQ. Therefore, looking at the school complaints and the parent's feedback the children were tested for Learning disabilities on ATLD and further clinical diagnosis with NIMHANS Battery.

Out of the 40 children tested ATLD showed that 33 children had learning difficulties and 7 children had no learning problems. When the same children were clinically assessed with NIMHANS Battery it showed that 32 children out of the 40 children had learning disabilities. Teachers had reported that they felt all the children had some learning problem and were not able to perform to their optimal capacity but did not know what the exact problem was. Most of the teachers felt the child was showing attitude, was lazy naughty and did not understand the importance of education. Parents reported they knew their children struggled but did not understand why they were getting less marks even after extra tuition or remedial classes, but 2 of the parents felt their children did not have any kind of problem but would pick up as they grew up but came for assessment because they were forced by the school.

Phase 2

150 students from a new international school in Chennai who believe in inclusivity, got all the children tested for learning disabilities so that no child is missed out. All the children have been tested on ATLD along with the NIMHANS battery and Vanderbilt ADHD Diagnostic Rating Scale done by psychologist Ms. Manasi.

Table 2.1 *Sample (N=150)*

Variable	Students	Percentage
Adequate	91	60.67%
LD	22	14.67%
ADHD	31	20.67%
ASD	2	1.3%
Behavioural Problem	4	2.67%

Table 2.2 *Sample (N=150)*

Variable		Students	Percentage
Gender	Male	84	56%
	Female	66	44%
Age	3-6	38	25.3%
	7-10	87	58%
	11-13	25	16.67%
Class	Kinder Garten	38	25.3%
	Primary	87	58%
	Middle	25	16.67%
Medium	English	150	100%
Place	Chennai	150	100%
Mother Tongue	Tamil	72	48% %
	Hindi	18	12%

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Telugu	46	30.67%
Malayalam	11	7.33%
Others	3	2%

Table 2.3 *Sample (N=150)*

Variable	LD	Percentage	Adequate	Percentage
ATLD	59	39.33%	91	60.67%
NIMHANS	22	14.67%	128	85.67%
Teacher	54	36%	96	64%
Clinical	60	40%	89	60%
Parental	51	34%	99	66%

The children were all studying in an international school with ICSE syllabus, and they all came from well educated, upper middle class and cosmopolitan culture. It was the school principal's idea to get a psychological assessment done for all the children in the school. All the children were observed in groups, classes and individually and were clinically assessed. The children were also tested on Assessment Tool for Learning Disabilities by their respective class teachers, NIMHANS Battery and Vanderbilt ADHD Diagnostic Rating Scale was done by the psychologist.

Out of the 150 students assessed ATLD showed that 59 children had different types of problems affecting their academic performance. Based on the ATLD report out of the 59 children 22 had Learning disabilities, 31 had ADHD and 2 had autistic symptoms. The 22 children with LD were provided with accommodation at school and 12 out of them attended remedial classes after school and have been showing tremendous improvement in academics as well as general behaviour. Out of the 31 students with ADHD 11 children had impulsivity and behavioural issues, 4 children had their own defence mechanism and were able to manage to behave at school and curb their impulses. The remaining 16 children were having learning difficulties due to attention problem. These 16 children have been provided with accommodations at school and provided with differential instructions to help them.

When the students were clinically assessed with NIMHANS Battery and Vanderbilt ADHD Diagnostic Rating Scale it showed that 22 students out of the 150 students had learning disabilities, 31 students had ADHD, 2 students with ASD symptoms and 5 students with oppositional behaviour.

Teachers had reported that they felt about 54 children had issues and were not able to perform to their optimal capacity and some students out of these 54 children had some serious behavioural issues.

Parents of 51 children felt their children had some problem and were not giving their best output and they also reported that managing these children at home and making them do homework was becoming a ridiculously huge problem. The 2 parents of the children with autistic symptoms were not ready to accept that their child had any kind of problem. And few of the parents whose children had ADHD did not feel it was a big problem they felt the children would learn as they grew up.

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Phase 3:

600 students studying in classes 1 to 5 from a 30-year-old CBSE English medium school in Thanjavur, who were facing problems in the middle schools as most of the students were getting lower grades than in previous years wanted to understand the reason for the same and wanted to know why this was happening wanted to get their primary school students assessed. The students were tested for learning disabilities so that no child is missed out. All the children have been tested on the Assessment Tools for Learning Disability along with the NIMHANS battery and Vanderbilt ADHD Diagnostic Rating Scale done by psychologists Ms. Manasi and Ms. Shahira and Ms. Monica.

Table 3.1. Sample (N=600)

Variable	Students	Percentage
Adequate	379	63.17%
LD	179	29.83%
ADHD	42	7%
Autism	–	0%
Behaviour Problems	–	0%

Table 3.2 Sample (N=600)

Variable		Student	Percentage
Sex	Male	348	58%
	Female	252	42%
Class	I	180	30%
	II	120	20%
	III	120	20%
	IV	120	20%
	V	120	20%
Medium	English	600	100%
City	Thanjavur	600	100%
Mother Tongue	Tamil	426	71%
	Hindi	144	24%
	Telugu	12	2%
	Others	18	3%

Table 3.3 Sample (N=600)

Variable		Percentage	Adequate	Percentage
ATLD	221	36.83%	379	63.17%
NIMHAN	180	30%	420	70%
Teacher	225	37.5%	375	62.5%
Clinical	220	36.67%	380	63.33%
Parent	220	36.67%	380	63.33%

Statistical Analysis

The children were all studying in a 30-year-old school with CBSE syllabus, and they all came from different economic and cultural strata and came from a traditional culture. It was the school correspondent's idea to get a psychological assessment done for all the children in primary school. All the children were observed in groups, classes and individually and they were clinically assessed. The children were also tested on ATLD by their respective class

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teachers, NIMHANS Battery and Vanderbilt ADHD Diagnostic Rating Scale were done by the psychologists.

Out of the 600 students assessed ATLD showed that 221 students had different types of problems affecting their academic performance. Based on the ATLD report out of the 221 students 179 had Learning disabilities and 42 had ADHD.

When the students were clinically assessed with NIMHANS Battery and Vanderbilt ADHD Diagnostic Rating Scale it showed that 180 students out of the 600 students had learning disabilities.

Teachers had reported that they felt about 225 students were not able to perform to their optimal capacity.

Parents of 220 students expressed their concerns that despite all the child's efforts and extra classes at school and tuitions the children were getting less marks.

PERFORMANCE OF ASSESSMENT TOOL FOR LEARNING DISABILITY

Procedure:

We have shared a test APK link of the ATLD was provided to teachers at the school who have tested their respective class students on the Tool by answering the multiple answer questions individually for each student with their experience of the interaction with the students in the classroom.

Students from different medium of schools – CBSE, IGCSE, Matriculation, ICSE medium schools were assessed by their teachers through Assessment Tool for Learning Disability.

1. The assessment done through the Tool was rated to be user friendly and easy to use since the teachers were given an online demo to use the Tool.
2. The teachers who used the Tool found no errors or mistakes while using the Tool. There were no complaints of data being lost or any technical lags in the Tool.
3. The speed of the Tool was rated up to the point regardless of any number of student data stored under each teacher login.
4. The instant result after every assessment done for the student was relatable for every student assessed.

Statistical Analysis

Test-retest reliability of the Assessment Tool for Learning Disability was determined by comparing assessment and post assessment scores using Intra Correlation Coefficient (ICC). Criterion validity was computed by comparing the Teacher's rating and Clinical rating with the child's assessment done by the Parents and Teachers who are assessing the child.

DISCUSSION

The present study, having a latitudinal design, aims to establish the reliability and validity of the Assessment Tool for Learning Disabilities for a sample of children with diverse types of Learning Disabilities, ASD, ADHD & Behavioural Problems.

Assessment Tools for Learning Disabilities offers 4 sets of assessments under a single login for every child such as Learning disabilities, ASD, ADHD, and General Assessment for any other classification of Academic or social skills disability.

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In the Indian educational system, there is a lot of heterogeneity in the inputs given. Often children are promoted to higher classes even when they are not grade appropriate. Because of these inherent problems, it is difficult to devise a test that can be reliably validated and classify if the child/student has any learning disability. Due to no proper identification, they lack early intervention in the majority of the schools further complicates the child's further academic skills affecting their neurological burden caused due to no remedial measures.

Keeping these difficulties in mind, Assessment Tool for Learning Disabilities was developed. It has a modest goal of screening children with LD or any other type of academic problems and it can be used for subtyping of LD or for those who would respond for intervention.

Based on the test sample size of 790 students in all the 3 phases we can deduce that ATLD helps in identifying students with learning difficulties and severity can be immensely helpful with providing the remediation and intervention.

Criterion Validity was established by compacting ATLD, NIMHANS Index for Specific Learning Disabilities, Teacher's rating which was done through an interview and parents rating was based on a form filled by the parent. The correlations with the finding from the ASSESSMENT TOOL FOR LEARNING DISABILITIES with NIMHANS Index, Parental Rating, Teacher scoring and clinical assessment was very highly significant. This shows a reliable concurrency proving the validity of ATLD.

Overall, it can be concluded that ASSESSMENT TOOL FOR LEARNING DISABILITY has high test-retest reliability and criterion validity.

FEEDBACK

Feedback from Schools:

BHIS-K was the pilot project with 150 students of grade 1 to 8 were assessed with the MANAS Learning assessment App. Mrs. Asma the Principal of the school was quite impressed because she wanted her school to be inclusive with the help of our App and the remedial methods and training given to the teachers at the school, the results have been exceptional ever since.

Blossom CBSE School was a large-scale project with 600 students of grade 1 to 5 were assessed with the Assessment Tool for Learning Disability. Mr. Shakti the Correspondent of the school was all praises with the results of the App with which he was able to identify so many students with active LD symptoms. The remedial methods and training given to the schoolteachers helped them to understand their student's problems, weaknesses and strengths and help them better.

Feedback from Teachers:

Mrs. Ruksana from BHIS-K was one of the teachers who had used ATLD for assessing her students, she found the App very user friendly and easy to use since it is self-explanatory on all levels. Mrs. Ruksana also added that the cumulative results and remediation methods were also immensely helpful for her student who was diagnosed with LD or ADHD.

Mrs. Bindu from Blossom CBSE School is one of the teachers who had used the App for her students of grade 3 and 4 and found many of her students were under the risk of LD. She

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also added the remedial methods suggested for her students were effective and they made accommodating the students with LD easier.

DISCUSSION

ASSESSMENT TOOL For LEARNING DISABILITY is easy to use, accurate and significantly reduces the turnaround time in identifying and addressing the issue of learning disability in a large target group. Based on this study and thesis we can conclude that Assessment Tool for Learning Disabilities matches the accuracy of clinical assessments like NIMHANS Battery for Learning Disability, Vanderbilt ADHD Rating scale for Attention Deficit Hyperactivity Disorder and Childhood Autism Rating Scale (CARS) for Autism and match their results at an accuracy of 98% on correlation and with the sample size of 760 students ASSESSMENT TOOL For LEARNING DISABILITY is validated and standardized.

REFERENCES

- Adams, M. J. (1990), *Beginning to read: Thinking and Learning about print*. Cambridge, MA: MIT Press
- Anna Gillingham, Bessie W. Stillman, *The Gillingham Manual, Remedial Training for Children with Specific Disability in Reading, Spelling and Penmanship*
- Booth, J.R., & Burman, D.D. (2001). Development and disorders of neurocognitive systems for oral language and reading. *Learning Disability Quarterly*, 24, 205-215.
- C. Christina Wright, Ph. D., *Learning Disabilities in Mathematics*, National Center for Learning Disabilities, October 1996
- Catts.W., & Kamhi, A.G. (2005). *Language and reading disabilities* (2nd ed.). Boston: Pearson.
- Garnett, K., & Fleischner, J. E. (1983). Automatization and basic fact performance of normal and learning disabled children. *Learning Disability Quarterly*, 6, 223-231.
- Geary, D. C. (2000). *Mathematical disorders: An overview for educators*. *Perspectives*, 26, 6-9.
- Geary, D. C. (2003). *Learning disabilities in arithmetic*. In H. L. Swanson, K. R. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (pp. 199-212). New York: Guilford.
- Geary, D. C. (2003). *Learning disabilities in arithmetic*. In H. L. Swanson, K. R. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (pp. 199-212). New York: Guilford.
- Geary, D. C. (2004). *Mathematics and learning disabilities*. *Journal of Learning Disabilities*, 37, 4-15.
- Hallahan, D. P., Lloyd, J. W. Kauffman, J. M., Weiss, M. & Martinez, E. A. (2005).
- Iovino, I., Fletcher, J.M., Breitmeyer, B.G., & Foorman, B.R. (1998). Colored overlays for visual perceptual deficits in children with reading disability and attention deficit/hyperactivity disorder: Are they differentially effective? *Journal of Clinical & Experimental Neuropsychology*, 20, 791-806.
- Jordan, N., Hanich, L., & Kaplan, D. (2003). A longitudinal study of mathematical competencies in children with specific mathematics difficulties versus children with comorbid mathematics and reading difficulties. *Child Development*, 74(3), 834-850.
- Joseph, J., Noble, K., & Eden, G. (2001). The neurobiological basis of reading. *Journal of Learning Disabilities*, 34, 566-579.
- Learning Disabilities checklist, National Centre for Learning Disabilities (April 2006)
- Learning disabilities: Foundations, characteristics, and effective teaching*. Boston: Allyn and Bacon

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- Lidz, C.S. (Ed), (1987), *Dynamic Assessment: An International Approach to Evaluating Learning Potential*, New York Guilford
- Lyon, G.R., Shaywitz, S.E., & Shaywitz, B.A. (2003). Defining dyslexia, comorbidity, teachers' knowledge of language and reading. *Annals of Dyslexia*, 53, 1-14.
- National Institute of Child Health and Human Development. (2000). Report of the National Reading Panel.
- Persistence of dyslexia: The Connecticut Longitudinal Study at adolescence. *Pediatrics*, 104, 1351-1359.
- Roxanne F. Hudson, Leslie High, and Stephanie Al Otabia (2007), *Dyslexia and the Brain: What Does Current Research Tell Us?*
- Shaywitz, B.A., Shaywitz, S.E., Pugh, K.R., Mencl, W.E., Fulbright, R.K., Skudlarski, P., et al. (2002). Disruption of posterior brain systems for reading in children with developmental dyslexia. *Biological Psychiatry*, 52, 101-110.
- Shaywitz, S.E., Fletcher, J.M., Holahan, J.M., Shneider, A.E., Marchione, K.E, Stuebing, K.K., et al. (1999).
- Shaywitz, S.E., Shaywitz, B.A., Pugh, K.R., Fulbright, R.K., Constable, R.T., Mencl, W.E., et al. (1998). Functional disruption in the organization of the brain for reading in dyslexia. *Proceedings of the National Academy of Sciences*, 95, 2636-2641.
- Shaywitz, S.E. (1996). Dyslexia. *Scientific American*, 275(5), 98-104.
- Stephen B. McCarney and Tamara J., *Learning Disability Evaluation Scale – Renormed*, second edition
- Taylor R.L. (1993), *Assessment of Exceptional Children: Educational and Psychological Procedures* (3rd ed), Boston: Allyn & Bacon
- Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- The Rights Of Persons With Disabilities Act, 2016

Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Valluri, M. (2023). Assessment for Learning Difficulties. *International Journal of Indian Psychology*, 11(2), 2199-2216. DIP:18.01.221.20231102, DOI:10.25215/1102.221