



A Guide to Understanding
**SPECIFIC LEARNING
DISABILITIES**
Dyslexia. Dyscalculia. Dysgraphia

CHANGEINKK FOUNDATION

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Introduction

Do you know children who have the potential to excel in academics, but are careless, lazy, forgetful, unfocused, and always making excuses? And you think, "If only they paid attention and tried harder, they could do much better."

Or maybe you know a child, who, no matter how hard they try, just can't seem to understand and learn? They make silly spelling mistakes, have untidy handwriting, often write letters in the opposite direction. It seems like they are always confused and very slow at completing any task.

But these same children are very good at giving answers orally. They are curious and ask questions constantly. They have vivid imaginations and strong logic, and may even be good at doing puzzles or building things with blocks or making beautiful art.

Don't give up on them so easily. There is more to their struggles than we can see. These are all signs that the child may be at risk of having a Specific Learning Disability.

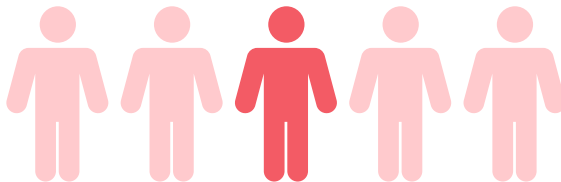
What are Specific Learning Disabilities?

It is important to remember that with support, remedial interventions and accommodations, individuals with specific learning disabilities can not only cope, but succeed in their lives.

Individuals with Specific Learning Disabilities (SLDs) have average or above average intelligence, and struggle with processing language (both spoken or written). They have difficulty in comprehending, speaking, reading, writing, spelling, and/or doing mathematical calculations.

This is because Specific Learning Disabilities (SLDs) impact the brain's ability to process information and learn. They include conditions such as Dyslexia, Dyscalculia, Dysgraphia, Dyspraxia, and Developmental Aphasia.

1 out of 5 individuals have a Learning Disability



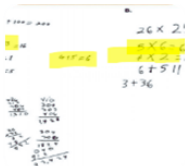
INDIVIDUALS WITH SLDs HAVE AVERAGE OR ABOVE AVERAGE INTELLIGENCE

In India, both the Rights of Persons with Disabilities Act, 2016 (RPwD 2016) and the National Education Policy, 2020 (NEP 2020) recognize SLDs and mandate the full participation of individuals with SLDs in the regular schooling process from the foundational stage to higher education, through inclusive classrooms.



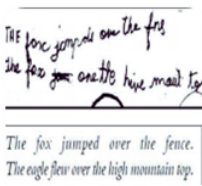
Dyslexia...

...struggles with language. It accounts for 80% of all SLDs



Dyscalculia...

...struggles with math. It is present in about 5% of the population.



Dysgraphia...

...struggles with writing and fine motor skills.

Key Facts

01 It is more common than one realises-affecting 20% of the global population. Yet only 1 in 20 get identified.

02

Individuals with SLDs have average or above average intelligence (IQ). However, they are often confused as "slow learners".

03 Beyond academics, SLDs impact an individual's daily functioning, and emotional wellbeing.

04

SLDs impact language abilities across all languages. If you are diagnosed with Dyslexia in English, you will also have Dyslexia in Hindi.

05 No two learners with learning disabilities are the same.

06

SLDs are a lifelong condition that runs in families.

07 Accommodations and assistive technologies help individuals excel through their lifetime.

08

It is an invisible disability-diagnosed through psychometric testing.

SLD Strengths

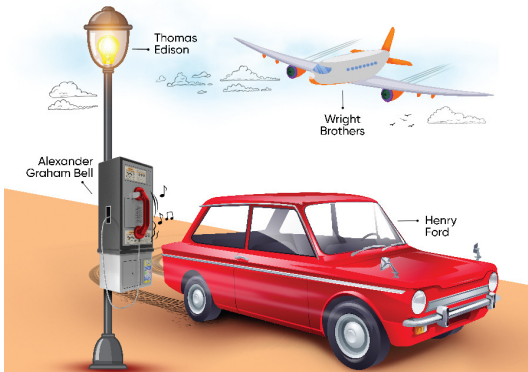


It may come as a surprise that despite their many struggles, individuals with SLDs have been extremely successful and are responsible for most innovations that have changed the world!



DID YOU KNOW?

These differently abled **DYSLEXIC** inventors have changed the world



It's time to change the conversation about the differently abled.
International Day of Persons with Disabilities
December 3, 2022

#SashaktDivyang

#Speak4Dyslexia

Dyslexia is one of the 21 disabilities recognised by the Rights of Persons with Disabilities Act 2016. The Act protects the rights of people with disabilities, recognizing them as valuable human resources for the country and creating an environment that provides them equal opportunities and full participation in society.

Global studies have shown that the percentage of students with Dyslexia in the fields such as engineering, arts and entrepreneurship is over twice the percentage of individuals with Dyslexia in the general population.

Dyslexia is surprisingly so common at the Massachusetts Institute of Technology (MIT), that it is also known as the MIT disease.

40% of the world's self-made millionaires are dyslexic.

In 2020, top 10 companies founded by Dyslexics generate \$1 trillion globally.

Individuals with SLDs can achieve these milestones because they have critical skills- often referred to as "Dyslexic Thinking".



SLD Struggles

Specific Learning Disabilities impact three core aspects of an individual's life.

01 Academic Performance

The impact of SLDs on a student's academic performance, often results in educators and parents thinking that the child is being lazy and/or is a "slow learner." This is not true. Remember- Individuals with SLDs have average or above average IQ. However-

- There is generally a gap between written and oral performance.
- Despite trying hard, they struggle with academic results.
- They struggle with spellings, writing and completing tasks on time.
- They may understand a concept but struggle with showcasing steps and doing complex calculations.

02 Executive Functioning or Life Skills

.SLDs impact processing of information, which impacts the ability to manage basic, daily tasks. This could include difficulty in time management and planning, following instructions, understanding directions, completing tasks especially those that involve multi-tasking, among other things.

03 Emotional Well-being

- When forced to process lots of information (reading/ writing) without breaks, they are likely to experience headaches, aches and pains (especially hands and fingers), exhaustion, as well as may sleep excessively.
- Judgements around their intelligence and their abilities leads to poor self-esteem, frustration, depression, etc.
- There is a higher probability of them being bullied by their peers and teachers for not being smart enough.
- High levels of anxiety.

Identification

As per the Department of Empowerment of Persons with Disabilities notification dated 04.01.2018, diagnosis of a person with SLDs requires a paediatrician, or a psychiatrist or paediatric neurologist or clinical or rehabilitation psychologist. The official diagnosis for SLDs can happen only in or after third grade or 8 years of age, whichever is earlier.

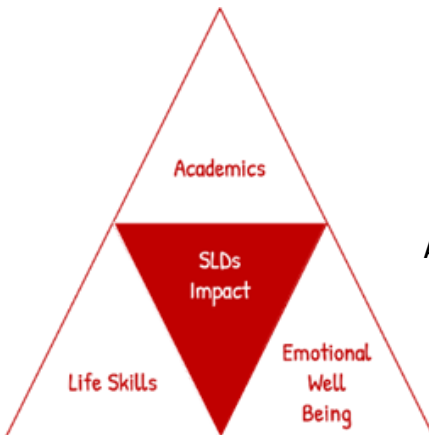
Diagnosis for SLDs is a 3 Step process:

- **Step 1: Assessment of paediatrician** to eliminate any visual or hearing impairments.
- **Step 2: IQ Assessment** by Child/ clinical psychologist/ paediatric neurologist/ psychiatrist. Only if the IQ is determined to be average or above (>85), then Step 3 will be applied.
- **Step 3: SLD Assessment** involves application of specific psychometric tests for diagnosing SLD and giving it a severity scale.

Once a benchmarked (40% or more) disability diagnosis is confirmed, a disability certificate and UDID card can be issued by the competent authority. The disability certificate is needed to access any facilities, benefits, or concessions available under the government schemes for persons with disabilities.

Screening

3 pillars of SLD impact



While a formal diagnosis can be done only after 8 years, a screening process can be undertaken for early identification of a child at risk of SLD. The process is much like taking a child to get their eyes tested for poor vision when a child regularly complains of a headache.

As part of the screening process, one must assess not just academic performance but also the impact on daily life and emotional well-being. The screening must be done in the primary language of the student.

It is important to highlight that the Rights of Persons with Disabilities Act “mandates that the appropriate Government and the local authorities shall endeavour that all educational institutions funded or recognized by them shall detect specific learning disabilities in children at the earliest and take suitable pedagogical and other measures to overcome them.”

SLD Checklist

Following is a basic checklist to monitor signs that the child may be at risk of having SLD.

It is important to highlight that most children will fall into either one category at some point. However, only if the child continuously shows signs in each of the three categories mentioned below (beyond age-appropriate development goals), then they may be at risk for an SLD. Talk to the teacher, special educator and/or your doctor to understand the condition and initiate a formal diagnosis.

Academic Struggles

- Difficulty learning to read, write & spell in all languages being learnt
- Difficulty with phonological awareness
- Persistent and continued reversing of letters & figures, e.g., '15' for '51', 'b' for 'd'
- A tendency to read inaccurately/ read slowly and/or without adequate comprehension
- Difficulty copying accurately from board or textbook
- Poor structure and organization of written work, but can express orally
- Difficulty in mathematical operations
- A gap in their oral and written performance

Life Skills

- Difficulty remembering information in order, e.g., order of a story, times table, science procedures, dates & days of a week
- Difficulty in writing or taking longer than average to complete written tasks
- Difficulty in telling left from right
- Difficulty in fine motor skills including tying shoelaces, putting on a belt or buttoning a shirt.
- Unable to focus for longer periods or getting tired easily
- A challenge with concentration, especially if there is movement & noise around them

Emotional Well-Being

- Low self-esteem and/or low confidence
- A sense of frustration due to constant failure despite working hard
- A high level of anxiety
- Bullied, no friends or social pariah
- Often complains of having headaches, is constantly tired and/or excessive sleeping.

Disclaimer: The above list is not a diagnostic tool. The checklist is only indicative that the child may be at risk of an SLD, and necessary action may be taken.

Accommodations

Individuals with SLDs are extremely resilient and with the right interventions, support and accommodations, not only cope but thrive and succeed.

The RPwD Act (2016) defines (reasonable) accommodations as necessary and appropriate modification and adjustments, to ensure that persons with disabilities can enjoy and exercise their rights equally.

Accommodations level the playing field for students with SLDs

- It requires adjusting teaching-learning material, curriculum, assessments, and classroom environment to accommodate a student's needs for their equal participation in the classroom.
- It is important to understand that the aim is to "level the playing field", allowing students to showcase their true potential without reducing the rigor of academic instruction.
- Examples of commonly used reasonable accommodations are allowing students to wear spectacles for weak eyesight and ramps for wheelchair access.
- In addition to accommodations, there should be reinforcement of learning strategies to improve learning outcomes. It's important to teach students in the way they learn best.
- Most Boards at Central and State level have issued guidelines of accommodations that support students with SLDs.
- It is important that students with SLDs are given accommodations from Grade 1 to 12, across all academic work and assessments. This includes homework, class tests, project work, unit tests, exams, etc.

Recommended Accommodations

Intelligent but need time to process information.

- Extra time on exams
- Extra time for HW
- Alternative exams

Intelligent but struggles with multi-tasking.

- Facility of scribe & reader
- Allow answering in bullet points

Difficulty processing information

- Exemption from 2nd & 3rd languages
- Alternative subject choices
- Overlook spellings
- Allow use of calculator

Overstimulation

- Preferential seating arrangement within examination room or
- Allowing sitting in a separate room

Print Disability

- Allow use of technology
- Use of bigger fonts
- Ensure adequate spacing between lines and image contrast

Please speak to your school-teacher/ head of institution/ board of examinations to understand what accommodations are available for SLDs. Do not hesitate to demand them- remember, accommodations are a **RIGHT!**

Interventions



While accommodations help overcome some of the struggles a student with SLDs faces, allowing their abilities to be benchmarked to typical students (much like spectacles do for children with poor eyesight), they are not enough. Students with SLDs require appropriate remedial intervention that will help close learning gaps and improve learning outcomes. These interventions include:

Multisensory Approach

Multisensory instruction is a way of teaching that engages more than one sense at a time. It is dependent on the learning style of the individual, which is driven by which “sense” the individual prefers to engage in to learn - visual, hearing, smell, taste, touch. Everyone learns in more than one style.



Visual

- Use pictures, diagrams, posters, models, projection screens, flash cards.
- Use of colour for highlighting, organizing information.
- Mind-maps, word clouds, outlining passages to help organize information and ideas.
- Conducting experiments, using 3D art, watching videos.



Auditory

- Listening to audio books, podcasts, recorded lectures, especially in karaoke mode.
- Making up Mnemonics like BODMAS
- Using songs to learn (Nursery Rhymes, Periodic Table Song, etc.)
- Acting in a play/or debating the content.
- Clapping of hands to remember count or patterns.
- Listening to music while studying.



Movement

- Using dance, physical games, and taking steps while learning concepts.
- Using play way, activity based teaching techniques, including immersive learning.
- Writing in the sand or in the air or in rice.
- Tapping or clapping out sounds.
- Playing with blocks, beading, lacing and other fine motor activities.

Supporting Cognitive Skills & Working Memory

Remember: Multi-sensory interventions should be done in the classroom for all students, across all classes, by the teacher. This can be done by all teachers- general, science, math, SST, etc. Parents may also adopt these strategies to reinforce learning at home.

Allowing children to stand, jiggle their body serve as energizers in between classes/long lessons.

Allowing students to use fidget spinners or stress balls, rock their chairs or sit on a bouncy ball during class. This helps improve attention span.

Colour-coded calendars to manage exam, home-work submission days and other deadlines.

To-do checklists, step by step instructions that are written, recorded or visually displayed for key tasks.

Timetables that are displayed in areas a child can see easily. Preferably, these can be pictorial with colour-codes, stickers, icons etc.

Remediation

with a special educator

Special educator interventions are generally one-on-one or in small group settings. They address the following:.



01 Close Learning Gaps

Beyond classroom instructions, to help cope and correct language struggles faced by students with SLDs, it is recommended that they undertake remedial instructions from a trained Special Educator. This should be done in the primary language of the student.



02 Multi-sensory Approach

A good remedial programme adopts a multi-sensory approach to reinforce learning. It progresses from basics like phonemes (sounds) and the alphabetic principle (the relationship of sounds to letters) and then moves to the complex word and text structures.



03 Need for Additional Therapy

In addition to language interventions, students may also need therapeutic services like occupational therapy (OT), speech-language therapy (SLT) and physiotherapy (PT). These interventions help improve fine motor skills, coordination, speech, and ability to write. In some cases, mental health counselling to address anxiety, depression, etc., may be needed.

Leveraging Technology



Assistive technologies are cheap (often a lot of free options), readily available and can be used to help any individual with learning disabilities improve their performance. They play a critical role in ensuring an individual can function independently. Common assistive technology features include:

Reading



- Text-to-speech in digital formats
- OCR for text and images
- Display control to adjust text size, font, contrast, colours, zoom
- Highlighting text

Listening & Watching



- Audio speed control
- Audio control (play/pause and volume control)
- Foregrounding audio
- QR codes on hard copies directing to e-content
- Closed Caption with controls
- Controls for animated (moving) content
- Audio Description
- Text and images with explanatory videos

Non-complex low-tech options:



- Set alarms as reminders for activities/chores, as well as to monitor time to complete an activity
- Use apps like WhatsApp, to give instructions and communicate with family/teachers/ friends
- Use calculators as help for math work and daily cash transactions
- Use calendar with reminders to mark important deadlines
- Use Closed Captions while watching videos and TV
- Karaoke mode - Listen to songs on Karaoke mode, to reinforce word recognition

Following are some in-built features in devices your already own!

Google

- Google Voice Typing
- Adobe Acrobat OCR and PDF software application
- Google lens
- Google Calendar
- Chrome search-by-voice feature
- Google Docs features: speech recognition, advanced spell checking, bibliography creation
- Dark Mode

Microsoft

- Windows Speech Recognition (in-built tool on Windows)
- Dictate (within Office 365)
- Microsoft Learning Tools – Office 365
- Adobe Acrobat OCR and PDF software application
- Outlook calendar
- Immersive Reader
- Syllabification
- Comprehension mode
- Focus mode
- Enhanced dictation
- Dark Mode

Apple

- Mac Dictation (in-built tool on Mac and iOS)
- Speech Controller or Speak Selection
- Typing Feedback
- Safari Reader
- Scribble
- Dark Mode
- Guided Access
- Voiceover
- Voice Control
- Live Text OCR

Supporting a Child with SLDs

Remember, you can't punish a disability out of a child!

Remove the stigma

No hiding. No shame. Be proud of who you are.

Believe Your Child

Listen to and believe the child's struggles. Don't assume they are making excuses.

Acknowledge Strengths & Struggles

Focus on and appreciate their many strengths. Don't judge them for their weaknesses.

Be Patient

Children are trying as hard to learn. Students with SLDs are not lazy.

Support Learning Needs

Teach them the way they can learn; multi-sensory along with remedial interventions as needed.

Provide Accommodations

Accommodations are needed as support for learning and assessments, just like those who need glasses to see clearly. Don't belittle them for using the accommodations. This is not cheating or taking shortcuts, but their necessity.

No Comparisons

Do not compare them with siblings or friends. Redefine success. Never settle for less.

Help with Planning

Create regular routines for the child that stay consistent. This helps them plan better and know what action is expected from them.

Encourage Independence

Help the child to develop problem-solving and decision-making skills. Leverage technology to support daily tasks

Reward Effort

Build an ethic of hard work and giving our best, without measuring success. Reward work time with fun time. Don't punish by taking away fun time.

Advocate & Educate

Build support systems. Advocate with & educating those around - friends, family, siblings, parents, teachers & YOURSELF. Don't be shy to seek help. Always #Speak4Dyslexia

Recommended Readings

Following is a list of additional resources that we encourage you to read, to better understand and support individuals with SLDs.



Understanding SLDs

- The Complete Learning Disabilities Handbook: Ready-to-Use Strategies and Activities for Teaching Students with Learning Disabilities (Jossey-Bass Teacher), Joan M. Harwell; Rebecca Williams
- The Gift of Dyslexia, Ronald D. Davis, Eldon M. Braun
- The Dyslexic Advantage, Brock L. Eide, Fernette F. Eide
- Overcoming Dyslexia, Sally Shaywitz,
- The Misunderstood Child, Fourth Edition: Understanding and Coping with Your Child's Learning Disabilities, Larry B. Silver
- The Dyslexia Document: A Checklist Reference for Parents and Teachers to Dyslexia of Kids, Jon Phillips, Free Online Version
- Thinking Differently: An Inspiring Guide for Parents of Children with Learning Disabilities, David Flink
- Learning Disabilities: From Identification to Intervention, Jack M. Fletcher, G. Reid Lyon; Lynn S. Fuchs; Marcia A. Barnes
- Essentials of Specific Learning Disability Identification (Essentials of Psychological Assessment), Vincent C. Alfonso; Dawn P. Flanagan, Dyslexia version also available.
- Finding My Superpower: A Book for Dyslexic Thinkers, Sarah Prestidge, Kauri Finlay

Living with Dyslexia

- Fun Games and Activities for Children with Dyslexia, Alais Winton, Joe Salerno
- More Fun Games and Activities for Children with Dyslexia, Alais Winton, Hannah Millard
- Dyslexia: A Teenager's Guide, Dr. Sylvia Moody
- Dyslexia Tool Kit for tutors and parents - what to do when phonics isn't enough, Vyonna Graham, Dr. Alta E. Graham
- At Home with Dyslexia: A Parent's Guide to Supporting Your Child, Sascha Roos,
- The Dyslexia-Friendly Teacher's Toolkit: Strategies for Teaching Students 3-18, Barbara Pavey, Margaret Meehan; Sarah Davis
- The Dyslexia Empowerment Plan: A Blueprint for Renewing Your Child's Confidence and Love of Learning, Ben Foss,
- Dyslexia Outside-the-Box: Equipping Dyslexic Kids to Not Just Survive but Thrive, Beth Ellen Nash
- Learn to Read for Kids With Dyslexia: 101 Games and Activities to Teach Your Child to Read, Hannah Braun,
- Blast Off to Reading!: 50 Orton-Gillingham Based Lessons for Struggling Readers and Those with Dyslexia, Cheryl Orlassino

At ChangeInkk Foundation, we strongly believe that for India to become a \$10 trillion economy, contributions of individuals with Specific Learning Disabilities is a must. After all, 40% of the world's self-made millionaires have a learning disability, like Dyslexia, and #DyslexicThinking has powered most innovations that have changed our world!

So, we are working hard to #Speak4Dyslexia, raising awareness around the many strengths of dyslexic minds. Through innovative programs, advocacy and capacity-building initiatives, we are #ChangeInkkTheConversation, to actively build inclusive ecosystems that support them- from cradle to career.

We engage closely with individuals, parents, educators, employers, policy makers, and civil society, to mainstreaming inclusion in schools, higher education and workplaces, where individuals with SLDs can thrive.



changeinkk.org

For more information about ChangeInkk and our initiatives, visit www.changeinkk.org or write to us: info@changeinkk.org.