

AWWA Inclusion Expert Series

Dyslexia in School: Literacy in the Inclusive Classroom

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9 – 11.30 am



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Session Outcomes

- Understand dyslexia through the traditional model
- Explore evidence-based dyslexia intervention
- Reframe dyslexia
- Create universally designed learning opportunities in the literacy classroom

How my journey started

In 2004, the then Prime Minister Lee Hsien Loong discussed a new vision of Singapore becoming an inclusive society that embraces all individuals with special learning needs.



Learning to walk the talk

- My girl was diagnosed with ADHD at P5
- My boy was diagnosed with dyslexia at P1 and ADHD at P3



How much do you know about dyslexia?

1. In Singapore, proportion of students with dyslexia is within the international prevalence of 3 – 10%.
2. People with dyslexia see and write letters and words backwards.
3. Signs of dyslexia can appear as early as preschool years.
4. People will outgrow dyslexia.



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Traditional model of dyslexia



<p>“Dyslexia is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities.</p> <p>International Dyslexia Association</p>	<p>Dyslexia is a specific learning difficulty which primarily affects reading and writing skills. However, it does not only affect these skills. Dyslexia is actually about information processing.</p> <p>British Dyslexia Association</p>	<p>Dyslexia is a specific learning difference that makes it difficult for people to read, write and/or spell. It has nothing to do with a person’s intelligence.</p> <p>Dyslexia Association of Singapore</p>
<p>Dyslexia is a reading disorder wherein an individual experiences trouble with reading. Individuals with dyslexia have normal levels of intelligence but can exhibit difficulties with spelling, reading fluency...</p> <p>Wikipedia</p>	<p>Dyslexia is a specific learning disorder that affects a person's ability to read, write, and spell correctly. It is characterized by difficulties with accurate and fluent word recognition, poor spelling, and decoding abilities.</p> <p>Chat GPT</p>	<p>Dyslexia is difficulty in reading and writings. Dyslexia is often hereditary and occurs in 5-10% of the population, and 10-20% of the population has different kind of learning difficulties.</p> <p>The Finnish Diverse Learners' Association</p>

Who is a manager with dyslexia?



I wish you knew...

How it feels being a learner with dyslexia.

Love, Your student



DON YEO YONG KANG



TEO TZE XUAN



VISVEN RAJAH



EZEKIEL LEE



MELYASARRA BINTE MUHAMMAD YOUSRI



SETH ERH WEI XUAN



NOELLE NG



SOFIA GUTIERREZ



SITI HAWA BINTE NAJIB



XAVIER GOH



CHUI KEN YEN



ISAAC GOH



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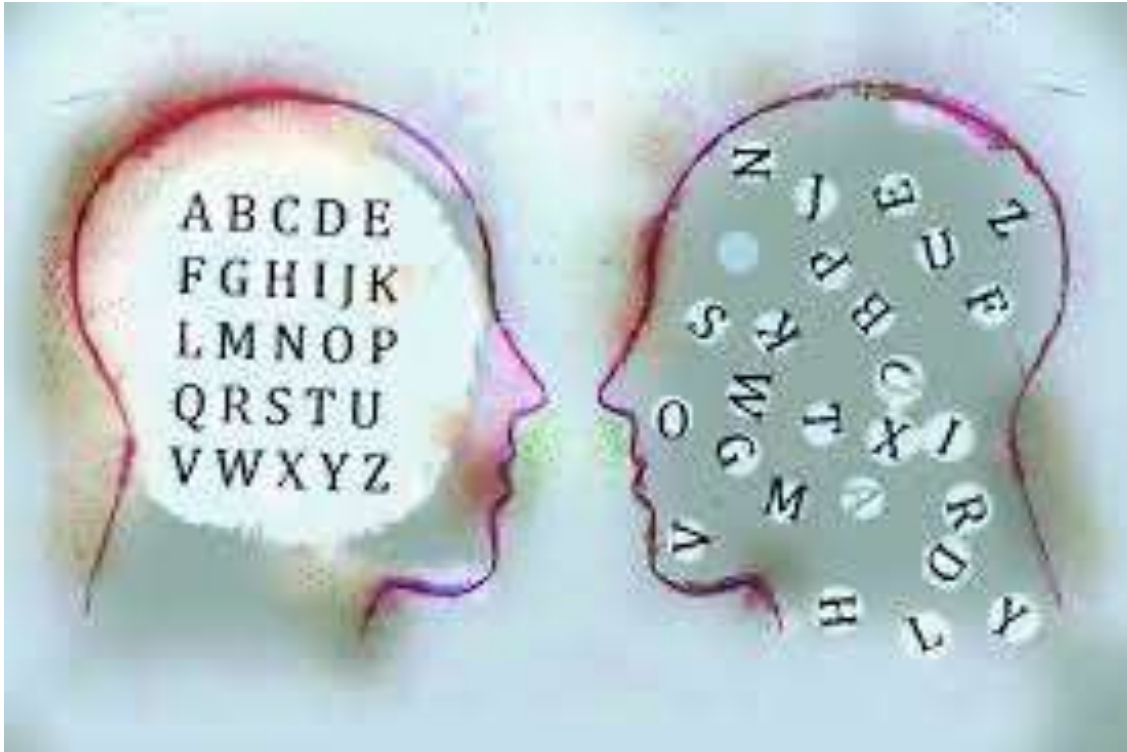


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A MESSAGE FOR TEACHERS



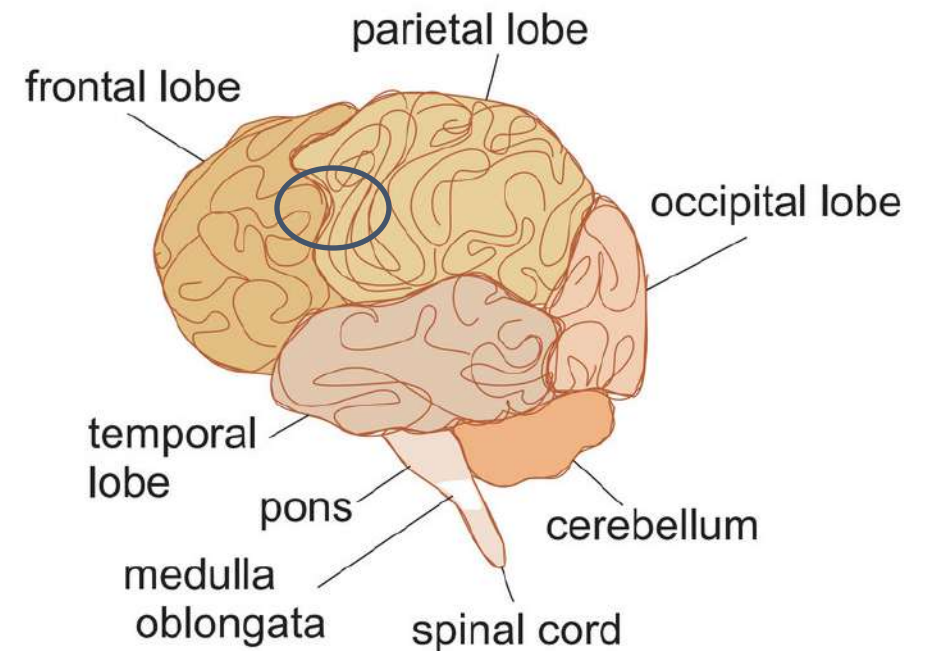
What is Dyslexia



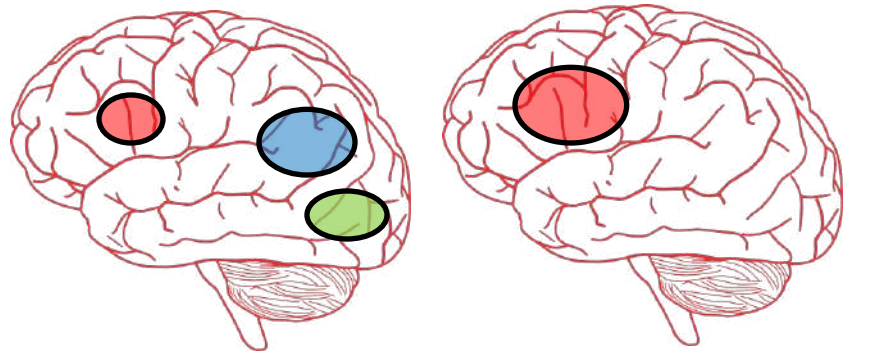
- It is a learning difficulty that affect the child's **reading and spelling**. With appropriate support, many children can learn to read and spell successfully.
- Caused by difficulties in **phonological awareness, phonological memory and rapid naming speed**.

Structural brain difference

- People with dyslexia have less grey and white matter in the left parieto-temporal area than those without dyslexia (Booth and Burman, 2001; Deutsch et al., 2005)



Functional brain difference



● Broca's area, Inferior frontal gyrus
(articulation/word analysis)

● Parieto-temporal
(word analysis)

● Occipito-temporal
(word form)

● Broca's area, Inferior frontal gyrus
(articulation/word analysis)

Shaywitz, S.E. and Shaywitz, B.A. (2008)

- Left image: Children with good decoding skills had more activation in the rear reading systems in the left hemisphere, including the parieto-temporal and the occipito-temporal areas, compared to children with dyslexia
- Right image: Children with dyslexia compensate for the disruption by using other less efficient systems in the left hemisphere (Broca's area) and systems in the right hemisphere

Dyslexia affects sound, letter, word recognition

- Has difficulties with rhymes
- Has difficulties putting sounds together to form a word
- Has difficulties with letter recognition
- Has difficulties recognizing commonly used words



Dyslexia affects reading

- Avoids reading aloud independently although they enjoy being read to
- Struggles to read age-appropriate level books
- Unable to read unfamiliar or new words
- Makes many errors when reading, confusing words that look alike
- Reads hesitantly and slowly

Dyslexia affects reading comprehension

- Has difficulties understanding what they have read
- Exerted so much effort on decoding that he has little resource left for understanding



Dyslexia affects spelling and writing

- Makes many spelling errors in written words
- Has difficulties with spelling despite repeated learning
- Organising spoken and written language

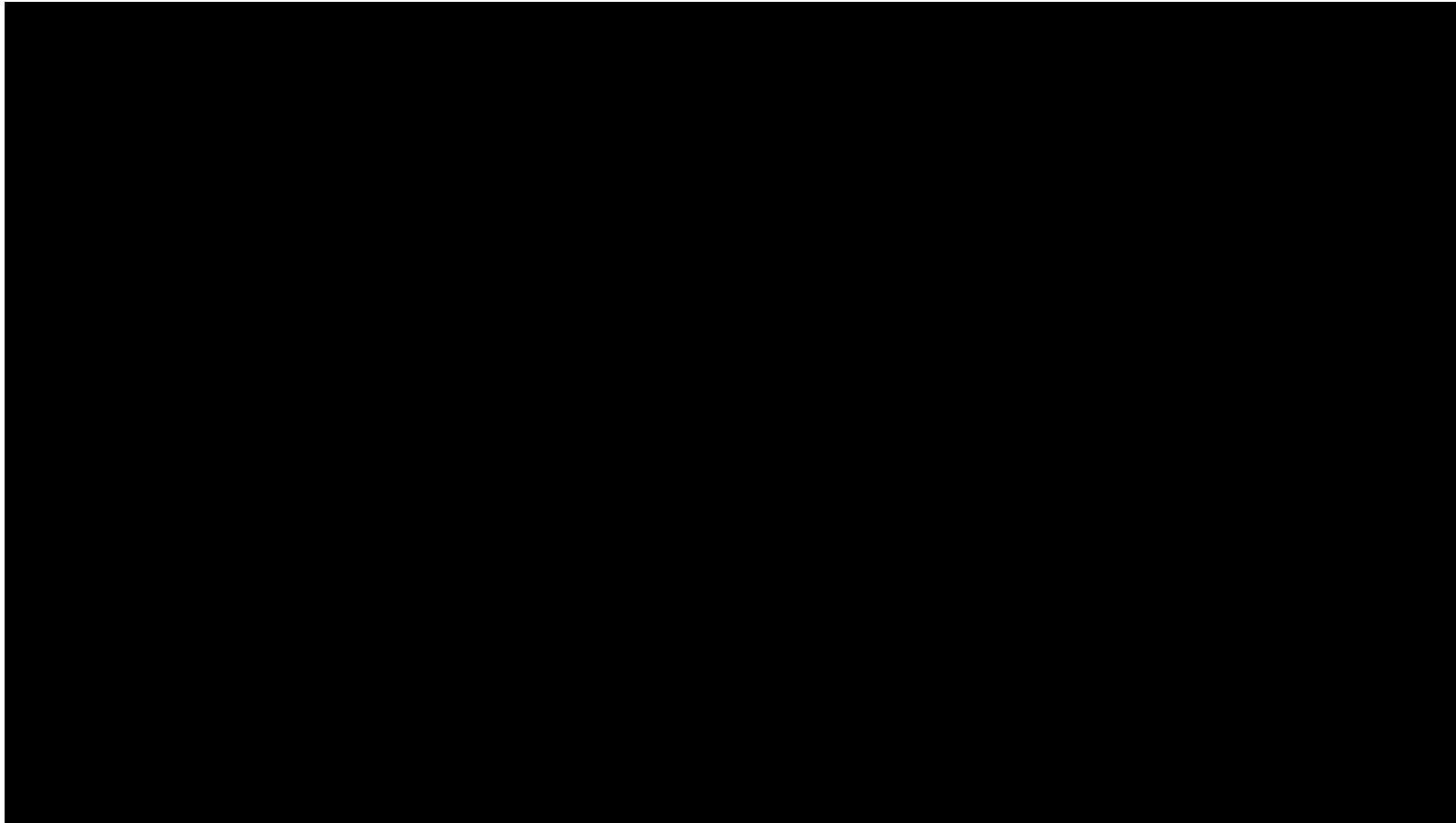


Dyslexia affects memory

- Has difficulty remembering words that have been taught
- Has trouble remembering or following a sequence of instructions
- Has difficulty with visual-spatial memory
- Has trouble memorizing number facts or doing math operations



Father & son, Brian and Joe who have dyslexia



Early signs of dyslexia

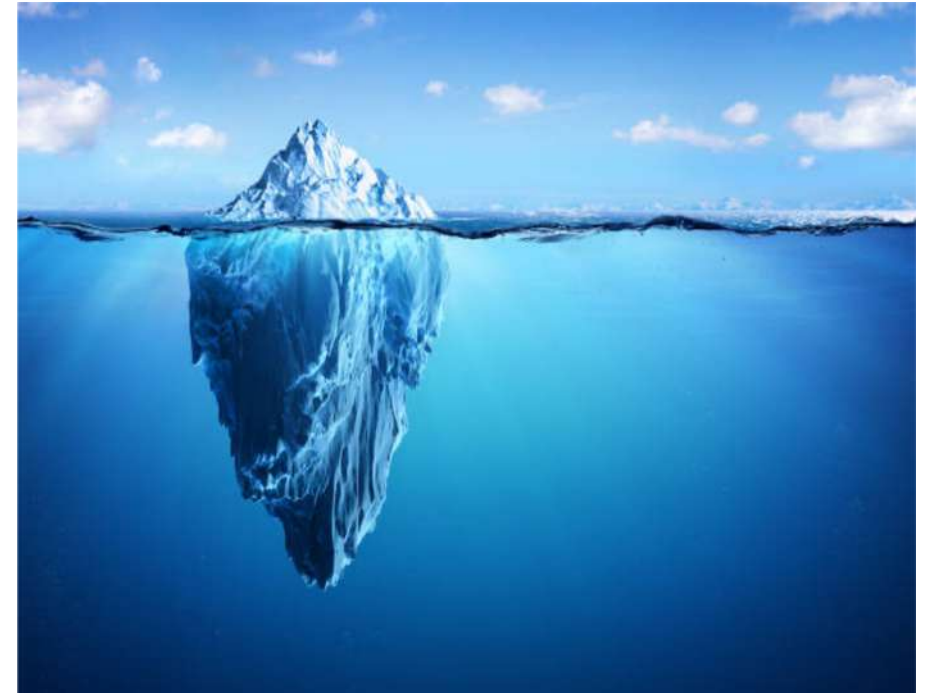
Indicators

- Difficulty learning nursery rhymes
- Difficulty learning to sing or recite the alphabet
- Likes listening to stories but shows no interest in letters or words
- Has a history of slow speech development
- Has poor auditory discrimination e.g. hears "cake" as "cape"
- Muddles words e.g. Macnolda's, aminal
- Has difficulty keeping simple rhythm
- Forgets names of friends, teacher, colours etc.
- Substitutes similar words in speech e.g. "knife" for "sword"
- Confuses between directional words e.g. up/down
- Difficulty with sequencing e.g. coloured beads, classroom routines
- Finds it hard to carry out two or more instructions at one time, (e.g. put the toys in the box, then put it on the shelf) but is fine if tasks are presented in smaller units
- Has family history of dyslexia/reading difficulties

Literacy difficulties: Tip of the iceberg

They may also have:

- Slower processing speed
- Difficulties maintaining attention
- Emotional and behavioural issues



Dyslexia: Social and emotional issues

Many of the emotional problems caused by dyslexia occur out of


- Frustration with school, or social situations
 - not aware what is holding them back
 - aware but does not know how to cope
- Fear of not meeting expectations

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Dealing with dyslexia: Children experience more than just educational issues

BY BALVINDER SANDHU

Published July 15, 2017
Updated July 17, 2017



Dyslexia doesn't just affect a child's educational issues but has an impact on emotional and social well-being. Stock photo by Peter Hershey on Unsplash

SINGAPORE — Dyslexia has always been associated with learning difficulties in children, but it was recently revealed that the condition could also lead to a range of social and emotional issues.

ADVERTISEMENT

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Formal dyslexia support system

- MOE schools provide dyslexia support for P1 and P2 students with literacy needs through the Learning Support Programme (LSP) (five times a week).
- Students who continue to need literacy support in P3 and P4 are screened for dyslexia and may attend:
 - School-based Dyslexia Remediation (SDR) programme that is conducted in school, four times a week, 30 mins each.
 - The MOE funded Literacy Programme (MLP) by Dyslexia Association of Singapore (DAS) is another source of support for children (7-17 yo) with reading and spelling difficulties. Lessons are held at one of the 12 centres islandwide, twice a week – one hour each.

Evidence-based dyslexia intervention

National Reading Panel recommends that evidence-based reading instruction for dyslexia must include these five components:

- Phonemic awareness
- Systematic phonics
- Fluency
- Vocabulary
- Comprehension instruction

International Dyslexia Association has also recommended that evidence-based reading instruction for dyslexia should be carried out in this manner:

- Systematic and structured
- Explicit or Direct
- Multisensory Instruction
- Diagnostic Teaching

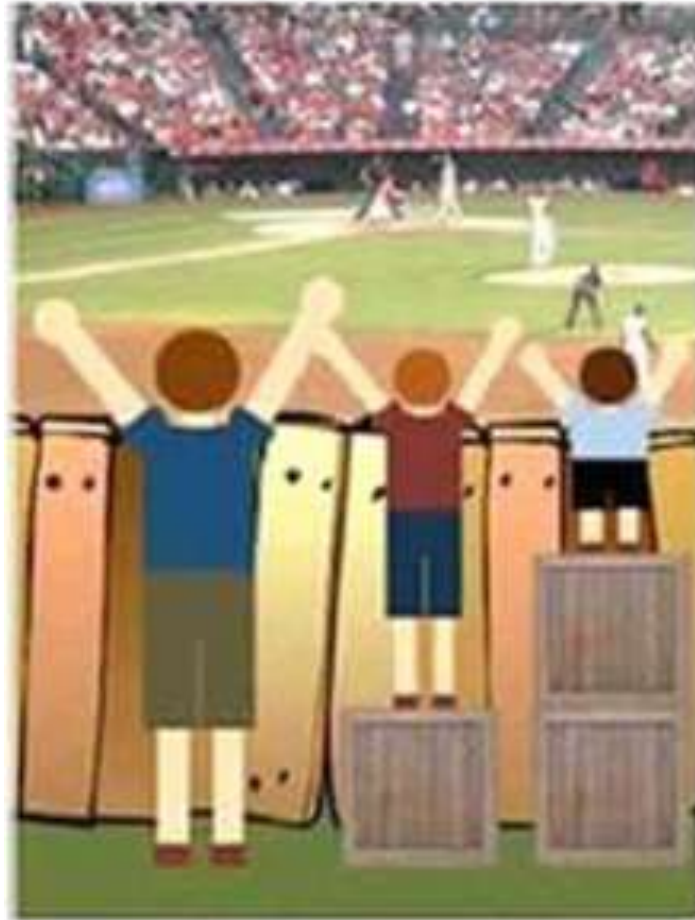
A typical lesson at DAS



Access arrangements

- Extra time for written exams (25% more time for each paper)
- Extra time for oral examinations (preparation time)
- Prompter (for students with significant attention issues)
- Scribe (for students with very severe dyslexia)
- Double copies of exam papers
- Enlarged exam papers
- Use of computer (students with handwriting difficulties)

Providing Individualised Support



Providing individualised support within the *same* infrastructure



Did you enjoy your break?

