



The Art and Science of Learning

Literacy Learning And Little Ones Identifying and Managing Literacy Struggles In 4-7 Year Olds

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- Brief Explanation of Learning Disability
- Terminology Delay, Difficulty, Disability, Difference
- Identifying Students Who Might Struggle
- Good Things Parents Can Do with Pre-Prep and Prep Age Children
- Testing How to Test at Each Age group
- Recovery Prefabricated Programs, School Support, Clinical Education





Dyslexia accounts for over 80% of Learning Struggles

In 2009 Sir Jim Rose's Report on 'Identifying and Teaching Children and Young People with Dyslexia and Literacy Difficulties' gave the following description of Dyslexia, which was adopted by the British Dyslexia Association:





- Dyslexia is a learning difficulty that primarily affects the skills involved in accurate and fluent word reading and spelling.
- Characteristic features of Dyslexia are difficulties in phonological awareness, verbal memory and verbal processing speed.
- Dyslexia occurs across the range of intellectual abilities.
- It is best thought of as a continuum, not a distinct category, and there are no clear cut-off points.
- Co-occurring difficulties may be seen in aspects of language, motor co-ordination, mental calculation, concentration and personal organisation, but these are not, by themselves, markers of Dyslexia.



A good indication of the severity and persistence of Dyslexic difficulties can be gained by examining how the individual responds or has responded to well founded intervention.



Current Definition from the International Dyslexia Association

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. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.





Caused by Accident, Illness or Injury

- A result of bad parenting, bad teaching or missed instruction
- Caused by or related to poor hearing or poor eyesight including tracking
- Caused by ADHD, problems with the cerebellum or vestibular system
- Scotopic Sensitivity Syndrome



Myth Busting

- Dyslexia is not a Gift
- Albert Einstein was not dyslexic
- We cannot predict who will respond to instruction
- Phonological processing tests are not enough
- Quick fixes don't work



Terminology – Delay, Difficulty, Disability

The terms Delay, Difficulty, Disability and Difference are frequently interchanged by professionals and lay persons alike.

In some contexts such as open and casual discussion that is not meant to be diagnostic or prognostic in nature, this may be appropriate.

However, too often these terms appear in formal reports and other types of formal communication with scant regard to their discrete meaning.



Delay

The term **delay** implies that the child's leaning problems will correct given suitable time. Thus their difficulties may be more linked with maturational tempo rather than neurological factors. There is probably not much to be gained by structured attempts at remediation or accommodation. In other words the problem can be left relatively untreated and given a reasonable period of time the child will recover naturally if suitable teaching takes place. However a short period of intervention could work quite well.





The term **difficulty** could be used to describe a learning problem that may present similarly to a delay but will not improve or only improve marginally over time. It usually means that the child has a problem in specific area of the curriculum. With additional regular tuition in the areas of concern the problem will likely correct.





The term disability is used to define a neurological and constitutional based disorder. Learning disabilities have a neurological signature and usually (but not always) represent a lifelong condition. This means that the child may have significant and long term academic and scholastic problems. Dyslexia and its various subtypes are examples of such disabilities. This type of problem has nothing to do with intellect, environment, social status, educational opportunity, self esteem or motivation. It can only be managed and improved with highly structured, direct, explicit and goal driven interventions that usually contain some elements of perceptual and processing training as well as multi-sensory literacy instruction.



Difference

This term, though in its infancy in terms of professional use, is being widely used by parents, support groups and learning advocates in an attempt to de-stigmatise Dyslexia and other learning 'problems'. By using the word 'difference' it highlights the fact that though certain children find text based learning more difficult they find other activities and skills easy to learn and in fact may have above average abilities in other areas.



Difference Cont ...

Some are concerned that the term "learning disability" focuses on an individual's weaknesses and isolates them from other learners while the term "learning differences" highlights the fact that they simply learn differently than others do.



Individuals with learning disabilities do learn differently and have as much to offer and contribute as individuals without learning disabilities. However, presently the term 'Differences' has <u>no formal or legal status</u> and whilst the term Learning Disability is still not well understood it does at least attract legislative based support under certain disability laws and policies of Education Queensland.

Unfortunately there is no such legislation connected with the use of the term 'Differences'.



Identifying Students Who Might Struggle

What to Do:

Teach Teach Teach

Literacy is a Taught Skill – Not a Biological Awakening

Teaching literacy skills requires direct, explicit and systematic instruction



Early Signs of Literacy Struggles

If teaching is explicit and systematic it makes it possible to observe certain important indicators (signs and symptoms) such as:

- Poor Phonemic Awareness
- Poor Rhyming and Poor On-set and Rime
- Poor Grapheme recall
- Poor A.R.N and Processing Speed
- Poor Eidetic Memory (High Frequency Words)



Other Considerations

The Top Three 'Agitators' to Literacy Skill Development

- > Anxiety
- Attention and Concentration
- Fatigue Sleep Disorder

These <u>are not</u> neurobiological causes of reading problems but they can sabotage normal reading skill acquisition



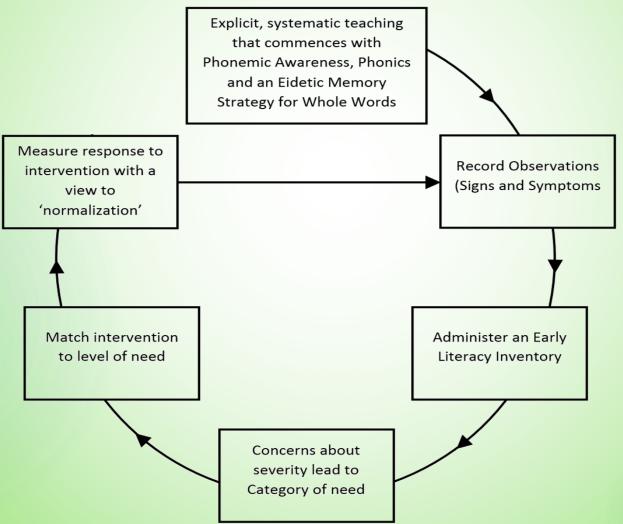
Evaluation

Students who show signs should be formally screened using an acceptable instrument such as:

- Predictive Assessment of Reading (PAR)
- Dynamic Indicators of Basic Early Literacy Skills (DIBELS)
- Texas Primary Reading Inventory (TPRI)
- > AIMSweb screening assessments
- CTOPP 2 (5-7 yrs)



Simple Response Procedure





Good Things Parents Can Do – Pre-Prep and Prep

- Read to children Expressive Language Development
- Demonstrate good language skills in the home
- Teach the alphabet at home
- Learn Rhymes and Verses by rote (convert written text into spoken language)
- Play games that involve memory (particularly working memory) and sequencing
- Encourage drawing and colouring
- Encourage child to re-tell stories using the author's words





Depends on Degree of Severity

Intervention can be:

School Based
Private



Two Broad Approaches

Prefabricated (Off the Shelf, Available in the Market Place) Programs such as :

Barton, Hickey, Wilson, Alpha and Omega, The Sound Way, Reading Horizons, Lindamood, Greatleaps, RAVE-O, etc

Benefit: Ideal for schools. Programs meet standards of efficacy

Challenge: Tendency to teach a program not teach a child. A lot of research needed before purchase.



Two Broad Approaches Cont...

Eclectic or Individualised and Customized

Programs that are customized around the child's profile and progress is measured on the principle of Response to Intervention (RTI).

Implemented by a qualified specialist following Scientific Evidence Based Principles:

Benefit: Outcome driven and highly successful

Challenge: Intensity Frequency Duration requires significant commitment



Example <u>Content</u> for an Intervention - 6 yr old

- 1. Decoding at Grapheme level V/C Vowels & Consonants
- 2. Synthetic Phonics: VC/CV
- 3. HF Words: 1. Frequency Order (Many lists available)
 - 2. Letter Order
- 4. Phon. Awareness: Elision





1	2	3
b	+	m
р	S	n
k	f	d
C	g	r
j	V	У
×	W	I
q	Z	h

Vowels Consonants Blends - VC Blends (Synthetic Phonics)

1	ab	ac	ad	af	ag	aj	ak	al	am
	an	ap	aq	as	at	av	ax	az	

E

A

2 ed ef ek el eb ej ec eg em et eq es ev ex ez en ep

I

3	ib	ic	id	if	ig	ij	ik	<u>i</u> l	im
	in	ip	įq	is	it	iv	ix	iz	

0

4	ob	<u>oc</u>	od	of	og	oj	ok	ol	om
	on	ор	oq	<u>05</u>	ot	ov	ox	<u>oz</u>	

υ

5	ub	uc	ud	uf	ug	uj	uk	ul	um
	un	up	цq	นร	ut	<u>uv</u>	<u>uх</u>	<u>uz</u>	

Consonants Vowels Blends - CV Blends (Synthetic Phonics)

	ba	са	da	fa	ga	ha	ja	ka	la
1	ma	na	pa	ra	sa	ta	va	wa	χa
	za								

Е

A

2	be	de	fe	ge	he	je	ke	le	me
	ne	pe	re	se	te	ve	we	ye	ze

Ι

3	bi	di	fi	gi	hi	jį	<u>ki</u>	li	mi
	ni	pi	ri	si	ti	vi	wi	χi	zi

0

	bo	со	do	fo	go	ho	jo	ko	lo
4	mo	no	po	ro	S0	to	vo	wo	χo
	zo								

υ

	bu	cu	du	fu	gu	hu	jų	ku	ļų
5	mu	nu	pu	ru	su	tu	vu	wu	χu
	zu								

High Frequency Words - Part One: Reading (Decoding) and Timing (Fluency)

			Top 42 V	Vords			
	۵	I	at	an	am	go	
	he	in	is	i†	if	Mr	
1	my	no	me	of	<u>oh</u> !	on	
Block	SO	up	we	to	be	and	
8	all	ask	are	ran	car	off	
	but	dad	for	day	eat	get	
	got	her	had	dog	boy	his	

Phonemic Awareness: Elision

<u>16</u>	say munch	now say it again but don't say ${f n}$	much
17	say fifth	now say it again but don't say $f(2^{nd})$	fith
18	say fixed	now say it again but don't say ${f k}$	fist
19	say crunch	now say it again but don't say n	crutch
20	say driver	now say it again but don't say ${f v}$	dryer
21	say spit	now say it again but don't say p	sit
22	say winter	now say it again but don't say t	winner
23	say powder	now say it again but don't say d	power



Scientific Evidence Based Principles

- Multisensory
- Alphabetic and Grapho-phonemic
- Direct, Explicit, Repetitive and Drill-Like Instruction
- One on One
- High Intensity, High Frequency, Moderate Duration
- Systematic and Cumulative
- Goal Driven
- Response to Intervention



Scientific Evidence Based Principles

Transference

If you want to learn to ride a horse don't ride a bike because.....



Transference

you only get better at riding a bike not a horse!



Thoughts from Early Childhood Teachers

- Early identification and intervention
- Both teachers and parents should look out for early indicators of LD
- Don't label or pigeon hole too early
- Early intervention helps children to catch up with their peers before the difficulties become more intractable
- Early intervention reduces emotional problems associated with failure

Thoughts from Early Childhood Teachers Cont...

- Early intervention with young children often produces positive results quickly that are maintained over the long term.
- "I use the PLD resources that start with letter/ sound in sets and work from single sounds, word to sentence level".
- Whatever approach used, these children will need overlearning excessive repetion and specific work on speed and automaticity.





App recommendations for young students at risk of LD

There are tens of thousands of apps released each week- many claiming to be 'educational' and able to help children read and spell. Parents and carers need to be careful in selecting such apps for young children to use. Check who the developers are and see if there are ratings for the app before purchasing.

We also need to be very mindful of the effect of screen-time on children- with regard to eye health, attention and brain development. The current Australian guidelines for screen-time suggest children should not spend more than 2 hours using a screen each day. That time needs to be managed and divided into time spent playing fun games that are pure entertainment and time spent using true educational apps such as these listed below:

Book apps to engage emerging readers:

Dr Seuss apps: These are high quality interactive books where children can tap a word and have it read to them or have the entire text read to them. There is a bundle of 6 books for \$22.99 which include The Cat in the Hat, The Lorax and Green Eggs and Ham. Individual books are \$5.99. These are particularly suitable because they are so engaging and also develop phonological awareness in young children through the use of rhyme and alliteration.



The Wonky Donkey (\$7.99) is a hilarious interactive book that can be read on auto play and also children can tap on single words to have them read aloud. Children can paint their own versions of the pictures in the story. Interestingly, this book was first created as an app, and because it was so popular, went into print.

The Monster at the End of this Book (\$4.99) is a brilliant Sesame Street story with a hilarious new ending to the traditional Golden Book Version.

Apps to develop reading and spelling skills:

Letter Sounds 1 Pro (\$24.99) is an Australian made app to teach the sounds of the letters of the alphabet. The teaching system in the app automatically identifies what a child knows, what the child does not know, and which letter-sound patterns the child confuses. Letter Sounds 1 Pro teaches children to discriminate between confusing patterns, and strengthens weaknesses in letter-sound understanding.

Reading Intro (\$ 2.99) by Oz Phonics has a range of activities starting with a simple sound matching game to develop auditory discrimination. There are activities to develop letter-sound knowledge and they can start to make simple words with full sound support. Australian made. If you have older children consider the bundle of apps by Oz Phonics- \$13.99 for all 5 of their apps that cover more complex sounds and have extensive activities to develop reading and spelling skills.

Word Wizard 2.99 This app allows children to move letter tiles onto a work-board and hear the sounds as the letters are placed. They can build their own words or learn the Dolch words in pre-set exercises. Great Value app.

Montessori Crosswords (\$4.49) this is a high quality app that can be used for younger children to teach them basic 3 letter words for reading and spelling. It has a high quality voice saying the sound of letters as they are moved to make a word. It is also suitable for older students learning more complicated sounds.

Developing Oral Language

E C

iteracy

Puppet Pals HD (Free) is an excellent app that young children can use to create cartoons using their own animations with a range of themes and characters. They can also use a photo of themselves to create a character.





Toontastic (Free) This app offers an easy way to create animated films that can develop oral language and storytelling skills. Children choose their characters and settings then move the pieces around- providing their own dialogue. The finished movie can be shared in the Toontastic community so it's important that they do not reveal personal information in their videos.

Tale of Tales (\$1.49) Children can create their own fairy tales with a range of characters that blend together to create a new story each time. There are more than 2000 combinations of stories to be made which stimulates children's imagination.

List compiled by Julie Tasker Assistive Technology Consultant www.atapps.com.au

All prices are subject to change- see App Store

These apps are available on iPad- some may be available for Android devices- search on Google Play.



Take Away Messages

- The best way to discover difficulties early is to teach literacy in an explicit way
- Teach first and respond to the child's response to the teaching
- Take a Non-Categoricial Approach Don't look for a diagnosis
- Don't Over-react Teachers and parents should be alert to problems but not alarmed by them
- Don't under-react 'Wait and See' is usually Wait and See them fail'
- Stay Up Beat There is a lot that can be done for young children who struggle with reading