Dyslexia – what's in a name?

Dyslexia is one of the main conditions in the Specific Learning Disabilities category, others being dyspraxia, dysphasia, dyscalculia, dysgraphia and ADHD, which in fact often co-exist. The word itself is quite literally means: Dys – problem, lexia – read (can’t read).

Dyslexia itself is a lifelong condition, usually inherited, which is generally considered to affect around 10 per cent of the population.

It is related to intelligence, language, background or race. In fact learners are often first identified as dyslexic when they fail to make expected progress despite at least average intellectual ability and satisfactory educational experience.

One of the complicating factors is that dyslexia is a condition that affects different children in different ways. It is a condition that attracts a number of theories, not all of which are research-based. There are also differences in how dyslexia is viewed in different countries. However, there are generally accepted facts about the condition, and a number of useful definitions, which convey a broad understanding.

What exactly, causes dyslexia? As stated before, it is defined as brain primarily as an inherited condition, although there is also a condition known as 'acquired dyslexia', which is a similar pattern of difficulties caused by head injury or other brain trauma. Dyslexia is, in essence, a neurological condition, and recent advances in brain imaging technology are adding significantly to our understanding. There are, in fact, three main deficit theories on the causes of dyslexia:

- the phonological deficit theory – relating to the particular difficulties with phonological awareness and development of phonological processing;
- the correlational deficit theory – relating to central processing difficulties, which cause problems with automaticity and information processing;
- the magnocellular deficit theory – relating to visual and auditory deficits.

The evidence reinforces the need for a structured, multi-sensory approach to literacy, which incorporates plenty of reinforcement, but also specific development of the underlying perceptual skills, such as phonological awareness, sequencing, visual perception and memory. In practice, with learners with moderate-severe deficiencies, it is best provided through software reinforcement and hands-on teaching games.

So what should we look for, when identifying learners who may be dyslexic? In the school system, there are a number of possible indicators. These include:

- Unexpected and persisting difficulty with reading or spelling;
- Poor or erratic handwriting;
- Difficulties with short-term memory, particularly with following verbal instructions;
- Problems with organisation or planning;
- Difficulties with sequences, particularly rote sequences or times tables;
- Family history;
- Poor concentration;
- Inconsistency – good or poor days, with no apparent reason.

Conversely, however, there are many strong, particularly involved with ‘right hemisphere’ functions such as creativity or imagination. Dyslexics are often visual thinkers and frequently perceive things differently and think laterally.

Many have excellent spatial abilities, which can be a particular asset in fields such as design, art or computing. There are many successful dyslexics, such as Andy Warhol, George Patton, John Lennon, Nigel Kennedy, Richard Branson and even Albert Einstein. A common story with many of them is that they struggled through school, but achieved success when they got into fields that suited or nurtured their abilities.

Many teachers in the dyslexia field, quite rightly regard dyslexia as a ‘learning difference’, rather than a disability and recognise the need to cater for people who think and learn in different ways. A key part of this is, of course, providing dyslexics with the opportunity to show their strengths, rather than confronting them only with aspects they struggle with.

An important principle in this field is the need to treat learners as individuals, not concentrating on choosing the correct ‘label’, but assessing their individual learning needs and providing them with the right opportunities and support. Currently, for too many people leave the school system regarding themselves as ‘failures’ because they weren’t able to overcome their literacy difficulties and, tragically, many never overcome their image of themselves and realise their potential.

References:

- Mundy, K. University of Texas in conjunction with Texas Department of Mental Health.

Dyslexia is a specific learning difficulty that mainly affects the development of reading and language-related skills. It is likely to be present at birth and be lifelong in its effects. It is characterised by difficulties with phonological processing, rapid naming, working memory, processing speed, and the automatic development of skills that may not relate to an individual’s other cognitive abilities.

It tends to be resistant to conventional teaching methods, but its effect can be mitigated by appropriately specific interventions including the application of information technology and supportive counselling. (http://www. bt dyslexia.org.uk/dyslexia/ definitions)

In New Zealand, one complicating factor is that dyslexia itself was only officially recognised in 2007. Prior to this, specialist assessment providers tended to ‘avoid’ what they felt was a ‘controversial’ term and label children with the more umbrella term SDL (Specific Learning Disability). However, the Ministry of Education now provides resources and advice on dyslexia and its definition includes mention of ‘secondary characteristics’ that may be involved, including ‘difficulties with auditory and/or visual perception, planning and organising; short-term memory; motor skills or social interaction’.

http://learnarystar.org.nz/.

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We receive calls on a daily basis from concerned parents, teachers and educational personnel asking for tools to assist with supporting writing, reading and interpretation of meaning.

Writing is a necessity for academic success and is a basic requirement for participation in life. When an individual struggles to express their ideas, they often feel alienated and frustrated. Providing students with the tools they need to bridge the gap in communication can dramatically affect not only their ability to express themselves, but their overall outlook on learning.

Assistive Technology – what tools can assist?

Most of us are dependent on the spell checker and grammar checker in our word processing application. Some make full use of the synonyms, vocab lists and thesaurus as standard tools to support our writing. The appropriate use of assistive technology can remove barriers for struggling reluctant writers and those with developing language skills.

Text to speech

It is no surprise that struggling students need more engagement and feedback. Having the computer highlight words as they are read back the text they have written provides a positive, rewarding experience.

The test begins to make sense when they can hear back what they are writing and viewing. Editing and proofing work becomes a much easier task when they can listen to their written work being read aloud.

Any selectable text in an application – including the internet, work sheets and websites containing textbooks – can be read back. If the document contains pdf or graphic based text, there is software to capture this and read back word by word.

Word prediction

As a student types, the software monitors the input letter-by-letter and produces a list of words, in a separate ‘prediction box’, that begin with that letter. Each time a letter is added, the list is updated giving the student a selection of words to support their writing.

Word prediction is a speech empowering tool for the most reluctant writer – those students for whom the thought of writing a paragraph, even on a computer, is terrifying. Pre-writing brainstorming activities students can create content-specific Topic Dictionaries. The words in the Topic Dictionary will appear above any other predicted word, and the writing process becomes personalised.

Mind mapping

Mind Maps are visual maps of connecting thoughts that span out in a radial way from one central idea. A Mind Map uses only keywords to prompt memory and association. With many mind maps the student can record their thoughts or information around the pictures or images they have used. The recording can be played back within the outline mode providing yet another means to assist the student when they begin the process of creating their written work.

Mind mapping applications can be used with the support of word prediction and text to speech. With an application like Word2, the Topic Dictionary can be brainstormed and the Topic Dictionary and word prediction used within the mind map, assisting the students’ progress through the writing stages.

Speech to text

With an application like Dragon Naturally Speaking, the user speaks and the software recognises what was said and types it into the computer. Dyslexia affects different people in different ways. Some people with dyslexia will be able to use voice recognition software without any problems. Others may have difficulty with the initial voice training, dictation or connection.

Before starting to use a voice recognition program you have to read out a document that is presented on the screen. This can be an issue for people who are not fluent readers.

There are a number of ways to work through this. The voice recognition program offers a choice of texts. Some are easier to read than others, or can be read alongside a helper – the helper reads the text on the screen in small sections and the user repeats it a section at a time.

Smartpen

The Livescribe Smartpen captures everything that you write and everything that is spoken. Inside the pen is a camera that takes a picture of your notes as you write them. It also has a built-in microphone that lets you record what is being said.

Where to from here

Ministry of Education-CAT have done a number of comparative reviews on applications across various platforms. The easiest way to access these resources is to search the internet for ‘Ministry of education cat’. For lists of various applications, 30-day trials, evaluation equipment or training data email assistivetech@ETS.CO.NZ or call 0800-370-158. E:

By Catherine Britil, Manager, DTSL, Assistive Technology.

Advocacy week to focus on improving student achievement

Dyslexia Advocacy Week (DAW) takes place this year from March 16-22, with a key focus on improving the dyslexic students’ experience and achievements in the classroom.

Fundamental to this is the provision of NCEA Special Assessment Conditions (SACs) for students with learning differences as they at NCEA level exams, and the provision of similar accommodations for those in the earlier, formative years as they move through the education system.

Run by Dyslexia Foundation of New Zealand (DFNZ), DAW 2015 is designed to empower and activate parents to advocate for their child’s legal rights in the classroom, which include access to SACs and the provision of resources by schools and others such as RTLBs (Resource Teachers: Learning and Behaviour).

A focal point of the week will be the ‘Plus 20 in 2015’ initiative, aiming at lifting the numbers of students receiving NCEA SACs such as reader or writer assistance, computer use, or extra time. The target is to lift numbers by more than 20 per cent this year, with DFNZ working with Ministry of Education and NZQA to raise awareness of SAC requirements and the obligations of school partners.

SACs are core to the role and responsibilities of boards of trustees and principals, and SAC support is now part of RTLB job descriptions.

The ‘Plus 20 in 2015’ initiative will build on key recommendations from the NCEA and Māori’s 2014 review of the use of SACs in NCEA.

Find out more about Dyslexia Advocacy Week at https://www.dyslexiafoundation.org.nz

Join the conversation on facebook at https://www.facebook.com/dyslexiafoundationNZ
Publications dedicated to ‘cracking reading’

Barrington Stoke is an independent publisher dedicated to cracking reading. They know that every parent wants their child to become a reader, and every teacher wants their students to make that jump from learning to read to loving to read.

Patience Thomson and Lucy Jackes founded Barrington Stoke in 1997, both when publishing output for struggling readers was virtually non-existent, and the concept of dyslexia-friendly literature seemed almost a bad joke. In the UK the National Literacy Trust was four years old and the National Literacy Strategy was not yet out of the box, but national testing showed that just 63 per cent of children reached expected levels of literacy by age 11. That year also saw the publication of Harry Potter, cementing a golden era of children’s literature. But the Barrington Stoke founders were aware of a growing inequality. While there were more and better books available for children to read than ever before, there was also a growing minority of children and young people who couldn’t access the brilliant (and increasingly long and involved) texts their peers enjoyed.

Their idea was, on the face of it, a simple one. They planned to publish brilliant short books by well-known writers with special adaptations to ensure accessibility for dyslexic and less experienced readers. The books would be commissioned, edited and designed to break down the barriers to reading, from dyslexia and visual stress to simple reluctance.

Making that vision a reality was rather more complex. Before the first books were published, they consulted a raft of experts in ophthalmology, reading theory and special educational needs, supplementing Ms Thomson’s dyslexia expertise and Mrs Jackes’ publishing background.

Financial backing came via a loan from the bank and a band of private investors, many of whose children had been pupils of Ms Thomson, who had been a principal at a specialist school for children with specific learning difficulties.

Crucially, the authors were attracted to the idea and came on board – Michael Morpurgo and other authors helped them launch the list than and have been writing for them ever since. So, what’s the difference between a ‘standard’ and a Barrington Stoke Morpurgo?

35,000 words? The first Barrington Stoke word count was an achievable 5000 – 10,000.

The count has since been taken down to 200 and up to 15,000 for different reading levels.

The books are typset in the highly readable Barrington Stoke Roman typeset, with special spacing to support dyslexic readers. The books were printed on heavy cream paper to combat visual stress and eliminate problematic show-through.

Nowadays they use a two-colour process to achieve the same effect.

They have never commissioned simplified books – from the beginning they asked authors to write the story they wanted to write. Language specialists become involved later on.

First and foremost, the list proved itself in the way that really mattered – parents, teachers and librarians found their children could read the books. Sixteen years later, and the postbag still brings tears to the eyes, the publishers say: “I just wanted to let you know how much you have changed my son’s life.” “He really boosted her confidence and she is so proud of herself.” “To hear my child reading out loud to herself without my assistance was the most wonderful thing ever.”

The company has also enjoyed “gobsmacking” support from authors, illustrators, agents, librarians, teachers, parents, bookdealers and the trade press. The Bookseller says: “It’s impossible to remember life before Barrington Stoke.”

“Thanks to enlightened bookdealers the list is now on core stock at many UK retailers and bestselling Mr Gumn author, Andy Stanton, once told an interviewer he knew he’d made it when we came knocking at his door,” Ms Thomson says.

“You can see steps on the road to reading for book-deprived children – otherwise Harry Potter or the Hunger Games can prove just another disappointing experience that confirms that reading really isn’t for them. “That when our books exist to do and our biggest challenge is to continue to win the hearts and minds of those who can help as much of all those children who are not readers yet, but – with the right help – could be.”

Barrington Stoke books are distributed in New Zealand by South Pacific Book Distributors Ltd.

Early intervention can boost success

Specialised, early intervention can significantly boost success at school for a child with dyslexia, according to research. One-on-one, personalised tuition resulted in vast and surprising improvements in achievement skills, according to Dr Karen Walde, Associate Professor of the School of Psychology at Auckland University.

SPELD NZ, in collaboration with school ITILRs, is piloting the New Zealand Early Years Learning Framework, carried out a pilot study involving 42 seven-year-old students struggling in the classroom as a result of dyslexia.

Dr Walde analysed the resulting data and said the study was taken by surprise.

“I knew that I would find that students would increase their reading skills after SPELD lessons. What I didn’t realise however was just how successful the pilot programme would be. The children increased their predicted reading success by 20-44 per cent in areas of sound blending, phonemic awareness, verbal comprehension and reading fluency. However, their general cognitive abilities also significantly improved.

We saw vast improvements in thinking ability, cognitive fluency and processing speed. I am truly impressed.”

The New Zealand Journal of Educational Studies published the research findings, noting the improvement of cognitive efficiency and processing speed was "tantamount to the ability of the brain to be modified, presumably via strengthened neural connectivity, following even a relatively brief (ESG session) exposure to an enriched environment in the form of SPELD intervention”.

The students in the study came from a variety of schools, ranging from decimal 1 to decimal 10. They received 30, 45-minute sessions of one-on-one tuition, twice weekly, from SPELD NZ teachers. Each child had assessments of both academic and cognitive abilities before and after the 60 lessons using the Woodcock-Johnson III (WWJ) test battery. SPELD NZ’s chairman Marion Fairbairn says although the sample size was small, it was a first step and the findings were very encouraging.

“They indicate that specialised teaching, built on solid foundations, can make a strong contribution to those with dyslexia and to the wider education sector.”

The pilot programme proves that by investing in our under-achieving seven-year-olds, we can help them achieve literacy and success at school. As dyslexia and other specific learning disorders can be hereditary, this could have a flow-on intergenerational effect. Can we afford NOT to help these children?“

The research findings will be used to develop and undertake similar studies planned for the future.

Do you know a child with unexpected problems with reading, writing or maths?

SPELD NZ is a not-for-profit organisation providing specialised help for those with dyslexia and other specific learning disabilities.

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