Current Definitions (In accordance with tki)

Defining dyslexia is a complex and contested process and there are no agreed definitions internationally. The Ministry of Education has drafted this definition as a starting point for our work and, as such, it is as a working definition with further refinement expected:

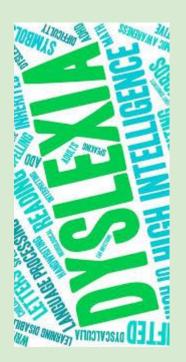
Dyslexia is a spectrum of specific learning difficulties and is evident when accurate and/or fluent reading and writing skills, particularly phonological awareness, develop incompletely or with great difficulty. This may include difficulties with one or more of reading, writing, spelling, numeracy, or musical notation. These difficulties are persistent despite access to learning opportunities that are effective and appropriate for most other children.

People with dyslexia can be found across the achievement spectrum and sometimes have a number of associated secondary characteristics which may also need to be addressed, such as difficulties with auditory and/or visual perception; planning and organising; short-term memory; motor skills or social interaction.

People with dyslexia often develop compensatory strategies and these can disguise their difficulties. People with dyslexia can also develop compensatory strengths which can provide an opportunity to further advance their learning.

Early identification followed by a systematic and sustained process of highly individualised, skilled teaching primarily focused on written language, with specialist support, is critical to enable learners to participate in the full range of social, academic, and other learning opportunities across all areas of the curriculum. Click here for source (Literacy Online).





Current Definitions (In accordance with tki)

TKI Inclusive Education

Oyslexia is a term used to describe a range of persistent difficulties with aspects of reading, writing and spelling. It may assist with understanding why some students do not make expected progress in these areas despite the teaching and extra support that would be helpful for most other students. By working with the strengths of students, difficulties associated with dyslexia can be reduced.

 Source: About Dyslexia, a Ministry of Education resource on TKI Literacy Online

Dyslexia is....

- A brain-based issue that makes it hard to learn to read accurately and fluently.
- A lifelong condition.
 Learners don't outgrow dyslexia but with the right support, key skills can improve.
- A common learning issue.
 Many successful people have it, and researchers have been studying it for over a century.

Dyslexia is not...

- A problem of intelligence.
 Learners with dyslexia are just as smart as their peers.
- A problem of vision. The core issue involves understanding how the sounds in words are represented by letters.
- A problem of laziness.
 Learners with dyslexia are already trying hard. They need more help to make progress.





Other Definitions



Dyslexia is a developmental disorder characterised by reading and phonological difficulties.

It is a persistent and unexplained difficulty in achieving accurate and/or fluent word recognition skills despite adequate intelligence and opportunity (Waldie, Wilson, Roberts & Moreau, 2017)

"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."

Adopted by the IDA Board of Directors, Nov. 12, 2002.



Dr Gavin Reid shared this definition: 'a combination of abilities and difficulties, which affect the learning process in one or more of reading, spelling and writing. Accompanying weaknesses may be identified in areas of speed of processing, short term memory, sequencing, auditory and/ or visual perception, spoken language and motor skills. It is particularly related to mastering and using written language, which may include alphabetic, numeric and musical notation'

Other Definitions

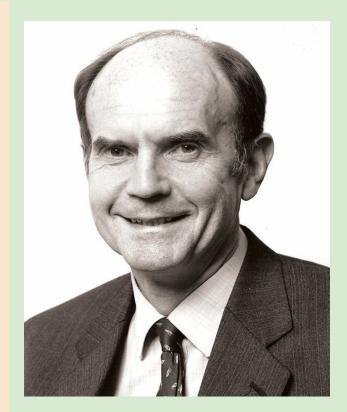




Sir Jim Rose: The Rose Report

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.



Other Definitions

British Dyslexia Association

In addition to these characteristics, the BDA acknowledges the visual and auditory processing difficulties that some individuals with dyslexia can experience, and points out that dyslexic readers can show a combination of abilities and difficulties that affect the learning process.

Some also have strengths in other areas, such as design, problem solving, creative skills, interactive skills and oral skills.

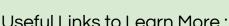


Simply put, dyslexia is a specific learning disability ('SLD') that makes it far harder to learn to read, write or do number work. It is a processing difficulty that makes achieving success in literacy and numeracy a real challenge.

So, dyslexia can be summarised as having problems with processing visual or auditory information; withholding that information in working memory and with kinaesthetic awareness, co-ordination and automaticity. Please see next slide for more specifics.

YOUTUBE Clip: Learning disability - definition, diagnosis, treatment, pathology





DFNZ - Dyslexic Foundation of New Zealand

DFNZ Facebook Page

The New Zealand Dyslexia Handbook

Dyslexia - SPELD Foundation

SPELD SA

Literacy Online

TKI Inclusive Education

Dyslexic.com

The Rose Report

British Dyslexia Association



Definitions further unpacked



<u>Understanding the definition</u>

The definition states that dyslexia is not due to the individual's ability to learn and develop these skills. It is to do with the way people process information and how that affects their ability to learn. This processing difficulty can be due to a number of reasons, but it is this which causes problems with acquiring literacy skills.

Most dyslexic students have been identified to have one or more of the following deficiencies in the sub-skills that are required to acquire and use adequate literacy skills:

• A marked inefficiency in the working or short-term memory system

This means that a dyslexic student may have problems with the amount of information that can be held and processed in the real-time, conscious memory.

 Inadequate phonological processing abilities causing problems with connecting the letter patterns with the associated sounds

This is usually due to problems with the speed with which auditory information can be processed and with accessing the memory of audio sounds to relate them to the letter pattern.

Difficulties with automaticity

This can cause problems with getting things in the right order or sequencing and may also show itself as clumsiness caused by the brain sending the wrong signals to parts of the body in the wrong order.

A range of problems connected with visual processing to do with the speed with which visual information can be
processed and with accessing the memory of visual patterns Some people use the term "visual dyslexia" to mean what
we call Visual Stress.

The Science Behind It - What is happening in the brain - A General View



<u>Decoding Dyslexia</u> - What parts of the brain are being used?

To read we use 3 key areas on the left hand side of the brain and they all work simultaneously.

- <u>Phoneme Recognition</u>: In the front of the brain, there is an area used for sounding out words in our head or out loud. It also starts to break down words into similar sounds known as phonemes. For example the letter T is 'ta'.
- Word Analysis: At the back of the brain, there is an area for analysing words which pulls the word apart even more by analysing the syllables and the phonemes. As in 'TI - ga.'
- Word Detector: The third area detects word forms allowing
 us to instantly recognise words without having to sound
 them out. The more activation in this area the more able the
 reader to glide through print without hesitation. As in 'tiger'.

Neurodiversity - How does the brain work?

TED Talk: What is dyslexia? Kelli Sandman-Hurley 4.34 mins

Word Detector: This is the area that has been shown to function differently with some dyslexic people. Dyslexics have problems trying to gain access to both the word analyser and word detector.

This may cause them to compensate and rely more heavily on sounding out the word or they may also use areas on the right hand side of the brain which take visual clues from story pictures to decipher words.

Research Article Links

<u>Brain Sciences - Is Dyslexia a Brain Disorder?</u>

The Yale Centre for Dyslexia and Creativity

What Are Dyslexia and Its Effects on Teaching Language Skills

Secondary symptoms of dyslexia a comparison of self esteem and anxiety profiles of children with and without dyslexia

Pilot research project shows one-on-one remediation can result in "vast improvements" for students with dyslexia. The NZ Journal of Educational Studies concluded this was testament to the ability of the brain to be modified, presumably via strengthened neural connectivity, following exposure to an enriched environment of learning.

https://www.speld.org.nz/wp-content/uploads/2017/12/pilot-nzjesarticle.pdf

