
Reading Difficulties: Dyslexia

Dyslexia

Dyslexia is a hereditary neurological disorder experienced by 10% of the Australian population which causes the information relating to literacy to be processed in a different area of the brain (Brain Foundation, n.d.; Dyslexia Association Australia, n.d.a; Sousa, 2005; The Yale Center for Dyslexia and Creativity, n.d.). While it is a spectrum disorder, common symptoms of dyslexia can often include confusion with symbols, meanings of words and emotional reactions to the learning environment (Dyslexia Association Australia, n.d.b.). According to The Yale Center for Dyslexia and Creativity (n.d.), despite these difficulties, individuals with dyslexia are often fast thinkers who reach their potential through creative tasks and activities which require strong reasoning abilities.

Dyslexia creates several problems when trying to read, write, and recall information from one's working memory. Because information is processed in a separate area of their brain, phonological information, such as the processing of graphemes, can be a significant area of learning delay (Brain Foundation, n.d.). According to research analysed by Sousa (2005), a brain with dyslexia often lags behind the visual processing system, meaning that the eyes are already scanning the next letters in a word while the brain is processing the previous ones. For example, if a person was reading "DOG", the brain would still be processing the letter "D" and associating a sound to it, while the eyes have begun scanning the letter "G". Because of this, a dyslexic brain may associate the -duh- sound belonging to the letter "D" with the letter "G", which may cause issues when the individual relies on their working memory to spell the same word at a later time (Sousa, 2005). Put simply, the individual has issues assigning the sound heard – the phoneme, to the letter seen on paper – the grapheme.

While it is certain that dyslexia occurs due to information being processed in a different area of the brain, professionals are still uncertain about the exact reasons that dyslexia occurs in specific individuals. The main confusion surrounding this is because it does not impact one's intelligence, only their reading and processing skills (Siegal & Mazabel, 2013; Sousa, 2005). Professionals know that the signs and symptoms vary between those who are diagnosed, however, due to the nature of the disorder, these markers are the only way to identify the condition in any individual (Dyslexia Association Australia, n.d.b; Sousa, 2005).

In light of this, educators should be adjusting their teaching in various ways. The first thing that educators should consider when analysing their teaching is the difficulty that students may have in their classroom due to the way they process information. Educators should use this realisation as a reminder to be patient with their students because while they may be slow readers, they are still working at mastering a skill that is difficult (Sprei, 2016). As well as this, educators should ensure that they implement appropriate strategies in their teaching to cater for this. Educators have the responsibility to provide a variety of resources and technologies that allow students to access information in ways that cater to various learning needs, including dyslexia. One way that educators can allow this access is through resources which do not require extensive reading, due to the difficulties they have with verbal-visual processing (Sousa, 2005). While there are many other things that educators can provide and consider for their

teaching, by starting with these two suggestions, they can start supporting their students in their journey with dyslexia.

References

1. Brain Foundation. (n.d.). Dyslexia. Retrieved from <https://brainfoundation.org.au/disorders/dyslexia/>
2. Dyslexia Association Australia. (n.d.a). Dyslexia FAQ. Retrieved from <https://www.dyslexia.org.au/dyslexiafaq.htm>
3. Dyslexia Association Australia. (n.d.b). What is dyslexia?. Retrieved from <https://www.dyslexia.org.au/whatisdyslexia.htm>
4. Siegal, L. S., & Mazabel, S. (2013). Basic cognitive processes and reading disabilities. In H. L. Swanson, K. R. Harris & S. Graham (Eds.), *Handbook of learning disabilities* (2nd ed., pp. 186-208). New York: Guilford Press.
5. Sousa, D. A. (2005). How the brain learns to read. (pp. 120-132). Thousand Oaks, CA: Corwin Press.
6. Sprei, D. (2016, May 19). Dyslexia is a different way of thinking: A conversation with David Boies [Web log post]. Retrieved from <https://learningally.org/Blog/dyslexia-different-way-thinking-conversation-david-boies>
7. The Yale Center for Dyslexia and Creativity. (n.d.). What is dyslexia?. Retrieved from <http://dyslexia.yale.edu/dyslexia/what-is-dyslexia/>