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Transforming Text Into Student Success: A Guide to Creating Dyslexic-Friendly Classroom Materials

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Up to 20% of people in the US have some form of reading disability according to The National Institute of Child Health and Human Development in 2000 (Wadlington & Wadlington, 2005, p. 16). The UK has the figure at around 10% just for dyslexia sufferers (Crown, 2022). In Japan, a government survey estimated around 6.3% of elementary school children had some dyslexic type learning disorder; however, this was based on teacher responses as there is still a stigma in Japan over reporting these types of disabilities (NPO EDGE, n.d.). Although there are no accurate global figures on reading disabilities, as some nations do not test for this, it is very likely that the percentages of the global population having some form of dyslexia are broadly similar in size to the ones cited above due to the causative factors being genetic/medical in nature and not educational or geographic. A full explanation of the medical science behind what causes dyslexia is outside the scope of this paper. However, for those interested, there is research explaining this for non-medical people (Lyon, 1998; Peterson & Pennington, 2012). Also important for teachers to consider, regarding visual accessibility, is colour usage choice for people with colour vision deficiency (CVD). However, the CVD in education issue has already been covered in an earlier paper (Paterson, 2024), so it does not need to be covered here. That paper is a good complement to this paper, so please have a read if interested in CVD issues in making education more accessible.

What this paper will focus on instead is how teachers can minimise the effects of dyslexia on students' performance, especially in the area of interacting with texts in their courses, as helping those students who suffer from dyslexia is a worthwhile cause. A high-quality and equitable education should be accessible and available to all learners as far as possible, and making more dyslexic-friendly materials for classrooms to help students in this regard is actually very possible and something that educators should strive towards providing in their classes.

Dyslexia Friendly Guidelines

In the UK, The British Dyslexia Association (BDA) has existed since 1972 and has continually advocated for the rights of those with dyslexia. They also publish a dyslexia-friendly style guide[1] (British Dyslexia Association, n.d.) with many guidelines to make text easier to read for dyslexics. In short, they suggest using sans serif fonts in size 12 or larger, as sans serif fonts generally have a more open look with more space between letters (often called "tracked out" in typographical circles)

1 BDA Style Guide https://cdn.bdadyslexia.org.uk/uploads/documents/Advice/style-guide/BDA-Style-Guide-2023.pdf?v=1680514568

and no serifs (the projecting strokes or tails on letters), which also makes text easier for dyslexics to read.

This is in stark contrast to the much more commonly used Times New Roman font (TNR)—a serif font almost ubiquitous in academic circles and publications in Japan. TNR is much harder to read with its reduced tracking, less open letter spacing, and prominent serifs. It was originally designed to cut costs for The Times newspaper by saving paper via reducing the tracking and moving letters closer together. However, this font was only suggested for the narrower columns in newspapers, not the wider ones used in books and reports (The Times, 1932), so a modified version was later created for books (Mann, 2014). Unlike now, the awareness of how reduced tracking and serifs affected dyslexics was not well known at the time of its creation. With this increased awareness of TNR's limited accessibility for dyslexic readers, the U.K. and U.S. governments have now banned the use of TNR (Hudson & Timsit, 2023; Hyndman, 2023), and many U.K. universities have followed suit, with one even rejecting a fellowship application for using the wrong type of sans serif font (Cressey, 2015). Therefore, the need for texts to be more accessible is becoming much more widespread, and educators and universities should take note of this.

To address this accessibility issue for dyslexics, the font Quicksand was developed by Andrew Paglinawan in 2008 and further redeveloped by Paglinawan and Thomas Jockin in 2016 (Fonts in Use, n.d.-b). Following this, Google worked with typographers and educators, building on earlier work conducted on how children read and write (Shaver-Troup, 2007). This led to the development of a sans serif font by Bonnie Shaver-Troup and Thomas Jockin in 2018 called Lexend (Fonts in Use n.d.-a). This was modelled on the earlier Quicksand font and was specifically designed to make reading easier with more widely spaced letters. Lexend has also been successfully introduced in business circles due to the ease of reading documents written in Lexend (Zaraysky, 2022), as well as its inclusion in Google's font list, making it available to the general population. Additionally, a script expansion of Lexend called Readex for other non-roman alphabet languages, such as Arabic, was released in 2021 (Fonts in Use, n.d.-c), so the global reach of Lexend (and its derivatives) as a dyslexic-friendly font is spreading.

However, the way the actual font is presented is also important for dyslexics. The BDA also suggests avoiding underlining, as it can have the same negative effect on reading as the tails on serif fonts. Also rated badly for readability are *italics*, and writing in ALL CAPITALS, with the latter usually resulting in a slower reading speed for "normal" readers (Babayiğit, 2019, p. 371). The BDA also suggests avoiding single line spacing as the small gap between lines makes it harder for dyslexic sufferers to follow each line horizontally—see the 7 lines below for a comparison.

Sample text in Times New Roman, in single line spacing with font size 12 (and with some underlining and ALL CAPS) for comparison purposes with the rest of this paper which is written in Lexend, in double line spacing with font size 12 and no underlining and no all caps. Hopefully readers can see how single line spacing in this style is much more difficult for dyslexic sufferers to read as the small gap between lines makes it harder for them to follow each line horizontally, and see how underlining, *italics* and ALL CAPS makes it more difficult for them to separate each letter.

Therefore, using Lexend with double line spacing is preferred, as this greater line spacing also makes text easier for dyslexic sufferers to read and with no underlining and no all cap. Yet, examples of all these accessibility and typography no-nos are also frequently used by educators in their work. In Japan, TNR is still the official font of many academic journals and publications, including JALT's *The Language Teacher*, which usually uses single-line spacing!

Conclusion

In summary, teachers and educators need to be aware that an inappropriate choice of font, font size, line spacing, and text style (*italics*, underlining, CAPITALS) can have a negative impact on how dyslexic students interact with reading and writing their own work. Therefore, to maximise the accessibility of text-based work for dyslexic sufferers, educational staff should make efforts to significantly improve how they present their coursework in terms of readability and comprehension for dyslexic learners by using sans-serif fonts like Lexend, with a font size 12 or larger and using double spacing. By selecting this type of font and formatting, educators can reduce visual stress on dyslexic and other readers, improve letter recognition, and ultimately support better learning outcomes for students with dyslexia. This simple and easy-to-implement adjustment can make an effective and measurable difference in creating an inclusive learning environment, allowing dyslexic students to focus on the content of texts instead of struggling with decoding and reading texts, and it helps with their own written texts if they can write in a dyslexic-friendly font style. As educators striving for accessibility and equal opportunities in education, awareness of these issues and how to address them is an important first step toward accommodating diverse learning needs.

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