

B.D.A. Dyslexia Handbook 2011.

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Technology Providing Access for All

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Technology is now an embedded part of every young person's learning. Computers and the internet enable learners to gain the skills they will need to become effective participants in an increasingly global economy that's pretty much becoming reliant on individuals' digital capabilities.

Despite the visual appeal and inclusive options that a multimedia approach to presenting information offers, most websites, text books and printed material still rely heavily on text to convey their messages.

There are a large number of learners who have problems when it comes to reading and writing and a group of learners whose needs are so specific that they cannot gain the full benefit of access to these fantastic resources or even essential course material.

Fortunately, technology can provide an opportunity for all learners to fully participate in learning and for those who need specialist support, it can also make the difference between being able to participate or not!

The good news is that with all modern computers, this is easy and inexpensive to do for the majority of learners who have reading and writing difficulties. Also, an added bonus is that by providing support for this group, it also offers opportunities for others to gain even more benefit from using the internet or other printed material.

1. Accessibility 'Out of the Box'

Take a look at the accessibility features offered in a standard 'out of the box' **Windows** or **Mac** computer. Both types of machine offer many levels of customisation for users who have difficulty with reading and writing. The Ease of Access Centre within Windows 7 allows quick access to adjust accessibility settings on the computer for individuals. Apple also offers a variety of built-in tools and technologies that help all people to get the most from their computer.

Features that are offered with both of these operating systems include:

- n Screen magnification which enlarges text size for those with low vision.
- n Settings to increase and decrease contrast, remove colour (switch to greyscale) and even reverse the video to white-on-black or black-on-white for low vision users.
- n On-screen keyboards, assignable mouse buttons and sticky keys which allow greater flexibility for those who have difficulty with physical access, or those who cannot easily avert their eyes from the screen without losing concentration.
- n Text-to-speech options allow the computer to read back sections of the screen and to speak selected text on websites and within word processors with a single keystroke.
- n Speech to text software allows voice control of the computer and also allows the user to speak directly into a word processor. This is useful for anyone who finds it difficult to use a keyboard and mouse, but also great for reluctant writers.
- n Word completion and spell checking options within the accessibility options allow for improved efficiency with writing and recording.
- n It is even possible to convert text to a spoken track that can be used on an MP3 player or Smartphone without having to purchase any additional software. Suddenly text becomes accessible for a range of users who prefer to have text read back to them, not just those who have difficulty with reading.

If you don't know what options and preferences are available, then there are also several presets already for you to choose from. It is then possible to further customise the preset so that it is exactly what you want. Once the computer has been setup as you like it, then your personal profile can be saved and stored so that it is available each time you log onto that machine. And if you are working on a network in a school, for example, it is also possible to have a 'roaming' profile that follows you wherever you log onto a computer on that network.

Many of these access features are also being built into portable devices such as Smartphones and MP3 players. Also there are many 'apps' available for these devices which help to improve accessibility of text. (Perhaps the focus of another article!)

2. Other Basic Tools

Despite the improved accessibility built into modern computer operating systems, there are some additional software tools that all learners should have access to if they are going to take full advantage of the powerful role that technology can play in supporting reading and writing.

There are many software packages available for dyslexics and each has its own unique selling point or offers specific features that may help to overcome a particular reading or writing difficulty. The catalogue produced by the B.D.A. New Technologies Committee is a valuable resource for a product overview. However, there are a number of key areas that should be covered when deciding what other software tools should be installed on a computer to ensure that it is 'reading and writing friendly'.

Some of these features may be part of the computer operating system, but may be more suited to the learners needs when integrated into other software packages as often they include additional features. However, as a minimum, it is important to ensure that the areas below are covered:

- n **Text to speech software:** for users who prefer to have pages of text read out loud. This could be web pages, worksheets or text books. It is also worthwhile checking to see if the software can read out pdf's. This file type is increasingly being used on the web to ensure that the layout of the

document is maintained, particularly when it is a downloadable file. (Some text to speech software will not read pdf's).

- n **Text prediction software:** (similar to 'predictive texting' on a phone) which helps to speed up writing. This is particularly useful for younger or reluctant writers. Many word processors now offer text prediction and word completion, but there are also software packages available that offer more than simple word prediction and will help with homophone checking, grammar checking and allow the user to create personal word banks.
- n **Mind mapping software:** helps learners to structure, visualise and classify ideas and can be used as an aid to study, problem solving, decision-making and writing. Learners can then use the maps as revision aids, story boards for structuring essays and project planning.
- n **Screen magnification software:** which enlarges any chosen section of the computer screen for learners who have sight impairments. Also great for reading in groups around one screen, or for 'family time' around the computer.

3. So Much More than Technology for Dyslexics

When it comes to using technology to provide access to reading and writing it is important to think about supporting the needs of everyone who may use that particular computer. By providing a basic set of tools as outlined above and by customising the operating system for individual needs, you will be providing access to a much wider group of learners, while also providing specific support for those who need it