

# Use of Assistive Technology

"Once I was given the opportunity to use a 'talk-to-text' program in many of my subjects, my academic results improved dramatically!"

*Katie – Aged 16 years*

When considering the processing difficulties frequently evident in the profiles of students with learning disabilities, it is not surprising that the challenge to participate becomes even more difficult as the demands of schooling increase.

Whilst remediation and good quality literacy instruction go some way towards improving students underlying skills, the use of assistive technology not only allows students the opportunity to improve their understanding and engagement in the learning process, it also allows them to better demonstrate their skills and knowledge more independently and at a level more commensurate with their overall understanding.

## What is Assistive Technology?

The term "Assistive Technology" is usually applied to electronic devices and computer hardware and software that increase or maintain the capabilities of an individual with a disability. Assistive technology (AT) includes those devices that assist all students, regardless of the presence of a disability, and those devices that have been specifically designed to assist individuals with a disability (adaptive technology).

For students with SLD, the opportunity to use AT to support and reinforce the learning process along with reducing the functional impact of their learning disability, means that their overall level of success is greatly improved. As with other classroom accommodations, the purpose of using AT is not to provide the student with an advantage but rather, it reduces some of the burden of lower literacy or numeracy proficiency.

All students, including those without a learning disability, can benefit from using some of the assistive technologies available. AT can be used in a variety of manners within the classroom environment to support the general teaching process and to provide additional remedial support as it allows for repetition and rehearsal of learnt skills. AT use for general classroom instruction also allows for multisensory teaching opportunities that will not only benefit the student with SLD, but all students within the classroom.

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## What are some examples of assistive technology?

Assistive technologies include, but are not limited to, the following:

<b>Text to Speech</b>	Allows any electronic text that can be highlighted to be read aloud by a computer or mobile device.
<b>Voice Recognition</b>	Allows a computer or enabled hand held device, to be trained in how you speak, and once trained, to write down everything you dictate into any active textbox.
<b>Digital Recorders</b>	Enables students to recall, plan, practise speeches, practise pronunciations, and dictate information.
<b>iPads and Tablets</b>	Provides a multisensory learning experience and there are a large number of apps that can be used to support students across a variety of learning areas.
<b>Electronic Spell checkers</b>	Uses phonetic patterns to suggest words for a poor speller when a computer is not available.
<b>Word Prediction software</b>	Uses phonetic and grammar patterns to suggest words as each letter/word is typed.
<b>Visual Search Engines</b>	Displays a picture of a page rather than the text headings or written content of a webpage.
<b>Literacy Specific Software</b>	Used to support reading and writing. Includes templates for writing, graphic organisers, grammar checkers, and study tools.
<b>Educational Software</b>	Provides support for the development of phonological awareness and phonics.
<b>Electronic Resources and books</b>	Can be used with reading software and mp3 players/iPods.

The applications of AT are far and wide for each student. The usefulness of AT will vary depending on each student's ease at using the AT and depending on their individual needs and difficulties.

• The use of multimedia and electronic information allows students with reading disabilities' to improve their comprehension of a topic or idea without being dependent on their reading ability

**Examples of effective AT options for the student with a learning disability:**

- The use of multimedia and electronic information allows students with reading disabilities to improve their comprehension of a topic or idea without being dependent on their reading ability
- Computers and word processors can reduce the burden of editing and re-writing assignments, making the writing process faster and allowing students to work more independently
- A photo taken with any device that has a camera may be used instead of copying information from a whiteboard. This information can be stored digitally and in some cases converted to text
- An MP3 recorder on any device can record ideas and help overcome short term memory difficulties

**When should Assistive Technology be introduced?**

Some students will find it very beneficial to use assistive technology and educational software to support the early development of literacy skills and letter-sound awareness. Other students will find that their need for AT does not emerge until much later in their education.

Matching students' needs with the use of assistive technology should happen when the need arises.

Early on in Primary school, students are more likely to benefit from the use of educational software and online learning programs to help support reading and spelling development. Students at this level are also likely to benefit from the multisensory nature of iPads, tablets and the interactive whiteboard.

In Upper Primary and Secondary school, the use of AT may be extended to the provision of assistive technology to accommodate for the difficulties that the student may be experiencing. Software such as Text to Speech allows for better comprehension of information and independent learning, whilst software to support the writing process can be introduced to assist with the high demand on writing in the later years of school.

Technology to assist with organisation, study skills, time management and memory can be introduced at any stage.