Resources for Alternatives to Handwriting

Handwriting is a complex process requiring visual perception, neuromuscular abilities and motor components. There are also cognitive and social emotional factors that influence handwriting, such as confidence and motivation.

It can be useful to explore assistive technology tools as an alternative to handwriting. This resource has been developed to share assistive technology options available to students with handwriting difficulties.

Models and Frameworks

When selecting assistive technology for a student with handwriting difficulties it can be useful to use a model or framework to guide your decision making. Assistive technology may not be suitable for every student.

The SETT framework encourages information gathering and assistive technology implementation based around the *Student*, *Environment*, *Task* and *Tool*.

Consider the following questions when choosing assistive technology:

Student
- Does the student fatigue when writing?
- Does the student have difficulty with multiple step tasks?

Environment
- Where is the student placed in the classroom?
- Is the desk set up suited to the students needs?

Tasks
- What tasks are expected of the student?
- What is the format of writing tasks e.g. single word, sentences, paragraphs?
- What is the goal of the task? e.g. correct spelling, neat handwriting or just getting ideas down on the paper

Tool
- What assistive technology options are available?
- What technology does the school currently use?

For more information about the SETT framework including documents for data gathering visit www.joyzabala.com

Notetakers

Portable notetakers are simple, lightweight computers with a keyboard interface. They allow for keyboard entry of text only and can have word prediction or text to speech built in. Portable notetakers offer minimal distractions and are usually battery operated making them well suited to a classroom.

Laptop or Desktop computers

Mac or PC computers offer a range of software and hardware options to support writing. Laptop computers are often preferred as they are portable between classes and home.

Students may use standard word processing software such as Microsoft Word to complete writing tasks. If more specialised support is needed there is a range of assistive technology software that can support writing speed, spelling, organisation and proof-reading. Software features include word prediction, word banks, mind-mapping or speech to text.

Alternative keyboards can support typing with features such as large keys, keyguards or coloured keys.

If typing is the main form of writing it is important to develop typing skills to be as efficient as possible. The ILC has developed a resource called "Learning Typing Skills" which can be found here:

http://ilc.com.au/ilc-tech-resources-computer-access-software/

Tablet

Tablet computers such as iPads or Android tablets run apps which can support students with writing tasks. These apps can support students to use multiple modes to convey their ideas such as photos, videos, voice recording and text. Students may use the onscreen keyboard or a physical keyboard depending on their needs.
The ILC has developed two resources on iDevice and Android apps. These can be found here:

http://ilc.com.au/ilc-tech-resources-tablets-smartphones/

Dictaphones and voice recording apps

Dictaphones and voice recording apps may be used to allow students to present work orally. This removes the motor component of handwriting or typing. Dictaphones may be used prior to speech recognition software, as they do not require the student to train the software and the student can develop their dictation and delivery in their own time.

SmartPen

The Livescribe Smartpen can support note taking tasks by recording audio and syncing it with handwritten notes. Students can retrieve what was being said by the teacher by tapping on the special notepad. The Smartpen can be used for recording homework tasks, note taking or group brainstorming.

For more information about specific alternative to handwriting assistive technology visit the ILC Australia National Equipment Database

http://ilcaustralia.org.au