



## Assistive Technology For Writing

By Linda Balsiger, M.S., CCC-SLP

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Writing by hand can be a daunting task for students with dysgraphia, dyslexia, or motor limitations. As a result, students with handwriting challenges typically produce written work that is far below their oral expressive skills. Fortunately, assistive technology can alleviate the handwriting burden, so that students are freed to focus on the content of their written work. As the holiday shopping season approaches, you may wish to consider investing in technology to support your child's writing skills.

The following assistive technology products range from simple solutions like keyboarding, to more sophisticated programs such as note-taking pens and speech-to-text software.

### Learning to Keyboard

The following products are designed to teach keyboarding skills to children:

- 1) Type to Learn by Sunburst Inc ([store.sunburst.com](http://store.sunburst.com)) – This popular suite of products teaches children (grades K-12) to type using game-like activities.
- 2) EnglishType Junior & EnglishType Senior – by English Type Ltd. ([www.englishtype.com](http://www.englishtype.com)). Developed by an Educational Psychologist, these products teach typing with a multisensory approach. They have been used extensively in classrooms, and include age-leveled literacy instruction in reading, spelling, vocabulary, grammar, and punctuation.
- 3) Dance Mat Typing ([www.bbc.co.uk/schools/typing](http://www.bbc.co.uk/schools/typing)). This free website developed by the BBC has 4 levels of lessons for children ages 7-11.

### Portable Keyboards for the Classroom

Renaissance Learning produces AlphaSmart portable keyboard laptops for students to use in a classroom setting ([www.alphasmart.com](http://www.alphasmart.com)). These devices are 12.5 inches wide and weigh 2 pounds or less. Built-in word processing software with a thesaurus and spell-checker is included. Two models are available:

- 1) Neo: Offered for only \$219, the Neo is a very affordable option. The 5.75" x 1.5" LCD screen can be configured to display 2-6 lines of text. Text can be sent directly to a PC, Mac, or supported USB printers. Battery life is amazing - up to 700 hours on three AAA batteries, or 300 hours on a rechargeable battery. Storage capacity is 512 MB.
- 2) Dana: The Dana model is a more sophisticated Palm-based laptop that starts at \$350. The 7.25" x 2.25" inch touch screen LCD with backlight can be rotated vertically, and supports writing with a stylus. Additional software includes Documents to Go (Word, Excel, and PowerPoint), with synchronization across platforms. To-Do list, Memo Book, Calendar, and many other Palm OS applications are supported. With 16 MB, storage capacity is greater than the Neo, but battery life is limited to around 25 hours. Upgrade options include a wireless version for wireless Internet connectivity.

### Note-Taking Software

- 1) Audio Notetaker by Sonocent ([www.audionotetaker.com](http://www.audionotetaker.com)) – This desktop product allows digital audio recordings to be imported and converted to typed print for playback, review, and editing.



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Spaces are automatically added when pauses in the audio occur. Notes can be organized for studying by inserting breaks, copying or moving text, underlining or highlighting, or adding notes in an annotation box on the left side.

- 2) The Pulse Smartpen by LiveScribe ([www.livescribe.com](http://www.livescribe.com)). This pen contains an infrared camera that records what is drawn or written, and links it to audio that is recorded simultaneously. The Live Scribe Desktop software allows notes and drawings to be transferred, stored, and organized on a computer, where audio that is linked with a drawing or word(s) can be played back. A search function allows students to quickly find important information in their written notes.

### Speech-to-Text Dictation Programs

Research has found that students with learning difficulties who utilize speech recognition software organize their work better, write more creatively, and use more robust vocabulary. Leading products include:

- 1) Dragon Naturally Speaking by Nuance ([www.nuance.com/naturallyspeaking](http://www.nuance.com/naturallyspeaking)). This widely-used program converts dictated speech to text for documents, email, and spreadsheets. Transcription of digital voice recordings is also supported. Voice-controlled editing and correction features allow users with limited mobility to perform editing functions without a keyboard.
- 2) Windows Vista – Windows Vista contains built-in speech recognition software, but the features and accuracy are less robust than other products.
- 3) MacSpeech Dictate ([www.macspeech.com](http://www.macspeech.com)). This successor to MacSpeech iListen is similar to Dragon Naturally Speaking, but is designed to run on Mac computers.

### Proofing Written Work: Text-to-Speech Products

An array of text-to-speech products can help students with dyslexia to proof their written work. Popular products include ClaroRead, Kurzweil 3000, and Texthelp Read & Write. These products range in sophistication and price. The range of features includes: homophone support, phonetic spell-checking, compatibility with speech-to-text products (such as Dragon Naturally Speaking), study/organization aides, varied playback features, and ability to “read” other document types (e.g. web pages, scanned pages).

### Stepping Forward with Technology

Assistive technology can unlock the doors to learning and writing for students who have been limited by dysgraphia or dyslexia. With so many products available, students can begin to explore their potential and experience the freedom of self-expression, rather than being limited by their difficulties.

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