

Text to Speech Technology for Reading Disorders

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In a recent technology column in the Chicago Tribune newspaper, parents asked about text-to-speech programs for students with reading disorders such as dyslexia. Although the columnist mentioned some interesting products, there are more powerful products available for both PCs and Macs that are specifically designed for use by those with learning disabilities.

Many learning-disabled students in public schools and universities utilize the Kurzweil 3000 Color Professional program. This program is a multi-sensory wonder, displaying the highlighted text while reading it aloud in a humanlike computer voice. The scanned pages appear exactly like each textbook page, so students can see color pictures and graphs on the computer screen as the text descriptions are read aloud. Schools and individuals use Kurzweil 3000 to provide accommodated access to their textbooks and other printed material so that students can keep up with and benefit from their regular mainstream education. Additionally, Kurzweil 3000 has extensive study skills tools so that students can learn to highlight or annotate their texts, look up words in Kurzweil's dictionary, look up information in a computerized encyclopedia such as Encarta, read research information on the Internet, and create flashcards for memorizing vocabulary and concepts. If their teachers ask them to utilize quotes from books, students can select, copy, and paste these quotes directly into their essays and papers. With this program, students can also "read" any PDF or text file, Internet page and search engine result, and e-mail message.

The newspaper columnist was correct in stating that scanning can be a time-consuming endeavor, but Kurzweil 3000 has a batch-scanning

program that can be utilized with high-speed scanners to complete the scanning process more quickly. Additionally, there are inexpensive scanners with automatic document feeders available for home use. In order to use these automatic document feeders, copy shops can cut the bindings off of books. The Kurzweil 3000 website (www.kurzweiledu.com) lists compatible scanners with indications of those that have automatic document feeders.

The other time consuming aspect of this technology is proof-reading the scanned material. Although the scanning conversion (OCR) in Kurzweil 3000 has vastly improved over the years, some proofing is still required. As with scanning, there are some specific techniques that increase the accuracy during scanning and can speed the proofing process.

Parents should be aware that students in public schools who have been diagnosed as having a disability requiring assistive technology should be provided with the appropriate software and hardware by their public school. Additionally, if the students need this particular technology in order to access their education, the school needs to provide the scanned and proofed material, ready for the students to read. Because these programs are expensive, parents sometimes have difficulty getting the schools to provide such technology, even though federal special education laws mandate that appropriate assistive technology must be considered for students with special education needs. Some parents hire independent experts to help them determine what technology their child needs, but some of these families have found it easier to just pay for the evaluator-recommended software rather than fight the illegal

barriers to school-funded technology. Increasingly, though, schools are recognizing their obligation to provide appropriate accommodations so that more students attending public schools have access to school district-provided text-to-speech programs such as Kurzweil 3000.

It is essential that students with reading difficulties have access to such technology early in their public school education (as soon as their disability is identified) so that they can have the same access and opportunities to accumulate knowledge as their non-disabled peers in preparation for college. Once students reach college, many schools such as Indiana University have comprehensive student assistance services that provide programs such as Kurzweil 3000 to their learning disabled students in order to comply with the Americans with Disabilities Act.

More on technology for reading disabilities...

Students with dyslexia often have difficulty producing quality written work because of the profound spelling difficulties associated with this disability. If students utilize voice recognition technology for written schoolwork at an age as early as nine, there is research that indicates these students can write essays as well as their non-disabled peers. If readers are interested in learning about voice recognition technology for those with learning disabilities, they can read my article on my website at www.Techpsychologist.com and click on "Voice Recognition Technology."