# Technology Can Help Students with Learning Disabilities Succeed

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Compared with elementary schools or high schools that cater to the masses, there may be a false perception that professional school programs don't need to worry much about students with learning disabilities. After all, we only accept the best and brightest into optometry school, right? In reality, disabilities know no boundaries, and some students with great talent may need extra assistance from our academic programs.

Although most students with visual, auditory, or physical disabilities may not seek out an optometric career path, some students with learning or other more subtle disabilities may very well already be in our classrooms. As those with disability are encouraged to seek out higher educational and career goals, we will be encountering these students with greater frequency in our classrooms, laboratories and clinics. This places upon us an important responsibility to provide the necessary tools and resources so that these students can be successful.

Accommodations like extended testing time or modified student schedules may top the list, but it's important to remember the ever-growing list of technology solutions that may also lend a helping hand. A literature search provides countless examples of studies that show technology's benefit to students with learning disabilities. Such assistance also tends to improve self-sufficiency for students who otherwise may be overly dependent on faculty, tutors, peers, or parents to help them get through our programs.
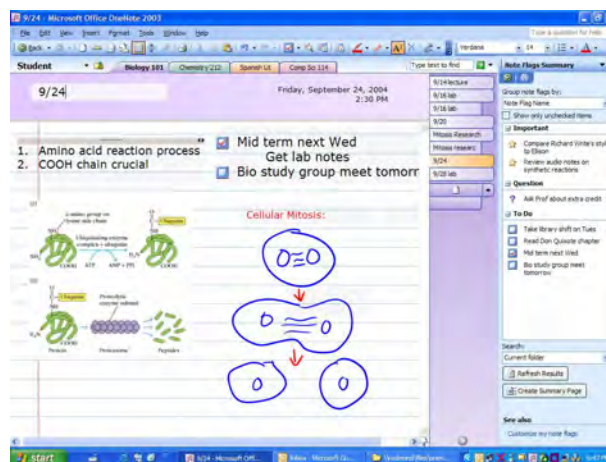
Here, we have compiled a list of options you and your students may find helpful.

## Memory

A variety of tools are available for students with memory problems. Many software applications allow users to store notes, reminders, pictures and Web pages, as well as email, attachments and almost anything else in one spot. Users can move things around, organize materials in a way that works for them and, best of all, electronically search through their notes by remembering only snippets of text. Some of the newer tools are even capable of searching for key words that are part of photos and other scanned materials. Microsoft's OneNote program is part of the Microsoft Office Suite of software commonly available on most computers and is a great and easily accessible tool for our students to use. (Figure 1) The program Ask Sam (www.asksam.com) is another option.

**Figure 1**
**Microsoft OneNote provides an easy way for students to gather information from many sources and organize it in a single location.**

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In addition, a variety of memory enhancement tools can provide automated reminders to students via cell phone or wristwatch display. Examples include Watch Minder (www.watch-minder.com) (Figure 2) and My Email Reminders (www.myemailreminders.com). (Figure 3)

## Listening and Reading

For students who have a difficult time integrating the sights and sounds of the classroom in real time, listening to playback of recorded lectures may be helpful. Some playback programs even allow one to adjust the playback speed so that the voice of a fast-talking professor can be slowed to a manageable pace. Many books are now available in audio format, which offers similar advantages. Even students without a learning disability may appreciate using these audio tools to become "Road Scholars" while making great use of captive commute time. Audio textbooks are sometimes more difficult to find than best-sellers, but the format is slowly growing.

Numerous Optical Character Recognition (OCR) programs read printed text or text on a Web page aloud to students. Kurzweil (www.kurzweiledu.com) is a popular supplier of text-to-speech resources in the education market. (Figure 4).

## Writing

Similarly, speech-to-text tools may be just the thing for students who have difficulty writing or typing. With programs such as Dragon Naturally Speaking (nuance.com/dragon), the user speaks into a computer microphone and the computer converts the words into type. Users who may have been frustrated by this type of technology in its infancy should know it has been improved and definitely deserves another try.

Typing tools can also help students with writing-related learning disabilities. Text expansion applications allow a student to type a brief word into a word processor while the text expansion application automatically works behind the scenes to substitute that short word with a longer phrase. Imagine typing "RE" in MS Word and having "refractive error" show up on the screen. Software in this category includes Texter

**Figure 2**
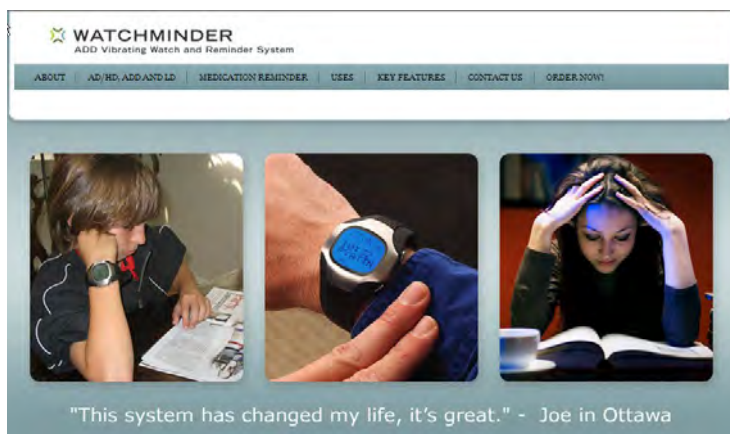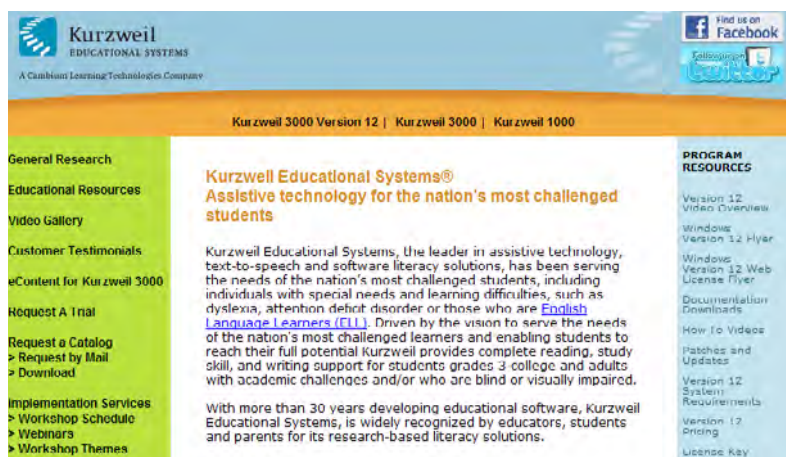**Watch Minder can send automated reminders via cell phone or wristwatch.**



**Figure 3**
**My Email Reminders is one of several memory enhancement tools available to students.**



**Figure 4**
**Kurzweil Educational Systems is a leader in text-to-speech software solutions.**

(lifehacker.com/software/texter/life-hacker-code-texter-windows-238306.php), Typinator (www.ergonis.com/products/typinator) and Activewords (activewords.com).

When spelling is problem, phonetic spelling tools can be used. These allow the student to type the way a word sounds, and the software produces the correct spelling. However, today's great word processors that highlight typing/spelling errors in real time may make phonetic spelling software unnecessary.

## Number of Resources Continues to Grow

As the rigors of the optometric craft continue to increase, assisting professional school students who have a learning disability can be challenging. However, a wide variety of technology tools can be very useful, and the list of resources grows daily as software developers work their magic.

If you know of other resources that help your students with learning disabilities, let us know about them by emailing us at ggoodfel@ico.edu and dmaino@ico.edu.