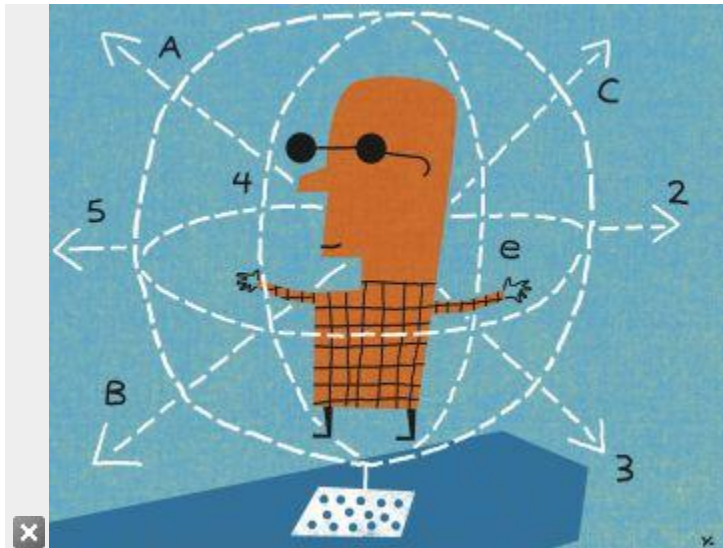


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## Let's Give the Blind Better Access to Online Learning



*James Yang for The Chronicle*

*By Virginia A. Jacko*

It is ironic that in an age when technology could erase so many barriers for blind students, colleges and universities are not paying enough attention to accessibility in their online services.

Online learning should be a significant advantage for blind and visually impaired students because of the absence of physical barriers—there is no struggle to locate classrooms, deal with elevators, or walk between buildings on a large campus. While most colleges attempt to comply reasonably with the Americans With Disabilities Act, all too often the developers and publishers of software and online course-management systems, digital textbooks, and other course materials—as well as the colleges that buy their products—ignore the needs of blind and visually impaired students.

I first expressed concern about digital accessibility more than 10 years ago, when I was a financial executive at Purdue University. When Purdue launched its distance-learning initiative, like many

universities it did not see accessibility as a priority. I was then losing my eyesight to retinitis pigmentosa, a hereditary eye disease that causes gradual vision loss leading to total blindness, and I was becoming aware of how technology can both help and hinder the disabled. Purdue adopted an online-purchasing system that shut out the visually impaired. When I alerted the software designers and the company's president, they were unaware of the problem. At the time, we had several older employees, and this oversight caused some people to leave their positions prematurely, a blow to the university's human-resources pool.

People often assume that virtual technology, that world-at-your-fingertips magic that has been so entrancing and useful to almost everyone in the developed world for the past 15 years, erases barriers for the blind. After all, we hear all the time about how anyone with Internet access can find out practically anything. But it just isn't true: I have been totally blind for almost 10 years, and without my screen-reading software the world my computer offers is nothing but a smooth pane of glass. The intricacies of digital forms and Web-page interfaces may not seem formidable at first glance (although heaven knows enough of my sighted friends complain about Web sites). But as *The Chronicle* has reported ("[Colleges Lock Out Blind Students Online](#)," December 12, 2010), these barriers are just as real as any physical barrier. My guide dog, Kieran, helps me negotiate physical barriers, but he certainly can't do anything for me online!

Colleges must press software designers to make their online applications accessible. Screen-reading software, which responds to computer keystrokes by reading out loud the text displayed on the monitor, is one solution. If every component of a Web site has a text element, the screen-reading software should work. I use JAWS (Job Access With Speech) software, which works extremely well with Microsoft software. I am able to use Outlook, Word, and Excel by running JAWS simultaneously.

Federal standards on access to electronic and information technology (referred to as Section 508) require keyboard-enabled interfaces. The technical standards for software are clear: "When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually"—in other words, it should be readable by screen-reading software like JAWS. In addition, all graphic elements on Web pages must have a textual description. The federal regulations also are clear about accessibility of online forms. You would think this one would be a no-brainer, but look at all the trouble caused by online-course software that would not allow students using assistive technology to submit their assignments online the way other students could, as described in the December article in *The Chronicle*.

Our computer instructors at Miami Lighthouse for the Blind and Visually Impaired Inc., of which I am president, have heard complaints about online accessibility from blind and visually impaired students attending colleges in Florida, but such complaints are not unique to our state.

I have also heard success stories, especially in cases where students used distance-learning course software developed by Angel Learning Inc. With the acquisition of the company by Blackboard Inc., a more flexible environment for teaching and learning should develop, which may begin to resolve accessibility problems with screen-reading software.

The most frequent issue involves Web sites that are not accessible or are very difficult to use. The screen-reading software is unable to read graphics that do not include a text component. Other complaints we hear involve professors who send e-mails with attachments that are scanned documents, rather than text that can be rendered by screen-reading software. A scanned document is just like a picture as far as screen-reading software is concerned, and therefore reads as "blank." Another issue is that some Web sites have automatic, continuous instant-messaging updates or continuous chats, which need to have a link to disable them, because JAWS frequently garbles the constantly changing text.

Miami Lighthouse has formed partnerships with software companies as a test site for other kinds of accessible technology, and we would welcome the opportunity to work with developers on accessible courseware and other learning technology—but no one has asked! It isn't enough anymore for a university to have an office of disability services that provides course assistants and a place for students to complain. We are living in a world that has fully embraced digital technology and media, and the blind and other disabled people have the right to participate in it fully.

It is not an impossible or even a difficult task to make sure all graphic elements are keyboard-enabled. Software designers for colleges and other institutions will make accessibility automatic when they realize their market demands it. It would also help for faculty members to keep accessibility in mind and think twice before, say, attaching scanned course material to an e-mail or requiring participation in a live chat, which is a big challenge for JAWS software.

Many universities are expanding their distance-learning curricula, which can be very lucrative. But if that expansion includes the large-scale use of Web-based materials that shut out blind students, universities will eventually have to account for that failure.

Accessibility affects everyone in the long run. It is perplexing that colleges and universities spend significant amounts of money on diversity initiatives aimed at promoting ethnic and socioeconomic

diversity but fail to consider curriculum access for the visually impaired. It is especially perplexing when you consider that the software to solve accessibility problems already exists, and federal regulations are in place that require access to online information.

We know that better online access for the blind is possible because we have seen it happening at Miami Lighthouse. Our vision-rehabilitation program has an extensive assistive-technology component. It is vital for our clients to know they can regain the ability to use computers, phones, and other electronic devices for work, education, socializing—everything the sighted world uses technology for. Our vocational-rehabilitation clients make extensive use of accessibility software for business and music applications, which has helped many of them find or keep rewarding, mainstream employment. Colleges must provide better accessibility for the blind and visually impaired, especially as the colleges vigorously embrace diversity.

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