E-Texts in the Classroom

E-text readers designed for use in higher education will reduce textbook pricing and address environmental concerns

By **Charles Hannon**

A May 2007 Congressional advisory committee found that average full-time undergraduates spent between $700 and $1,000 on textbooks in 2003–2004 and that from 1987–2004, textbook prices at four-year public colleges rose 109 percent compared to a rise in the Consumer Price Index of 65 percent.[1] We all complain, not least the students, but we never do anything about it.

We *can* do something—inevitably we will—but the coming change requires action now in terms of planning and collaboration. We need to revise our entire approach to the concept of course readings. Specifically, we need to become much better at what Nicholas Negroponte called "being digital."

Higher education is transitioning from atoms (paper-based books) to bits (screens). In future, it simply will not make sense to harvest trees, make paper, print and bind textbooks, and ship the books to a college campus for use in at most a few classes over two or three semesters. It will make more sense to carry a modestly priced e-text reader with easy browsing and annotation features, capable of displaying any textbook a teacher assigns. This might sound futuristic, but it's not a lot to ask given technologies available today. Unfortunately, an examination of recent trends in publishing and in hardware and software development shows them moving in opposite directions.

Publishers have worked for the past decade to create highly interactive digital companions for textbooks. Originally on a CD-ROM packaged with each book, this ancillary material now more commonly appears on multimedia websites where students can view animations and videos, take practice tests, review tutorials, link to related sites on the Internet, and communicate with tutors and subject experts. Publishers also promote "e-books" that combine all that extra material and the textbook itself in a neat online package for a fraction of the price of the traditional textbook. David Myers' *Psychology*, for example, one of the textbooks commonly assigned for introductory psychology courses, illustrates the trend: students can use all the online ancillary material for free with the purchase of the textbook, or they can forgo purchasing the bound textbook and pay a reduced price for the e-book.

But who wants to read a textbook on a computer? Even on a laptop, the physical strain of scrolling through the material and the eyestrain from the backlit monitor make long-term, concentrated reading of substantial digital material a challenge. Tablet computers have improved the form factor of mobile reading devices but not the issues of eyestrain or the less-than-optimal human-computer interaction.

Parallel with efforts by publishers to digitize and supplement their authors' content have been efforts of Project Gutenberg and others to create simple e-texts for display on smaller, more mobile devices such as cell phones and PDAs. The long-sought "convergence" device that combines cell phone, web browser, and personal organizer is a reality in Palm, BlackBerry, iPhone, and other devices, but their small screens, and the difficulty of their interaction methods, make them unacceptable for reading and annotating the long texts we teach in the classroom.

The closest the consumer hardware industry has come to realizing the dream of reading long texts in digital format is the Sony Reader and the even newer Amazon Kindle, book-sized devices that use electronic-ink technology that is easy on the eyes, even for extended periods of time. Whereas textbook publishers have spent the past decade creating rich multimedia mate-

rial to accompany their texts, however, these e-text readers are designed for displaying black-and-white text and images one page at a time. They do not have sophisticated web browsers and can't display the rich material developed by textbook publishers. Only the Kindle has a built-in means of connecting to the Internet.

On the most basic level, faculty and students are likely to find these devices' physical and software controls difficult to use for common classroom tasks. With the Sony Reader, users cannot take notes, annotate text, or quickly turn to a particular page as with a conventional book in a typical classroom discussion. The device is designed primarily for casual reading of text-only books on the bestseller lists, as a cursory look at the Sony Connect book download site demonstrates. The Kindle's lack of PDF support and its cumbersome method of converting user-created documents to Kindle format present additional challenges to faculty and student adoption. These are not devices for the college classroom. But we need one.

We face a typical market economy conundrum: the existing hardware devices do not satisfy our needs with regard to digital textbooks, so we don't buy them, and the lack of sales makes it seem there is no market for the new devices. Yet there is momentum in this area, as demonstrated by the Kindle and by ongoing research into flexible, ultra-thin e-ink screens, all of which shows that manufacturers remain interested in developing an adequate product for serious readers.

We have been here before. Academe has partnered with industry in the past to integrate new kinds of computer hardware into our curricula. We need forward-thinking companies to commit to developing a book-sized device that is affordable, easy to handle, allows one to turn quickly to specific pages, and makes annotation as natural as scribbling in the margins. These usability issues can be addressed successfully with enough attention to hardware and software design. For our part, forward-thinking colleges must commit to adopting such a device for in-class use. Faculty should be encouraged to experiment with new devices in their courses, and administrators need to design campus programs that would allow students to take a variety of "e-text courses" in any given semester. We have done this before with laptops, PDAs, iPods, and clickers, and we can do it now with new e-text readers.

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Early adoption promises to be smoother than for previous "technology enhanced" academic programs if we can enlist the humanities faculty who work with traditional texts in the classroom. All the public-domain pieces are in place for digital versions of English Composition, Early American and British Literature, or upper-level languages courses. Unlike those who struggled to integrate new websites and multimedia CD-ROMs into their courses, faculty teaching e-text versions of their literature-based classes will need only minor alterations of their syllabi. They will require some support in locating, formatting, and making available for download the texts they assign, but this is a fraction of the work that colleges already do to support laptops, iPods, and other innovative technologies. The large corporations that have already invested heavily in text-scanning projects should be eager to subsidize initiatives that advance their projects in practical ways.

Currently available e-text readers do not display the interactive multimedia content developed by textbook publishers, nor should they. E-text readers occupy a niche new to computers but old in the classroom: that of the ordinary textbook. They provide an alternative to print-on-demand methods and have the additional advantage of being able to store a semester's readings (and more) in one place. When they can do this in a highly usable way for $150 or less, they will become an everyday campus appliance.

Change of this magnitude is never easy. Hardware providers will have to relinquish—for a time—profiting on content formatted for a new machine. Technology companies have reaped great rewards in the past from giving their technology to schools and colleges, winning in return a generation of potential customers familiar with their products and brands. And we cannot tolerate publishers' selling textbooks in e-text format but not reducing textbook prices accordingly. For their part, academics need to abandon anxieties about the "death of the book." The codex form has been a jewel in the history of mankind's efforts to pass on knowledge, but if we are still assigning paper-based textbooks a hundred years from now, we will have failed the planet.

One day all the multimedia course content already developed might be easy to read and use on a book-sized, lightweight, Internet-ready e-ink device. We should not wait for that day to use electronic texts in the classroom, however. We need to begin experimenting using basic literature in introductory courses, in plain-text format on our current (albeit rudimentary) tools, if we hope to take full advantage of that future when it arrives. *e*

Endnote

1. Advisory Committee on Student Financial Assistance, "Turn the Page: Making College Textbooks More Affordable," May 2007, Washington, D.C., http://www.ed.gov/about/bdscomm/list/acsfa/turnthepage.pdf.

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