

Are digital textbooks the money-saving wave of the future?

August 19 2009, By Derby Cox

An old adage states, "As California goes, so goes the nation." If that's true, then advocates of textbook reform -- and college students bearing the brunt of spiraling textbook prices -- have to be excited by California Gov. Arnold Schwarzenegger's push to use digital textbooks in high schools.

So-called e-textbooks present a slew of advantages over their print brethren: they're cheaper, easily searchable, and in some cases, can be modified to better fit the teacher's vision for the course.

But while digital textbooks may have entered the public consciousness only recently, the idea has been around far longer. A growing number of publishers -- both individuals and major [textbook](#) companies -- are offering their content digitally, in some cases for little or no charge.

"One big positive of free books is that it gets you out of the horribly exploitative textbook market," wrote Fullerton College professor Ben Crowell in an e-mail. "It's just a scandal that they're charging students as much as \$250 for an organic chemistry book, and bringing out a new edition every three years in order to kill off the used book market."

The Yale-educated physics professor began his digital textbook 12 years ago, when his lecture notes "gradually morphed" into a book. His interest in the open-source operating system Linux convinced him that free was the way to go, and his textbook is available for anyone to use at www.lightandmatter.com. More than 40 colleges and high schools have

adopted the book, according to the Web site.

Crowell isn't alone. He runs a site (www.theassayer.org), which catalogues free books on everything from philosophy to military science. The Massachusetts Institute of Technology makes much of its course materials, including textbooks and videos of lectures, available on its open courseware site (ocw.mit.edu). Professors at other prestigious institutions, such as the California Institute of Technology, have also written and released textbooks free of charge.

But the free digital textbook movement isn't restricted to a small band of altruistic authors -- some people want to make money.

Enter Flat World Knowledge, a two-year-old startup that lets users read its textbooks for free at www.flatworldknowledge.com.

Eric Frank and Jeff Shelstad, who have a combined 31 years of experience in the traditional publishing industry, started the company after becoming disillusioned with the business.

The trouble began in the 1980s, Frank said, when 60-or-so textbook publishers competed to create the largest sales force. After the companies consolidated into a few mega-publishers in the 1990s, the industry entered what Frank called a "nuclear arms race of supplements," when companies competed to distinguish their products with extra materials like CD-ROMs.

The textbook companies passed on the costs of all that competition to consumers, Frank said. Between 1986 and 2004, textbook prices rose at double the rate of inflation, according to a study conducted by the U.S. Government Accountability Office.

Around the turn of the millennium, students were fed up, and with the

growth of the Internet, able to find alternatives, Frank said. A student in Florida could buy a used book from someone in Alaska. Desperate to kill the used book market, publishers rushed out new edition after new edition, succeeding in the short term but driving textbook prices skyward, he said.

Amid the turmoil, Frank and Shelstad, both executives for Prentice Hall Business Publishing, found themselves on a train together.

"We looked at each other and said, 'Is anybody happy in this industry? ... Who are the constituents? Students, they hate us,'" Frank recalled.

Their solution, to release digital textbooks online for free -- and sell the extras, such as print copies and study guides -- found a polarized response. Some looked at Frank and Shelstad "like we had two heads," Frank said. Others asked, "Can I invest?"

So far, the results have been promising, Frank said. About 70 percent of the students who have used the site for class buy products, spending a little more than \$30 each, he said. About 40 percent paid around \$40 for a printed black-and-white textbook with study aides, he said.

"There's always a lot of student complaints about the cost of textbooks, especially in intro courses," explained Robert Meeds, the chair of the communications department at Texas Tech University, which started using a Flat World Knowledge textbook in an introductory course this spring. "That's always something you're aware of. That doesn't necessarily guide the decision."

Clemson University psychology professor Fred Switzer said he appreciated the flexibility of the company's [e-books](#), which allow professors to rearrange or remove content as they see fit.

CourseSmart (www.coursesmart.com) is a digital publisher with a more traditional business model. Started as a collaboration among five major textbook publishers, the company says it offers e-textbooks for about half the cost of the print version. After purchase, the digital textbooks are available for 180 days.

"While the industry is moving in (the digital) direction, the transition to digital textbooks will not happen overnight, and textbooks will continue to be offered in print format," wrote Frank Lyman, executive vice president of CourseSmart, in an e-mail.

CourseSmart's main advantage is volume. The company offers more than 7,000 titles, compared to the 11 currently available on Flat World Knowledge's Web site. Lyman said sales were up 600 percent this year compared to last.

"I suspect that (the free textbook model) will increase and will be a good solution for a small segment of the market," Lyman wrote. "The primary problem with this model, however, is that it is hampered by the limited availability of content."

The digital textbook movement may get a boost from new, more portable technology, such as the tiny laptops called netbooks and Amazon's lightweight e-book reader known as the Kindle, which is as thin as a magazine but can hold thousands of volumes.

This spring, Amazon unveiled the Kindle DX, a new version of the reader with a larger display designed specifically for digital newspapers and textbooks. Six schools will test the new device this fall for its possible use in the classroom.

"There's a broad interest in whether (digital textbook) technology is about to get launched," said Martin Ringle, chief technology officer at

Reed College, one of the schools that will test the Kindle DX. "A lot of the pieces have been around for several years, but there's been pretty negative reaction from both teachers and students about content delivery and the tools for reading and utilizing the content. We're not sure that this is the breakthrough product, but Amazon has been pretty successful in the consumer market in terms of its content delivery."

"We're reaching that point where the cost of conventional textbooks has become so astronomical that anybody that provides any relief ... is going to be favorably received by the students," he added.

Whether the nearly \$500 Kindle DX will provide long-term savings remains to be seen. A Kindle edition of an applied chemistry textbook costs \$119, compared to \$134 for the hardcover print edition. A Kindle toxicology textbook costs \$92, compared to \$115 for the print edition.

Other obstacles to widespread adoption of e-textbooks remain. A study conducted by a group of student public interest research groups found that 75 percent of students preferred printed textbooks, which could hinder the use of e-textbooks that limit printing, such as those offered by CourseSmart. And the availability of Internet and computer access could complicate the introduction of e-textbooks in high schools.

In other cases, a lack of information could prevent students and teachers from using the digital textbooks that are already out there.

"Most people have absolutely no idea that there are hundreds and hundreds of high-quality, free textbooks on the Web," Crowell wrote.

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