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Digital Publishing

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Will Digital Texts Succeed?

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By Stephen R. Acker

Will Digital Texts Succeed? The great textbook debate roars on, but if we focus on learning outcomes first, we'll see a high value-to-price ratio for learning materials—digital or print.

Jim Sayer, Wright State University's (OH) faculty senate president, is a master rhetorician and teacher of that fine art, as well. Leading a discussion among the faculty senators on the relentless rise in the cost of textbooks—compounding at more than 6 percent per annum for the last two decades (according to the US Government Accountability Office)—he puts the problem of high textbook prices plainly: "I've taught Aristotle for 38 years. Every three years I do so from a different textbook, and it always is more expensive for my students. Why? What's going on here? Do we have a strategy for getting these costs under control?"

There have been numerous attempts to answer Sayer's questions, many of which call on digital technologies to save the day. With faculty changing instructional practices to take advantage of customizable, focused content (and digital delivery of that content), many people assume that digital distribution is the answer to bringing the costs of course content delivery in line. But the picture just isn't that simple.

Mark Nelson at NACAS buys into the vision of a digital future, but puts the tipping point another five years down the road. The twin forces for change he sees:

retirement of the baby-boom faculty and full emergence of the digital native population.

Why Go Digital?

This past June, the US Department of Education's Advisory Committee on Student Financial Assistance released its year-long study of the "broken" textbook market, laying out the problem of the rising cost of textbooks, and suggesting various recommendations for steps the federal government, Congress, and the Secretary of Education can take to make textbooks more affordable. After detailing a set of short-term strategies similar to those outlined by the ACSFA, Patrick McElroy, CEO and founder of Learning Content Exchange, and colleagues (who prepared one of the foundational documents for that study) put forth an additional analysis of disaggregating textbook content and course materials and delivering them digitally rather than by truck.

Then, too, in testimony before the ACSFA, John Sargent, former CEO of Macmillan, had this to say about custom and digital textbooks: "Custom texts are a prime example of market demand and advances in technology. A custom text enables faculty to choose exactly those materials- chapters from one or more textbooks, their own papers and lecture notes, white papers, independent data and research, for example-they wish to use in their classes. These custom texts combine publishers' content, but also content from a variety of third-party sources."

This "print-on-demand" model suggests a strategy to move from generic texts to custom digital content, and one in which college bookstores can play an important role. Yet, on the other side of the bridge that crosses the digital divide, some of the eBooks from Bedford, Freeman & Worth- well-advanced in their pedagogy and offered at half the price of the print text-hint to a "born digital" future.

Mark Nelson, digital content strategist for the National Association of College Stores, buys into the vision of a digital future, but puts the tipping point another five years down the road. The twin forces for change he sees are retirement of the baby-boom faculty (many of whom will never quite embrace non-print), and full emergence of the digital native population- described by Nelson and supported by Project Tomorrow data as students currently squirming in their seats in a sixth-grade classroom. Content born digital will then meet learners born digital, but the question is: Do we have to live through a five-year gestation? Perhaps; at least by

then the eBook reader may finally have achieved its promise for portability, contrast, and navigational richness.

Yet it is easy enough to find examples of failed eBook experiments, and trace the reasons for their failure. (Amazon's Kindle is the latest experiment, and the jury is still out on that one.) Typically, user dissatisfaction revolves around the following:

- * Technology (single-purpose display device, eye-fatiguing screens, material slow to load)
- * Organization (linear "page turners," poorly indexed content)
- * Inconvenience ("I hate being tethered to an online text; I can't read my book under the buckeye tree")
- * Lack of flexibility ("I can't take notes; I can't seamlessly jump to new content; the search and navigation are weak")
- * Faculty who don't really make use of the required eText (or print texts, for that matter)

The majority of today's students still prefer printed text to eBook readers, and Stacy Skelly, assistant director/higher education for the Association of American Publishers, puts this preference for print near the top of her list of impediments to digital content delivery. She's right: Monitor glare, dropped network connections, and confounding digital rights management strategies detract from learning, especially if the digital learning environment is merely the print learning environment ported to the screen. However, if the pedagogy advanced by faculty creates a different learning environment, different learning outcomes may appear.

Cal State's Digital Marketplace will be an open and browseable market allowing faculty members to identify and select print or digital content appropriate for populating a reading/resource list, based on course learning objectives.

The Impact of the Instructional Designer

If the instructional designer's worldview prevailed, the very first thing on every course syllabus would be a list of learning outcomes associated with that course.

Working backward from those objectives, the pedagogy and the learning materials that support that pedagogy would be carefully selected to help the students meet those objectives. Learning materials, whether print or digital, would be focused and organized around the stated learning objectives. Libraries and the web would provide conduits for subsidized or free content for students pursuing a broader array of individual learning goals.

Alverno College's (WI) Diagnostic Digital Portfolio website is a great place to learn how to describe attainable student learning outcomes. And yes, explicitly stating what you hope students will learn is challenging, but it's an exercise that offers the most amazing rewards.

What, then, is a learning objective? Simply put, it's a behavioral learning outcome consistent with course goals. Revolutionary, don't you think, to offer students-up front-a syllabus that specifies demonstrable, learned behaviors?.

Learning Objectives in Action

Kelly Driscoll, educator and co-founder of Digication, is both a digital pioneer and a teacher who believes in identifying learning outcomes upfront. Digication has been in the business of helping students, and the institutions in which they learn, to build ePortfolios around student learning outcomes. In fact, it wasn't much of a stretch for Driscoll and her content partners to think about an expanded system that grouped digital content underneath learning objectives-Digication is only one example of a model for distributing digital content in a focused, cost-effective manner.

TEXTBOOK MYTHS ...Or why the traditional new/used hardcopy textbook strategy isn't a good value proposition.

Though the traditional textbook offers all needed information in one place, the mosaic of unmarked chapters among those with yellow highlights documents the need for custom texts directly matched to different course syllabi.

Myth: The high cost of textbooks is the sole responsibility of publishers. Actually, the root source of high textbook costs is the "annuity problem"-the fact that first offerings purchased by the first group of students must sustain ever-weakening revenue streams until the book's "end of life."

Myth: Used books are the ticket to textbook savings. Since the publisher's revenue from new book sales must subsidize an even greater number of used book sales, a more efficient used book market will drive the cost of new texts higher.

Myth: Textbooks should be comprehensive. Though the traditional textbook offers all needed information in one place, the mosaic of unmarked chapters among those with yellow highlights documents the need for custom texts directly matched to different course syllabi.

Myth: International textbooks are the answer. Some international texts use lowercost (and lower-quality) paper and less expensive or no-color processing, but floating heavy texts back and forth across the ocean adds expense disproportionate to the resulting value.

Myth: Text rental programs are the way to go. Recent explorations highlight some clear drawbacks that accompany the positive effects of rental programs on student savings; namely startup costs and the length of time books must be reused to ensure program sustainability.

Myth: Libraries can provide copies on short-term loan for all students unwilling or unable to purchase a textbook. Many libraries would be hard-pressed to meet this requirement without significant increases in funding.

Myth: Bookstores are focused on serving student interests. Many universities supplement their operating budgets by defining the college bookstore as a profit center as well as a student service. Consequently, the university tries to balance increasing revenue at the bookstore with reduced textbook costs for the student.

Gerry Hanley, senior director of academic technology services for California State University, has another model in mind as he and his team lay out plans for a Digital Marketplace (DMP). He discusses DMP using the analogy of a farmer's market, an open and browseable market with wares selectable by the consumer. This large-scale and well-designed approach to sharing digital content will allow faculty members to identify and select content appropriate for populating a reading/resource list, based on course learning objectives. These materials can be made

available as print or digital content, and DMP will be designed for maximum flexibility to accommodate commercial, non-commercial, and faculty-member-created content. Somewhere down the road, students in the Cal State system will be able to create ePortfolios in which to document their learned competencies. These learning outcomes will share metadata with the content used to achieve them and thereby help future faculty identify vetted learning materials.

Starting with the consumer, the eText Ohio project is focusing on student learning outcomes in the world of digital delivery. With the support of the OhioLINK library consortium, eText Ohio has opted to focus on faculty members who teach large introductory courses in colleges and universities across the state. Working with four leading commercial publishers, the eText Ohio project will help faculty to a) expand their repertoire of teaching strategies advantaged by digital texts, b) help them to identify materials aligned with those strategies, and c) evaluate student learning outcomes in the digitally-supported courses. The goals of eText Ohio are to deliver student materials at less than 50 percent of the cost of a new text (in all cases at a price point below what a student can achieve through used book use or exchange), and improve learning outcomes in the process. The eText Ohio project hopes to meet the Cal State Digital Marketplace somewhere in the middle. DMP is building up from the content selection process, and eText Ohio works down, selecting content based on identified learning objectives.

The Last Mile

As always, we have to calibrate our "change-the-world slider" somewhere between what the technologies are capable of delivering and what our social systems are able to absorb. David Wiley, lead architect of OpenCourseWare management system eduCommons and a faculty member at Utah State University, describes his ideal textbook as seeded by 30 percent of faculty-selected content that "magnetizes" 70 percent more content contributed from students taking the class engaged in active learning. Blaise Aguera y Arcas, an architect for Microsoft Live Labs (labs.live.com), offers a compelling example of an interface exquisitely designed for socially constructed knowledge spaces, and one able to display an entire legible copy of Dickens' Bleak House on a single screen, preserving social context and page-turning with an imaging algorithm that can zoom to a single word from within an entire text on screen. (David Wiley, meet SeaDragon and Photosynth-both Live Labs innovations-and may they someday serve your courses well!)

Case Study: Western Governors University

One online university aims to resolve the print vs. digital debate by stocking its online bookstore with digital textbooks right alongside their hard-copy versions.

FOR STUDENTS AT WESTERN GOVERNORS UNIVERSITY, a nonprofit institution offering online bachelors and masters degree programs, online textbook purchasing is pretty much essential-and not just because WGU has no physical campus (or bookstore, for that matter). WGU students are also busy; most are working full- or part-time jobs, living in major metropolitan areas, suburbs, and rural areas, and some are active-duty military pursuing their studies at overseas installations. Online ordering has always been key to getting hard-copy textbooks into the hands of such students.

Then this past year, WGU decided to offer digital textbooks alongside print books, in hopes that ultimately, a full-scale adoption of eBooks (meaning 100 percent of books would have digital versions available) would save students money, and more importantly, afford them immediate access to learning materials (without waiting for hard copies to be shipped).

The idea sounded simple: Ask publishers to include an eBook alternative with every print version. But WGU administrators researched formats and delivery methods, and discovered some unexpected challenges in negotiating with textbook publishers. With eBooks still an emerging market, many publishers didn't have efficient processes in place for converting titles into digital formats. Individuals charged with handling questions of digital rights, conversion, availability, pricing, technology, etc., might work in several different divisions, for instance, making it difficult to coordinate workflow within the publishing company, much less between WGU and the publishers.

WGU turned to Ed Map, a provider of tools, support, and services for managing textbook distribution, for help with the transition to eBooks. Ed Map assumed project management responsibility with the publishing vendors, creating templates to expedite vendor partnerships and finalize eBook pricing. Generally, conversion to digital format has not been cost-prohibitive, even for smaller publishers; if a volume cannot be digitized, WGU will elect to choose a different textbook, or offer only the print version. Ed Map also has enabled WGU to analyze alignment of content with competencies, identify areas for textbook consolidation (where multiple textbooks or even versions have been selected by faculty), and pinpoint other areas for process improvement.

WGU's new online bookstore (an institutionally branded site hosted by Ed Map, including fulfillment and customer support) launched March 1. On launch, about 25 percent of the booklist had both print and digital versions available. This percentage is expected to increase as publishers add new eBooks and update current editions to digital format. While it's too early to gauge student response to the store, one thing is clear: The digital textbooks will indeed save students money, with most eBooks offered at an average discount of 40 to 50 percent over their equivalent print editions.

Of course, there are many unanticipated consequences of moving to a digital textbook realm. Some have been widely bandied about, and thus anticipated: concerns about the digital divide, technical standards, digital rights management, and resistance of user communities weaned on print. For yet a wider framework in which to consider issues tied to a digital marketplace, read the analysis by Cliff Lynch, director of the Coalition for Networked Information. Ed Walton's April 2007 empirical study also raises important issues. Walton, who is acting dean of the Library School at Southwest Baptist University (MO), finds that faculty working with students using digital texts face a new kind of literacy challenge because students scan books as strings of found phrases, jumping over the linear progression of the author's idea development. He argues that we need a new literacy to fully exploit the digital realm.

The New Value: Learning Outcomes

A wide continuum of options is available to faculty and institutions willing and able to change their instructional practices that favor a marketplace solution. By first identifying what the student should learn, an instructor can more appropriately value the content to help students reach those outcomes. The source of these materials can be the traditional for-profit publishers, the start-up companies that privilege the interface through which to construct the learning cycle, libraries, outputs from the minds and processes of the open courseware community-or a combination of the above.

As we move forward in redeveloping the learning materials package to take advantage of the digital options available to us, we should celebrate the diversity of solutions that have emerged and, ideally, wrap them in common and open standards, as CEO Rob Abel and the IMS Global Learning Consortium would have us do. We may never solve the paradox of context and content (content is most useful within context, yet contextfree learning objects are most reusable), but thinking of learning objectives as magnets that collect content filings will get us partway down

the path of a new, more affordable, and more equitable pricing model for instructional materials, once known by the quaint term, "textbooks."

::WEBEXTRAS ::

The University of the South (TN) Next-Gen Textbooks: With textbooks and other forms of scholarship moving to electronic formats, schools are turning to a surprising array of innovative tools. www.campustechnology.com/articles/40848.
Case Study: NYU College of Dentistry Takes Textbooks Online. www.campustechnology.com/articles/48557.

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