

GAME CHANGERS

EDUCATION and INFORMATION TECHNOLOGIES

Edited by **DIANA G. OBLINGER**

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Game Changers: Education and Information Technologies

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FROM THE EDITOR

I would like to thank the many people who made this book possible, particularly Gregory Dobbin for managing the project and Karen Mateer for her research.

—Diana G. Oblinger

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Shaping the Path to Digital: The Indiana University eTexts Initiative

Brad Wheeler and Nik Osborne

Introduction

THE RISING COST OF COLLEGE TEXTBOOKS has long been a burden for students, often motivating them to seek creative ways to get around this expense. Though digital textbooks—with their ability to provide cheaper, easier, and better access to content—have been around for years, the use of digital textbooks for academic purposes is still not widespread.

We are now in an era of great progress for digital textbooks and digital learning experiences, collectively referred to here as e-texts. Because costs are the most salient issue, new approaches are needed that work on the root causes of textbook prices for students. Early 2012 began with three promising developments:

- First, federal and state governments—along with private philanthropy—are investing hundreds of millions of dollars in freely available open educational resources (OER). These resources are being targeted at required, high-enrollment courses where they can have broad impact for all types of institutions.
- Second, Apple and other firms are bringing forth new technologies and business models in a bid to transform the textbook industry.
- Third, some institutions are using their experiences from volume software buying to change the pricing terms for e-texts in a sustainable win-win way for students, authors, and publishers.

This case study focuses on the third approach as it went from pilot study to full implementation at Indiana University (IU) and is now in a trial phase at five peer institutions.

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Attacking the Root Causes of Textbook Prices

As noted, textbook prices have been an escalating problem, causing ongoing concern among students, their parents, and governmental agencies over the role of textbooks in the growing cost of college. At IU, it is estimated that textbooks may account for almost 10 percent of a student's total cost of attendance per year, while at some community colleges, the percentage is far higher—sometimes more than the cost of tuition.

Over the years, students and content creators (authors and publishers) have been engaged in a self-reinforcing, negative economic loop for textbooks. Creators only get paid for their investment and work when a new textbook is sold, and students save money by purchasing a used textbook at a lower cost. Creators price higher as fewer students buy new, and students either seek used books or older editions, go without an assigned text, or turn to digital piracy in response to higher prices.

Early signs in the shift to digital were also troubling. Shrewd students who succeeded in buying a used textbook and selling it back had a net cost of about 35 percent of the book's list price, but less than half of students generally succeeded in selling back. In 2010, e-text pricing was around 70–75 percent of a new paper book or roughly double the cost of the buy-sellback net cost for students. E-texts (naturally) had no option for sellback, and they were riddled with restrictions concerning printing, length of access, and so forth. In addition, publishers were employing a bridging strategy to kill the used-book market by combining single-use website codes with new textbooks for essential online materials. If a student bought a used book, he or she would then still need to pay retail price for a website code.

Thus, while the shift to digital provided new opportunities for students to save money and publishers to rethink their business models, the trend was heading in precisely the wrong direction for content pricing. Also, publishers, bookstores, and others were coming forward with clever new software and hardware platforms for students to read and annotate e-texts. In the absence of a university plan, it is not unreasonable to foresee that a freshman could, with five courses, have seven e-texts requiring four or five different types of software just to study! Obviously, that makes no sense.

The Early eText Pilot Program at Indiana University

These root causes of textbook prices and trends for digital texts were already becoming clear in 2009. As part of its second Information Technology

Strategic Plan, Indiana University, a research institution with 110,000 students on eight campuses, began engaging in broad conversations with publishers to assess digital content and handheld devices trends. In order to address concerns about the rising cost of textbooks, IU soon after implemented a two-year pilot project to study the use of e-texts and other digital-learning materials. IU was betting that the same successful approaches it had used in negotiating volume licensing deals with Microsoft and Adobe could be used for e-texts.

The pilot project was guided by several key objectives:

- To reduce the costs of course-related materials for students
- To provide faculty with the high-quality materials they desire
- To enable adaptive learning platforms and new tools for teaching and learning—for instance, allowing annotations in an e-text that can be shared with other users
- To develop a sustainable model that works for all stakeholders involved: faculty, students, authors, and publishers

In 2009, an initial assessment was performed at IU on twenty high-enrollment courses—including science, business, and English—to gather quantitative information about the cost of textbooks for students. The assessment looked at a student's total cost of buying a textbook (including purchase and resell) over the entire life cycle of a textbook (three to four years). Around one-third of students had a net cost of 35–40 percent of retail, while the remaining two-thirds (who weren't able to resell) had a net cost around 60–65 percent of retail. With this information, IU set out to provide faculty with an option that allowed all students to obtain e-texts at a price that was generally as favorable to students who succeeded in buying and selling back a used textbook.

Through discussions with various publishers, it became clear that content creators would drop their prices considerably *if* they could get paid for each use of their content and avoid concerns about illegal digital copies. This would require moving from a probabilistic retail-price sales model (publisher/author creates textbook, faculty assign it, some percentage of students choose to buy it) to a deterministic sales model (publisher/author creates textbook, faculty assign it, each student in a course section pays for it).

This “move the tollbooth” model could produce a sustainable win for students through vastly better pricing and terms while also fairly paying content creators. IU had long charged lab fees for consumable materials, e.g., lab fee for a chemistry class, so the university could impose a similar e-text fee for students to pay their part of licensing an e-text for a particular course section. IU subsidized the first three semesters of pilots, and students received e-texts at

no cost as the program was assessed. In 2011, IU moved to charging students an e-text fee for the last two semesters of the pilot.

The pilot study culminated in the fall of 2011 when IU entered into agreements with Courseload, an e-reader software company, and five leading academic publishers to provide e-texts for the university: McGraw-Hill Higher Education; John Wiley & Sons; Bedford, Freeman & Worth Publishing Group; W. W. Norton; and Flat World Knowledge (see Table 1). The official rollout of the program began with the spring 2012 semester.

Insights in Rolling Out the IU eText Fee Model

Faculty autonomy plays a key role in textbook selection at most institutions, and that autonomy is the pillar of any successful e-text approach. IU's arrangement allows faculty to assess the price of an IU eText—to determine whether it is favorable to students—before choosing to opt in. Before implementation, the IU eText fee was socialized through many meetings with students, student leadership groups/government, faculty councils, deans, and many others across all eight campuses. Faculty were also shown the value of having a common platform for eTexts, which utilized a single sign-on and was integrated with Oncourse, IU's learning management system (Sakai), allowing students to share highlights and annotations among study partners in class.

IU also made clear from the beginning that the model does not privilege either digital or print—it is digital with print options. This was essential in avoiding the print vs. digital debate.

Beyond the cost savings, the eText pilot project resulted in the development of software tools that substantially improve content delivery while enhancing teaching and learning. The Courseload e-reader can be used to access eTexts and digital supplements, both online and offline, from all publishers. The software also gives faculty the ability to create their own digital course-packs by uploading self-produced content, open educational resources, or content from other various sources.

Students and faculty access their eTexts and the e-reader software through Oncourse. The software gives both students and faculty the option to search, annotate, highlight, and share an eText—features that allow learning with an eText to become a more interactive, collaborative experience. For instance, an instructor can cross-link parts of a text that relate to each other, insert a comment alongside a certain passage to provide emphasis ("be prepared to discuss this in class"), or even embed a video that amplifies a specific portion of the text students are reading. This allows students to gain new insights into

Table 1. **Notable Features in the IU Agreements**

Feature	Benefits
Extended Access to eTexts	Students will be able to access their eTexts for as long as they attend the university (as opposed to having the content disappear after a set time—e.g., after three to six months).
Elimination of Print Restrictions	Students are able to print as many pages as they want from an eText and may also request a print-on-demand version of the textbook for a small fee.
Significant Cost Savings	The IU agreements focus on providing eTexts to every student at a cost similar to what students would pay if buying and selling back a used textbook—equal to about half the price of an eText available in the marketplace.
Multiple Devices	The agreements with Courseload and the publishers allow users to access the eTexts via multiple devices (laptop, tablets, smart-phones, etc.) both online and offline.
Uniform Access	Through its agreement with software provider Courseload, the university has eliminated the need for students and faculty to download and learn multiple software platforms to access eTexts; instead, one platform is used to access, read, and annotate all eTexts, and one username and password are used to access the platforms (the same username and password students and faculty use to access Oncourse, IU's learning management system).

the subject and feel that the instructor is actively engaged with them in the material. Instructors also have access to analytics that show how their students are interacting with the material, which may help them determine whether students are comprehending or struggling with the material so they can intervene as needed.

Although students have the option of printing any part of an eText and can purchase a print-on-demand version for a modest fee, data from the pilot project suggested that most students prefer to consume the content digitally, thereby lowering their carbon footprint. For students with disabilities, Courseload and the university's Adaptive Technology and Accessibility Center are working together to ensure that the e-reader software and interface meet accessibility standards and continue to improve as new technologies are made available.

Students are informed at the time of registration if the course section they are considering is part of the eText program and if there will be a required

eText fee associated with the class. Generally, eTexts are available to students a few weeks before classes commence (eliminating the problem of students not having their required materials), and students are able to access their eTexts as long as they are enrolled at Indiana University (eliminating the problem of students selling back or losing access to materials from previous semesters).

The university's pilot study and ongoing eText project is documented through a website (<http://eTexts.iu.edu>) where presentations, frequently asked questions, and articles relating to eTexts and IU's eTexts initiative in general are also collected.

The Present and Beyond

With the IU eText initiative fully under way, faculty now have the option of choosing the eText fee model for their courses with its negotiated price structure and access privileges. If faculty do not want to use an eText under IU's model, they can still choose to assign a traditional physical text or use eTexts from other publishers or sources not affiliated with the university's agreement. In cases where no electronic version of a text is available, students must use traditional methods (i.e., the bookstore or online provider) to secure their textbooks for a course.

In January 2012, 127 courses, encompassing 5,300 students, signed up for eTexts through IU's initiative. Early numbers suggest that students on average saved \$25 per book or online supplement, and \$100,000 collectively when compared with similar offerings. Encouraged by this initial success, officials at IU continue to educate faculty about the program, promote its use, and listen to concerns. Two task forces are addressing workflow and policy-related issues regarding the use of eTexts (e.g., how the eText fee is handled for students who drop courses or otherwise interrupt their educational careers). As the eTexts initiative continues, IU hopes that it will not only become attractive to other publishers but will also provide a scalable and sustainable model for other colleges and universities as they develop their own eTexts initiatives and chart their paths toward a digital future. (See also Table 2.)

Piloting eTexts at Five Institutions

In November of 2011, five institutions—University of California, Berkeley; Cornell University; University of Minnesota; University of Virginia; and University of Wisconsin—elected to quickly replicate eText trials on their campuses. The usual approach of each campus negotiating a separate contract for eText

Table 2. Key Findings from IU Early eText Pilot Study

Of the twenty-two courses participating in the eText pilot project, data were gathered from system logs for the 1,726 students involved. A subset of twelve courses (with 1,037 students, 738 of whom responded) provided additional information through a survey.

- 1 More than half of the students (about 60 percent) preferred eTexts to print, with the scores ranging from 84 percent to 36 percent, depending on the course. The lowest score occurred in a class where the instructor made no use of the eTexts. The students especially preferred eTexts when the instructors actively used the text and provided annotations for the students. Students were also more likely to prefer eTexts if they had used one in a previous class.
- 2 Instructor annotations, sustainability, and cost were the top three reasons students gave for preferring eTexts. Students also appreciated the fact that eTexts were not as heavy as regular textbooks and liked the options for adding and sharing their own annotations (though some students remarked that reading text on a screen was hard on their eyes).
- 3 About 22 percent of the students reported that they read more of the eTexts than they would have if they were using a printed text; conversely, 55 percent said they read less than they would have from a printed text.
- 4 In general, students reported very few issues in making the transition to eTexts. Ten percent of those surveyed retained their preference for printed textbooks; however, system logs showed that 68 percent of the students printed no pages during the pilot study, and only 19 percent printed more than fifty pages. About five percent ordered full-text versions of the text.
- 5 Faculty participating in the study reported that using eTexts made them think more about the text they were choosing for their class and how they could use it more effectively to improve their teaching.

content with each publisher and a software platform was clearly impractical if it were to provide the option for January 2012 classes. Internet2's NET+ services quickly assembled a pilot opportunity through support from McGraw-Hill and Courseload. The pilot would allow each institution to offer eTexts to a limited number of sections as part of an overall research study.

With unprecedented speed, the five institutions, two companies, and Internet2 quickly found interested faculty, and the pilot studies went live in January 2012. Many other institutions are assessing their plans for pilot studies or options to move to full rollout for 2012–13.

Conclusion

The shift to digital course content is upon us as the rise of remarkable consumer devices, interactive content, new software platforms, and new economics pave the way. Colleges and universities have a remarkable opportunity to help determine the prices for digital material that will be with us for many years. Institutions can work directly with content and software-platform providers to vastly reduce the costs of going digital with sustainable, win-win models. The IU road to eTexts illuminates one path for that endeavor.

Brad Wheeler, *Indiana University's Vice President for Information Technology and Chief Information Officer, provides IT leadership for IU's eight campuses. He has co-founded collaborations including the Sakai Project for teaching and learning software, Kuali for financial and other administrative systems, and the HathiTrust for digital copies of scanned books as part of the Google Book Project. Nik Osborne, Chief of Staff, works closely with the Vice President and his cabinet to monitor, advise, communicate, and implement the operational and strategic agenda. Osborne led the implementation of IU's eTexts Initiative, serving as lead negotiator and contact for the university. He holds a B.S. in business and a J.D. from Indiana University.*

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