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Ad Astra per Aspera: Aspiring to Excellence in Challenging Times

The Customer Is Always Right? Resistance from College Students to E-Books as Textbooks

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Abstract

As the reign of the e-book continues to expand, more emphasis is being placed on e-books within the academic community, particularly with the idea of e-textbooks. Conventional wisdom suggests that in the same way the e-books now hold a major share of the book market, e-textbooks will continue to expand until they are also the dominant mode of textbook publishing. It also would be expected that current students in colleges and universities, who are usually described as digital natives, would embrace this technology wholeheartedly, but indications from currently-available research suggest the situation may not be as clear-cut. Recent studies have focused on the perceived impediments to e-textbook use from the student's point of view. Collectively, they provide some guidance for appropriate modification of the technology, and suggest ways in which libraries and instructors might market e-textbooks more effectively.

E-books: Pro and Con

E-books offer many advantages to the user. The first is space: many e-books can be stored on one reader and the requirement to provide shelf space for a set of individual printed volumes is removed. As an extension of this, portability becomes less of an issue, as users can simply travel with one device and their whole library. E-book readers offer the technology that mirrors what we do with printed text, namely highlighting, and annotating, as well as simplifying the technology for note-taking or quoting. In addition, e-book text is generally searchable, allowing quicker access to desired passages within the text.

From the librarian's point of view, e-books also offer many advantages. Access systems can be set to disable availability once the end of the check-out period is reached. There are no late returns and no overdue fines to be administered. E-books cannot be lost or damaged; neither can they be misshelved. The e-book is available at all times, subject to the licensing agreement, and the book is more available to be used.

There are also major cost savings reported for the use of e-books of the printed version. Bunkell (2009), reporting research carried out by Elsevier, reports that the cost per use of printed books ranges from \$3.24 to \$28.57, while the initial usage cost for an e-book is between \$0.25 and \$4.80. In addition, the maintenance costs for e-books decrease each year, compared to print.

From the publishers' perspective, the advent of the e-textbook has given them back control of the lucrative "first user" textbook market. Many e-textbooks are sold only as first use materials and are not able to be transferred or sold to other users. In exchange, as Hull and Lennie (2010) aver, publishers offer additional materials in the digital version, great interactivity, and fewer scarcely-altered new editions.

Without the "the unfair and relentless competition from used book sellers" (para. 1), publishers can include easy, continuous updating.

This is a convenient bridge to a discussion of some of the disadvantages of e-textbooks. Despite publisher assertions to the contrary, Carlock & Perry (2008) found that faculty were concerned with the lack of updated content in e-textbooks. Moreover, the "continuously updated" e-textbook may be offered by subscription, rather than outright sale. This raises the familiar issue of the sea change in academic content from ownership and disposal rights to leasing and first user only rights. The vendor shift from purchasing content to leasing it may even occur retroactively, as evidenced by the Kansas e-book consortium experience in 2011.

Lack of universal standards and the range of incompatible hardware and software systems were identified by Connaway and Wicht (2007) as major problems with e-book technology. This manifested itself in multiple e-book formats, some readable on only one type of device, as well as the inability of some readers to handle freely-available content in the standard pdf format. This platform incompatibility impedes research and materials usage, as users want to move from pdfs to laptop to ipad seamlessly, which is not possible at present. Digital Rights Management (DRM) and the use of portal and passwords for on- and off-campus use can also obstruct the use of digital materials.

Other issues include the license complications of single users or multiple simultaneous users; the selling of single title or whole collections of e-books; and the complications of interlibrary loan of e-books, and how, or even *if*, this can be accomplished. (See Fredericksen, Cummings, Cummings, & Carroll, 2011, on interlibrary loan and e-books; "there is no simple way to discern what might be covered, permitted, restricted, or forbidden" (p. 127).)

College Students and E-Books

The ultimate opinion of college students on the use of academic e-books is still undetermined. While there are many studies of faculty and student opinions on e-books, there are relatively few that investigate actual usage, and fewer still that concentrate on e-textbooks. However, the trend to date is clear: even after several years, students are less than eager to shift to e-textbooks. Both scholars and publishers have been perplexed by this apparent reluctance. If college students spend most of their waking hours online and prefer digital access to games, recreational reading, mail, research, ad infinitum -- why are e-textbooks a special case? And why have they remained a special case, even as more features are added and prices fall? A recent study from the National Association of College Stores (2010) indicates a great difference in the rate of use of e-textbooks compared to their general e-book counterparts still exists. This study found that only 2-3% of course material sales at member stores were accounted for by digital textbooks, 53% of the students polled were either unsure about buying digital textbooks or would not consider buying them if they were available..

General and Subject-Specific Studies

Research on the topic over the past decade is instructive, as the earlier studies introduced themes that have remained consistent. A 2006 study at the University of Denver (Levine-Clark) reported that about half of the campus used e-books, and appreciated the convenience of the searching capability, as well as being able to access the materials off-campus, but utilized them only occasionally, and read only small portions of the text. Over 60% of the respondents reported preferring print to e-books, although 80% indicated a degree of flexibility. This suggests that the ease of e-books may be a factor in their use, although it may also indicate that print remains a better alternative for full immersion in the text. Another quirk of e-book use was reported by Connaway and Wicht (2007); college students in a focus group indicated their preference for printing out electronic text, if that feature was available. Other studies investigated student preferences. In 2008, the Global Student E-Book Survey, sponsored by e-book provider Ebrary, gathered responses from 6,492 college students attending nearly 400 individual institutions in approximately 75 countries. Of the factors relevant to e-textbooks, college students ranked the following features as the most important: searchability; copying and pasting; printing; zoom and scale; and highlighting.

The largest study to date targeted at the academic use of e-books – and e-textbooks -- was conducted between 2007 and 2010 by the Joint Information Systems Committee (JISC) Survey National E-Books Observatory Project. JISC licensed a collection of course-related e-books (36 titles) in four subject areas (business, media, engineering, and medicine). The e-books were made freely available for a two-year period on the MyLibrary platform to 127 universities in the United Kingdom. Data from the study produced a range of findings, the most notable of which is worth emphasis:

The way in which the JISC e-books are being used perhaps indicates that e-books are not being used as a substitute for printed books. 85% of users are spending less than one minute per page. They are using e-books in a non-linear way – dipping in and out. This may indicate that if a user wants to read in a constant, frequent or linear way they will still buy or borrow the printed book. E-books are for 'just in time' or remote use. (Estelle, Milloy, Rowlands, & Woodward, 2009, p. 391.)

The pattern was consistent regardless of the age of the reader. E-textbooks produced even shorter sessions and fewer page views than other e-books!

The JISC participants found the strongest points in favor of e-textbooks to be (1) convenience, (2) searchability, and (3) cost; certain design issues, especially scrolling and next page buttons, were problematic for users. The study also made several recommendations for academic library provision of e-books and e-textbooks, based on the results of its focus group interviews. It stressed the importance of 24/7 remote access to the digital materials but also that access to digital materials needed to be simpler, citing problems associated with multiple access routes. Further, to the evident consternation of the investigators, the level of student with library provision of print textbooks rose during the study period:

“this effect is not limited to those in a JISC discipline and appears to be a general effect. More desk research is needed to discover what lies behind this – specifically if the general increase in e-book provision across the sector has made a significant impact on student perceptions.” (Centre for Information Behaviour and Evaluation of Research Final Report, 2009, p. 15-16.)

Even more recently, the 2011 Book Industry Study Group (BISG) Report on Student Attitudes Toward Content in Higher Education and Consumer Attitudes Toward E-Book Reading produced similar results. The study surveyed 1505 students “drawn from a nationally representative panel” regarding their opinions of e-textbooks. The most important e-textbook features in the group’s collective opinion, in descending order, were: affordability; readability; acquisition (easy to download/stream content); portability; speed; searchability; and environmental friendliness. However, most students (75%) still preferred printed textbooks; they liked the look and feel of print, the potential for permanent ownership of the book, and the opportunity for resale.

A number of studies focusing on one or two subject areas have also been published; they elucidate some of the unique disciplinary aspects relevant to e-textbook use. A 2011 study of the Health Sciences Library System at the University of Pittsburgh (Folb, Wessel, & Czechowski) revealed some interesting trends in e-book and e-textbook usage. Users in information-intensive roles, whether clinical, research, or study, were the heaviest users of *both* digital and print books, with the use of the physical and virtual library being highly correlated: the heaviest users sought information from both locations. This study also revealed interesting patterns of usage, with most e-books being used like reference books, regardless of their official designation. Respondents also stated a preference for print textbooks or manuals, but preferred digital format for research protocols, pharmaceutical, and reference texts. Again, users in this study indicated a high degree of flexibility and stressed the importance of convenience to their preference for digital or print resources.

Which features of e-books were important? Folb et al. found that over 50% of their respondents indicated that the ability to print sections of digital texts was extremely important, while over 40% gave the same rating to the ability to save sections of the e-books. Full-text searching was deemed very important by almost 40%. Bookmarking, highlighting, and annotation were all given lower importance ratings by the users.

An earlier study by Hernon, Hopper, Leach, Saunders, and Zhang (2007), reviewed e-book use by students in Economics, Literature, and Nursing at Simmons College. All groups liked the convenience, currency and portability of e-books, as well as the (improved) ability to scan contents and read selectively. The types of e-books used by each group differed: Economics majors used anthologies, monographs, and reference sources; Literature majors used monographs, textbooks, and literary criticism; and Nursing majors used textbooks, manuals and monographs. In the detailed interview summaries the article includes, most of the students referred to their preference for reading e-books in chunks or skimming portions of them; if they find “useful” material, they will print those pages; and for intensive reading, they prefer print.

Some of these results suggest that the purpose of the e-textbook may be seen differently by the publisher and the student. While publishers see the digital version as a replacement for paper, students may want the e-textbook to supplement, rather than replace, print (McCann, Schneiderman, & Hinton, 2010).

Technical Difficulties

Many studies highlighted particular shortcomings with the design of e-books and e-textbooks, and with the delivery systems. Chemistry students at the University of Maine complained that e-textbooks may use inconveniently small fonts, and associated platforms (here, Nook Study) restricted printing to 10 pages per download (Buntrock, 2011). Moreover, the actual content may vary between the print and digital versions of a textbook, particularly with illustrations, which can be either of insufficient quality to serve the needs of the students, or completely absent in the digital version (Carlock & Perry, 2008). Navigation can

be problematic in particular the design of scrolling capability and next page buttons (Joint Information Systems Committee, 2009).

Ease of use may also change student perceptions of e-textbooks. As Appleton (2004), noted in a study of midwifery students at Edge Hill College, while there is a persistent demand for electronic full text, the printed book is better for a textbook, as "...students are less likely to see the potential of a resource, which takes time to search and navigate effectively, when they are familiar with using alternative printed formats" (p. 249). While there may be improvements in functionality with each new generation of hardware, usability issues still persist.

Two studies at Reed College by Mamarelli and Ringle (2009, 2011) focused on technical issues in the e-textbook realm. In the 2009 study, the authors reported that students and faculty using KindleDX machines and compatible e-textbooks were unanimous in saying that the technology was simply unable to meet their academic needs at present. Electronic journal articles provided by the library were not accessible by the KindleDX without conversion, and the converted texts lost functionality. Low screen resolution impeded the presentation of diagrams, images, and graphs. Materials could not be ordered hierarchically for retrieval, page turning and highlighting were slow, and navigating within and between texts was clumsy. In a follow-up study (2011) using ipads instead of Kindles, some issues (legibility, speed, navigation) had been greatly improved, while others, particularly problems with the keyboard and synchronization of files, still persisted. The overall opinion of the participants was much more favorable; however, DRM and incompatible formats were still significant hurdles. The study seems to suggest that technical issues are no longer the big impediment to e-textbook adoption; instead, *content*-related barriers are the continuing problem.

What the Studies Tell Us

Throughout the e-textbook literature some common themes emerge. Students still prefer print textbooks, especially for studying, although convenience (e.g., 24/7 online access) may overrule this preference. Faculty still have reservations, particularly with content issues in graphic-heavy disciplines that require high-quality reproduction of pictures and diagrams. There are still too many platforms, hardware and software incompatibilities, and licensing restrictions that prevent a seamless electronic experience for students and faculty.

Cost is a major issue for e-textbooks, both for students and for publishers. Although initial cost to the student may be less than a printed copy (although this is not always the case), the student's inability to resell the book and recoup some of the investment, results in a total cost to the student that is comparable to print.

In addition, as Mamarelli and Ringle note, "Instead of offering significant cost savings to students, textbook publishers seem to be hoping to add value to their electronic products by taking advantage of the interactive capabilities of computer and tablet interfaces." (p. 7). There appears to be a disconnect between the student users and the e-textbook publishers, where the features the publishers consider important are of less interest to the students than improvement in basic functionality.

Conclusion: What Can Libraries Do?

Academic libraries have had mixed reactions to adding textbooks to their collections even in print versions. However, the library's familiarity with licensing, format issues, publishers and vendors, and remote access services have pulled it into the heart of the e-textbook discussion. An assumption seems to be shared among the authors of the studies referenced above – most of whom are librarians – that the preexisting expertise needed to deal with the multiplicity of content- and technology-related issues resides in the library. If students and faculty develop a higher comfort level with e-textbooks, how can libraries help meet their needs?

Several methods of meeting their needs have been mentioned in formal and informal discussions of the issue. Faculty comfort level with e-textbooks, for example, may increase as opportunities to create custom e-textbooks grow (Buczynski, 2006). Libraries are also in a good position to undertake more usability testing of e-books to determine platform choices (Aaltonen, Mannonen, Nieminen, & Nieminen, 2011). Successfully addressing e-reader and licensed e-content compatibility is a key factor in e-book and e-textbook promotion, and the availability of many resources via library subscription makes the library the logical focal point for further research.

For another method, Lonsdale and Armstrong (2010) note that library methods of promotion for e-books are too conventional and print-based. Further, promotional activities frequently fail to distinguish e-books from other resources. The authors suggest a marketing plan directed specifically at e-books; they also believe publishers should be encouraged to market e-books directly to students and faculty. Buczynski (2010) advocates “technology-mediated word-of-mouth”: for example, moving training or instruction sessions to online delivery (using Wimba, etc.), placing video advertisements on the library website, and directing students to e-books in e-reference or chat reference sessions

While the current situation with e-textbooks seems at odds with popular wisdom on the prevalence of e-books, and their wholehearted adoption by young people, the range of issues that still affect hardware, software, navigation, finding, and using appropriate e-textbooks serves to make them a less popular option for many students. Once these issues are addressed, and the barriers to easy usage removed, we may expect to see a change in e-textbook usage and a rise in their popularity as an effective means of study.

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