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Are Books Becoming Extinct in Academic Libraries?

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Are Books Becoming Extinct in Academic Libraries?

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Purpose: Academic librarians who are planning for the future need to be knowledgeable about the short- and long-range outlook for print. They must also consider what will happen if libraries abolish most or all of their books. Current and future academic e-book usage is explored, and ideas for response to collection changes are suggested.

Design/methodology/approach: This article examines a wide range of studies and comments on this timely topic.

Findings: The disparity between the reception of e-books in the general population and the adoption of them in the academic world suggests that print is still important to faculty and students. Given the advances in e-book technology, the increasing popularity of online/distance education courses, the adoption of the new EPUB 3 format, and the ubiquity of mobile devices, e-books are expected to increasingly replace print volumes in academic libraries.

Originality/value: What has received little attention in the literature is the complexity of the issue of e-book reception in the academic world. This article looks at current and future e-book usage from the perspective of several large studies on diverse aspects of academic life, including students' perceptions of libraries, their information-seeking behaviors, faculty research habits and information needs, students' reading habits, and the impact of emerging technologies on teaching and learning. Providing insight into current and future academic e-book trends, this article suggests practical ways to respond to these trends.

In the minds of our patrons, libraries are synonymous with books. According to OCLC's large 2010 study, *Perceptions of Libraries*, 75 percent of respondents, when asked what comes to mind when they think about libraries, stated "books" – a response that, surprisingly enough, is even more prevalent than in the 2005 study (De Rosa et al., p. 38). If our brand is the print collection, there is a serious disconnect between perception and reality. Academic libraries, in particular, spend a relatively small portion of their acquisitions budget on print books (ALA, 2011). If college students continue to equate libraries with books, what happens as we increasingly shift from print to electronic collections? Will we lose our *raison d'être*?

E-resources of all types are replacing print at a rapid rate in our libraries and, according to a series of recent studies on academic users' information-seeking habits, the move towards digital content is almost uniformly seen as positive (Connaway and Dickey, 2010, p. 4).

Electronic journals are exceedingly popular with students and faculty; their “anywhere anytime” access is making our print periodical collections obsolete. Electronic theses, newspapers, government documents, statistical data, and maps are also conveniently available at the touch of a computer button. Given the popularity of these electronic resources and the higher than average rate of e-resource adoption by college students (De Rosa et al., 2010, p. 56), we would expect that e-books are in high demand in academic libraries. But are they?

1. The e-book success story

The e-book consumer market is certainly booming. In July 2010, Amazon claimed that they were selling more e-books than hardcover editions; in May 2011, they announced that they are now selling more e-books than print books, both hardcover and paperback (Amazon.com, 2011). The not-for-profit group, International Digital Publishing Forum (IDPF, 2011b), publishes quarterly statistics on wholesale electronic book sales. The numbers have been steadily rising all decade but the last couple of years have seen an unprecedented rise, with the last quarter dramatically outpacing all previous ones. The increasing number of choices for e-book reading (e-readers, tablets, smart phones, netbooks), the decreasing cost of portable devices, the adoption of e-ink technology which helps reduce eye strain and allows users to read in sunlight, the increasing battery life of devices, and the improved options for highlighting, bookmarking, and adding notes have all combined to make e-books a mainstream option for consumers. With the proliferation of mobile devices, companies such as Amazon, Barnes & Noble, and Chapters have responded by creating free applications that permit readers to download and sync their online libraries to multiple devices.

Electronic content is increasing at an astonishing rate; Amazon alone currently sells over 950,000 e-books and provides millions of out-of-copyright books for free (Amazon.com, 2011). No small part of the e-book success story is due to the utter ease with which e-books can be bought and downloaded to a personal device. Many devices include Wi-Fi capability so readers

need not tether to a computer, a feature that promotes almost instant gratification. Why should consumers go to a bookstore when they can purchase and start reading the book they want within seconds?

With advances in the technology, digitization of the world's store of books is well underway. Google has scanned over 15 million of the estimated 130 million books in existence (Beck, 2011), and boasts a growing list of prestigious library partners to provide the resources. Harvard's University Librarian, Robert Darnton, is concerned that a private company is controlling access to the cultural record and is in talks with distinguished institutions such as the Library of Congress and the Smithsonian Institute in order to create the Digital Public Library of America. This body plans to provide universal digital access to books, web pages, and other media (Beck, 2011). Hathi Trust (2011), who so far has digitized 9 million volumes, has also partnered with major research institutions and libraries to preserve the cultural heritage. The Internet Archive (2011) is another non-profit organization offering free universal access to e-books. Thus far it has digitized almost 3 million books.

Why are e-books growing so rapidly in popularity? What are the advantages of e-books for readers in general, and our users in particular? Patrons can borrow online texts without entering a library or confining their borrowing to library hours. They do not have to return to the building to bring back books and they can avoid incurring library fines. Users can access e-books all day, every day and use them when the print books for their topic are out on loan. Anyone who has lugged hefty academic tomes around a campus, or packed books for travel can attest to the advantages of weightless e-books. Users also like the fact that e-books take up no space on their shelves (JISC, 2009, p. 22). Online books are searchable, a decided advantage over print texts. Fewer trees are cut and less fossil fuel used for transportation of goods. E-readers allow users to customize fonts and pages, thus improving their reading experience. And patrons can instantly look up an unfamiliar word on e-readers. Due to rapid improvements in the technology, e-books

are being used by an increasing number of people who have discovered their many benefits.

Does this mean that the days of print books are numbered in academic libraries?

2. Slow adoption in academic libraries

Librarians who work in academic institutions know that not all patrons are enthusiastic about e-books. In the 2010 ECAR study of undergraduates from 127 institutions, only twenty-four percent had used an e-book for coursework in the previous semester (Smith and Caruso, p. 75). Recent studies have shown that a sizable proportion of students still prefer print books, especially for cover-to-cover reading (Gregory, 2008; Van der Velde and Ernst 2009). Given e-book trends in the general public, why are students not adopting the format more readily? Up until recently, most academic e-books have needed to be read on vendor platforms and cannot be downloaded to personal devices. These devices have definitely changed users' expectations of the reading experience, and our users have little patience with less-than-ideal reading platforms. Each vendor platform is unique but all are substandard in terms of readability, searchability, and usability. As the authors of the British JISC National E-books Observatory Project maintain: "E-book platforms and interfaces need to be accessible and developed around principles of user-centred design: they are far from ideal, and in some cases, barely serviceable" (2009, p. 6). Users have been forced to read most e-books on computer LCD screens, a situation which leads to eye strain. They need to stay connected to the Internet while reading and be dependent upon technology to work. There is nothing more frustrating than the electricity or the Internet going down while reading an e-book. On all these platforms, patrons must scroll down and then up again to read each page, a serious roadblock to comfortable reading. Respondents from the National E-books Observatory Project identified these partial page views and excessive visual clutter as detrimental factors in e-book reading (JISC, 2009, p. 21). On some platforms, the table of contents is not hyperlinked so users cannot easily access pertinent chapters. Endnotes are an important part of academic books; users need to jump back and forth from text to notes, another

hurtle to smooth reading. Not all platforms allow for bookmarking, highlighting text, and adding notes – all crucial features for students and faculty. A desktop environment, for many readers, provides distractions and does not offer “the kind of immersive reading environment” they prefer (Spiro and Henry, 2010, p. 16). Add to all these disadvantages the fact that the search function within platforms is often frustratingly ineffective.

Dedicated e-reading devices are not without drawbacks too. Although the cost is steadily decreasing, the price is still a roadblock for many students. Since eighty-nine percent of undergraduates students already own a laptop and sixty-six percent, an internet-capable handheld device (Smith and Caruso, 2010, p.12), an e-reader is just one too many gadgets for most students. Affordability and device redundancy may be major reasons why only four percent of respondents from the large ECAR study of undergraduates own an e-reading device (Smith and Caruso, 2010, pp. 9, 10). E-readers can be dropped and broken; they are also small and portable enough to be stolen, a serious problem when an entire library of books are stored in one place (EDUCAUSE, 2010). With the trend towards cloud storage, though, content loss is less of a concern. Some e-readers provide a location percentage rather than page numbers, a problematic feature for academic users who cite passages from texts. Students and faculty need the same pagination on print and physical copies.

In Princeton University’s pilot study of e-readers, some participants observed that “not being able easily to compare documents, to flip through them or skim for review later in the semester, made their retention worse by the end of the course than they’d anticipated in the middle. The lack of flexibility and speed of navigation within readings was cited as a major factor in this” (2010, p. 19). One Princeton student commented specifically on the superiority of print for grasping an overview of a work:

I have a hard time retaining information unless I see it more than once . . . for me it’s really important . . . to be able to understand a broader framework of what I’m reading. . .

. It's really helpful for me to see subtitles and things that are set apart just so I can see where it's going, I can see how long it is. Then I'll read it and at the end I'll go back through and reference something . . . or if I don't have the leisure to read the whole document then I'll skim it . . . actually flipping not just forwards but also backwards and looking for sub headers and those kind of things and just kind of quickly underlining a couple of things here and there. When I was reading the Kindle I just kind of went from the beginning to the end and didn't do any of those other steps that I would normally do when reading a paper. (Princeton University, 2010, p. 19)

One of the single biggest barriers to e-book adoption in college and research libraries has been lack of academic content. Although it is steadily increasing, critical mass has not yet been reached. A major reason for lack of content is that it is costly for publishers to set up and maintain infrastructures for both electronic and print books, and university presses have long-established workflows based on the print model (Nelson and Haines, 2010, p. 3; Spiro and Henry, 2010, p. 14). In addition, not every book is a candidate for electronic format: "Art and design books, artists' books, children's books, and even programming manuals still seem to work better in tangible, physical formats" (Spiro and Henry, 2010, p.14).

Research has shown that for faculty, e-books as tools for research and teaching have been poorly utilized. When asked to rank a variety of online resources according to their importance for research and teaching, faculty placed e-books in last place. Only thirteen percent consider e-books as valuable today, although thirty-one percent see them as so in the future (Schonfeld and Houseright, 2010, p. 23). Some scholars fear that books outside the United States and Western Europe will be marginalized by not be digitized (Spriro and Henry, 2010, p. 21).

Although academic e-book vendors have been slow to respond to user complaints, they are starting to change. Many platforms now let patrons bookmark, highlight text, and add notes to pages. Ebrary is allowing patrons to download books to their personal devices in the fall of

2011. They are introducing a text-to-speech option which will make their books more accessible. E-readers are also continually improving with better options for notetaking and highlighting, longer battery life, and pagination that matches the corresponding print copy. But there is still work to be done by vendors, publishers, and libraries. All vendors need to provide downloading options. They must also improve e-book navigation by hyperlinking chapter titles and endnotes. Publishers need to reconsider overly restrictive digital rights management (DRM) protocols. As Spiro and Henry (2010) observe, “You can do a lot with a print book: photocopy or scan as many pages as you like, scrawl in the margins, highlight passages, bookmark pages, flip between it and other books, read it in the bathtub, give it to someone else, make art out of it, and so forth. Because of constraints imposed by some DRM regimes, readers of e-books may find that they can print only a limited number of pages, have to navigate awkwardly through the book, cannot take notes or bookmark pages, and cannot give the book to someone else” (p. 18). Users want these restrictions lifted (JISC, 2009, p. 22). Libraries need to improve their metadata so that e-books can be found more easily in catalogues; they must also create a greater awareness of their e-book collections. In one recent study of academic patrons, forty-one percent claimed they did not know their library owned e-books (Shelburne, 2009, p. 61). If libraries want to promote their e-book collections and expect them to be adopted on a large-scale, they also need to regularly purchase multi- rather than single-user options. Users have stated that they would like unlimited concurrent access to e-books (JISC, 2009, p. 22).

3. What about the future?

Although e-book usage in academic libraries has lagged behind the general e-book market, it is slowly but steadily catching up. The large JISC study of 120 U. K. universities reveals that two thirds of respondents have used an e-book for coursework or leisure reading; they claim that e-books in the academic world have become mainstream (2009, p. 5). With continuing improvements to the technology, it is inevitable that e-books will become a popular

format with students and faculty. Academic content is steadily increasing and will continue to do so. Print reference books will eventually disappear as their searchable, easily updatable, and more current electronic counterparts take over. Certainly e-book platforms as they currently exist are not conducive to reading entire books. But as more vendors provide options for downloading to personal devices, e-book reading will become ubiquitous. The actual location of a book will become increasingly incidental for researchers, providing them with more convenient opportunities for borrowing. Students will also take advantage of the time-saving features of not only electronic searching of texts but also copying and pasting passages from them. For students of literature, history, and a host of other subjects which rely on historical texts, free online access to out-of-copyright books will be a decided advantage. With the increasing availability of the Internet, the decreasing costs of mobile devices, the move from 3G to 4G networks, and the growing popularity of online courses, blended learning, and distance education, people will increasingly expect to be able to work, learn, study, and read “whenever and wherever they want.” This mobile learning trend – as the 2011 Horizon Report observes – will continue “to permeate all aspects of daily life” (Johnson, 2011, pp. 20-23). Respondents from the JISC study identified the convenience of anywhere/anytime access as the main advantage of e-books (JISC, 2009, p. 22). Since studies of information-seeking habits conclude that what is most important to students is speed, efficiency, and convenience (Connaway and Dickey, 2010, p. 34; De Rosa et al., 2011, p. 57; Head and Eisenberg, 2010, p. 35; Kroll and Forsman, 2010), we can anticipate that e-books will increasingly meet their needs.

In the 2010 ECAR study of college students and technology, two-thirds of respondents stated that they owned internet-capable handheld devices and fifty percent claimed that they check the Internet daily from their portable devices (Smith and Caruso, 2010). Since we know that our patrons increasingly read the news and other articles on mobile devices, and that these

devices go everywhere with them, we can expect our users to make the large cultural shift from print to electronic books sooner rather than later.

One of the greatest drivers of growing e-book usage will be the new EPUB 3 format, released in May 2011 (IDPF, 2011a). Based on HTML5, this new standard will revolutionize the way we define books. Since any component of a website can now be included in the EPUB 3 format, a book can host and stream multi-media content, and contain such features as quizzes and interactive components. Why is this significant? Instructors will take advantage of a technology that can engage learners and facilitate active learning. EPUB 3 publications will allow students to interact with content using more than one sense. “Brain researchers,” Rodrigo (2011) points out, “have been telling educators for quite a while that engaging multiple senses helps students better learn material.” With enriching multi-media content, e-books will surpass print in their ability to promote active and interactive learning experiences. When reading e-books, students can enter a “personal, portable extended classroom that intensifies their learning experience” (Wines and Bianchi, 2010). *The 2011 Horizon Report* predicts that game-based learning will become the next pedagogical trend (Johnson et al., pp. 20-23), and the new EPUB 3 format is the ideal format for this anticipated development.

The IDPF (International Digital Publishing Forum) has worked closely with the DAISY consortium to ensure improved accessibility of e-books; we can expect a wider reading audience as a result. The EPUB 3 format will also attract a wider range of books; it can support multi-columns and other complex layouts, a decided advantage for scientific, technical, or design-oriented texts that do not display well in current formats.

The EPUB 3 format is expected to be in wide use by 2012. For e-textbook creators, the upcoming years will be an especially rich pedagogical opportunity, observes Stephen Abram (2010). E-textbook providers such as CouseSmart have already seen dramatic increases in sales in the past few years and are exploring options such as individual chapter sales and year-long e-

textbook rentals (EDUCAUSE, 2010; Wieder, 2011) to attract a greater audience. E-textbooks are a segment of the e-book market that will no doubt be successful once textbook providers take advantage of EPUB 3.

Keeping these trends and expected developments in mind, should libraries reduce their print collections? Many already have. John Hopkins's Welch Medical Library has moved most of its print collection off-site; Stanford University's engineering library drastically pruned its print volumes, and Drexel University's Library Learning Terrace opened as an all-digital initiative. Increasingly the all-electronic collection is being considered as an option, particularly for health science, engineering, and science libraries. Budgetary realities are forcing librarians to decide between print and e-book content, and will continue to do so. Multi-campus libraries will increasingly buy e-books as a low-cost alternative to multiple print copies. Since the lifetime cost of keeping print books is higher than e-books (Courant and Nielson, 2010), this factor will weigh heavily in collection decisions. As e-book collections grow, print collections will inevitably shrink. In a recent study, eleven percent of academic users said they would be reading mostly electronic books in the future; twenty-six percent, mostly print; and fifty-six percent a combination of the two (Shelburne, 2009, p. 65).

But one technology does not necessarily have to supersede another. We must not forget that, in the increasingly electronic world of publishing, print is not dead. In fact, the reverse is true. As Darton (2011) points out, more books are published each year than in the previous year: "However it is measured, the population of books is increasing, not decreasing, and certainly not dying." Print books are a format that has worked for hundreds of years. People are deeply familiar with print; numerous individuals love the texture and physical tangibility of books; and many form an emotional attachment with them. Print books need no power source, can be easily read in bright sunshine, and are portable and versatile. Students can work with a number of books open at one time, and can easily flip back and forth between indexes, table of contents,

and endnotes. The print format is seen by some researchers as more reliable for research: “Given the sense of ephemerality of online resources “some faculty may not trust these resources as much as they do publications that are linked to a familiar and trusted imprimatur, which is perceived to be both more authoritative and more fixed and stable. Citation practices are still evolving, with many researchers preferring to cite the more authoritative print version than the digital version they actually consulted” (Spiro and Henry, 2010, p. 21). Many academics also believe that print facilitates greater concentration than electronic (JISC, 2009, p. 21). Browsing the book stacks and discovering books serendipitously is a much-loved feature of print collections. Print books and the libraries that house them “are symbols of a continuity of past and present; they offer access to the cultural heritage and pledge to preserve it into the future” (Spiro and Henry, 2010, p. 24). Many people will continue to prefer print books and even more will use both electronic and print formats.

Preservation of and long-term access to books are other issues that will complicate the future. The Internet Archive has decided to collect one physical copy of each book that it is digitizing. The physical book, they point out, still plays an important role in our cultural legacy. It is the “authentic and original version that can be used as a reference in the future. If there is ever a controversy about the digital version, the original can be examined” (Brewster, 2011). And we must keep in mind that we have not yet solved the problem of long-term digital storage. Data formats and the devices that display them quickly become obsolete (Spiro and Henry, 2010). As the technology changes and grows, the current online format may be replaced with something new.

4. Implications for libraries

How should libraries respond? It is too soon for most institutions to think of replacing most or all of our print books with e-books. But the writing is on the wall. We will reach a point where e-books will dominate in academic libraries. As always we need to consider the needs of

our users and remember that they vary from one another. Just as there are a number of different learning styles, so too are there a variety of reading styles. Our challenge is to listen to our patrons and respond to their wishes by providing choice.

But as our print collections inevitably decrease in size, we need to repurpose the space and reconsider the library's role. Indeed we must rebrand our image. When asked what they considered the top library role, college students answered "to provide books, videos and music" (De Rosa et al., 2011, p. 59). Indeed "people still tend to think of libraries as collections of books" (Connaway and Dickey, 2010, p. 4). They also continue to equate the prestige of an academic library with the number of volumes it possesses. In the *Time* magazine article, "Is a Bookless Library Still a Library?" Newcombe (2011) asks a second all-important question, "When books disappear, does a library lose its definition?" Instead of the library as warehouse, we need to promote the library as space and community hub, as the academic heart of a university, as the place of collaboration, reflection, inspiration, learning, and study.

Now more than ever, we need to demonstrate our importance to parent institutions. "With the shift from print to digital in both producing and consuming scholarship," observes Spiro and Henry (2010), "the value of libraries will be increasingly scrutinized to understand their contribution to the advancement of the university's mission. It will be critical for libraries to continue to demonstrate their relevance beyond simply subscribing to scholarly materials" (p. 34). We also need to refocus our attention and marketing efforts on what makes us truly special and unique – our expertise and dedicated service to our patrons. Where else can people receive individualized attention and personal assistance by trained professionals? In an age dominated by a confusing variety of electronic resources, we need to guide our users "through the wilderness of cyberspace to relevant and reliable digital" (Darnton, 2011). We need to follow the lead of the business world by marketing our "value-added" services in highly visible ways.

Let us not lose sight of the big picture. The world at large is becoming increasingly digital and it is important to learn from the music and newspaper industries, neither of which prepared well for the transition (Nelson and Haines, 2010, p. 7). Academic institutions have traditionally been conservative establishments. But during this time of sweeping format change, we need to be proactive, not reactive. Keep in mind, that we are in the midst of a cultural shift as dramatic as the one ushered in by the Gutenberg invention. Like the first printing press, e-books can “improve access to knowledge and increase the speed of knowledge distribution like never before” (Nelson and Haines, 2010, p. 3). Our mission is to facilitate this change by seeing ourselves as instrumental in the process of knowledge acquisition, in whatever format it takes.

Our role is to also promote literacy in our institutions. “The enthusiasm for e-books,” Darnton (2011) claims, “may have stimulated reading in general.” E-books could play a particularly important role on college campuses. Respondents in one study were convinced that “the Kindle is what’s going to get our younger generation interested in reading” (Wines and Bianchi, 2010). The National Endowment for the Art’s report, *Reading on the Rise* (2009), reveals that for the first time in two decades, reading in the general population and specifically in the 18-24 year-old group of Americans is increasing. But the fifty-one percent of college-aged students who read fiction is still far below the fifty-nine percent who did so in 1982. If one of predictors of student success is a high degree of literacy, and if facilitating student success is a key goal of our colleges and universities, librarians can play a pivotal role in supporting this objective. By facilitating the use of e-books in our institution but also not losing sight of the importance of print for many of our patrons, we can help our students and increase our value.

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