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The eBook User Experience in an Integrated Research Platform

by Michael Gorrell (EBSCO) <mdg@ebSCOhost.com>

At colleges and universities around the world, the use of the eBook as a source of research material continues to slowly gain momentum, “slowly” being the key word here. In reviewing multiple editions^{1,2} of the *Library Use of E-Books* published by the **Primary Research Group**, it can be seen that eBook spending of universities over the five years from 2006 to what is projected in 2011 has increased dramatically. The median spending has increased by more than a factor of five, with institutions projecting to spend \$104,922 on eBooks in 2011. While libraries are spending more on eBooks, they are choosing to spread those dollars amongst multiple vendors and publishers. In fact, the most recent study of the *Library Use of E-Books*² points out that libraries report purchasing eBooks from at least three aggregators in addition to purchasing directly from publishers.

With libraries’ increased spending on eBooks, are they getting proportionally more value by these expenditures? One way to explore the answer to that question would be to look at how good (skillful) the students are at using these resources. The 2011 edition² of the report indicates that librarians are not confident that students are able to use these resources as well as they are able to use electronic databases. When asked, *Compared to how your library’s patrons find and access information from major databases of magazine, newspaper and journal articles, what is their level of skill in using eBook services and databases?*, the results were that 44.71% of respondents indicated that patrons were less skillful using eBooks as compared to electronic databases, while only 3.53% said they were more skillful.

This point is emphasized when reviewing the *Survey of American College Students: Student Use of Library E-book Collections*,³ which was published in 2009 by the **Primary Research Group**. Students were asked their opinion of their institution’s eBook collection — 41.75% didn’t know what eBooks were or didn’t think their institution had any. They were asked how useful their institution’s eBook collection was (51% said either not useful or only slightly useful), and finally they were asked about the ease of use of the collection (55% not really sure).

The lack of understanding by undergraduates as to what is available in their university library’s collection may apply to more than eBooks, but for the sake of this article, we will focus on what can be done to bring eBook existence into the “mainstream” of undergraduate research studies and workflows.

Historically, eBook research has been done on either an aggregator’s platform or via a publisher’s platform. While MARC records are provided by these aggregators so that the content can be added to the catalog, one might question whether this is the most effective strategy for getting material to be consumed by students who are focused on scholarly research.

While the catalog has its advantages — complete holdings for books and other material — it has some well-documented shortcomings, most notably in its usability. The fact that new product lines emerged in the last several years — *NextGen* OPACs and discovery services and discovery layers — provides evidence that the catalog as the primary access point was not getting the job done. **Emanuel and Kern**⁴ discuss this dynamic in their 2009 paper *Next Generation Catalogs: What Do They Do and Why Should We Care?*:

...search engines such as **Google** and **Amazon** were getting better at meeting information needs while the library catalog remained static...the current catalog systems are not user-friendly...

Still, have *NextGen* catalogs helped enough?

In **Connaway, Silipigni, Dickey, and Radford’s** *‘If It Is Too Inconvenient, I’m Not Going After It.’ Convenience as a Critical Factor in Information-seeking Behaviors*,⁴ the point is made that often **convenience** is the key to successful usage. This is human nature, after all, as we are all *Resourceful, Evaluative Maximizers*.⁶

Connaway et. al. show that users perceive that the catalog lags other resources — most often positioned behind search engines and electronic databases in terms of convenience. They also reported how often these resources helped users. The catalog trailed search engines by a factor of eight, and electronic databases by a factor of seven.

The alternative to accessing eBooks via the catalog has been to lead users to aggregator platforms. While this may solve usability concerns (assuming aggregator platforms were all well-designed and easy-to-use), there was a larger problem for the research population as a whole: there were too many platforms. If, in fact, libraries are using three or more eBook aggregators, plus choosing some eBooks that are available only on the publisher’s platform, then users’ understanding of each platform and likelihood that they will “get the most” out of each is diluted. The convenience factor also takes a big hit in this scenario — it is inconvenient to have to visit three or four places for eBooks.

With **EBSCO’s** acquisition of **NetLibrary** from **OCLC** in March 2010, we recognized that we had a unique opportunity. We could incorporate eBook content into the same **EBSCOhost** platform that serves nearly all academic institutions for research databases. Additionally, we could add a rich eBook experience into **EBSCO Discovery Service (EDS)**. This solution promised to provide the best fit for what users and librarians had been after: a single, fast, fully-integrated research platform that exposes all of the library’s content in an easy-to-use “**Google-like**” way.

So that was our mindset as we embarked on the task to integrate eBooks (and AudioBooks) into our platform.

While we have invested heavily over the years in user testing and fine tuning **EBSCOhost** and **EDS** for usability, we understood that eBook usage brought new and interesting challenges. So, the job of integrating the eBook searching and viewing experience into the platform began with analyzing user expectations. We used many methods for exploring these needs, including:

- Log analysis based on the **NetLibrary** Platform
- Customer survey and feedback as collected by our extensive sales force
- Usability testing
- Large listserv for conducting formal surveys

This last mechanism was particularly important as the list had in excess of one thousand librarians, and response rates were high, which provided statistically valid responses to many questions. This feedback mechanism was extremely helpful in shaping the development effort and prioritizing features. As an example, one of the early surveys included the following questions related to downloadable eBooks. The responses are included (**bolded in parenthesis**):

- 1) How often does a user require a downloadable eBook?
 - o Extremely Common (**13%**)
 - o Common (**24%**)
 - o Sometimes (**31%**)
 - o Not Common (**25%**)
 - o Never Happens (**4%**)
 - o No Opinion (**3%**)
- 2) Regarding Downloadable eBooks, what does “Downloadable” mean to you? Download to:
 - An eBook reader (**Kindle, iPad, Sony e-Reader, Nook, iPod, etc.**) (**76%**)
 - A PC or a Mac (**11%**)
 - A Smartphone (**iPhone/Blackberry/Android**) (**11%**)
 - No Opinion (**2%**)

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3) What percent of your patrons/users are interested in using Portable devices for eBooks?

- Less than 10% (**14%**)
- Between 10 and 25% (**20%**)
- Between 25 and 50% (**29%**)
- Between 50 and 75% (**11%**)
- More than 75% (**7%**)
- No Opinion (**20%**)

4) What is the most important Portable device that we should support for eBooks? Pick one:

- iPad/iPod/iPhone (**50%**)
- Kindle (**8%**)
- Sony eReader (**4%**)
- Nook (**1%**)
- No Opinion (**36%**)

Similarly, when we wanted to know more about perceived usage patterns we would ask questions like the following:

- How often does a user comes to the System interested in a specific chapter of a specific book ?
 - o Extremely Common (**15%**)
 - o Common (**25%**)
 - o Sometimes (**24%**)
 - o Not Common (**23%**)
 - o Never Happens (**9%**)
 - o No Opinion (**4%**)

This learning process, combined with our iterative and interactive design cycle was used to develop the eBook user experience. Our team (which now included developers of the **NetLibrary** Platform) explored important issues for eBook usage. We focused on four main areas of functionality:

1. Discoverability. In a mass of content of varied types, such as you will find in a discovery service, we had to make sure that users could easily find eBooks within the product. Our UI had to be crisp and clear to users, with obvious pointers into eBook content — whether on a search page, a “landing” page (Figure 1) or a result list. We leveraged our experience with rich subject indexing to add new headings and categories to the eBook records that would aid users in finding the right eBook. Our long history in producing and searching full-text content was helpful in tuning the results by allowing the full text of eBooks to be searched by default. Lastly, all of the work that had been done to optimize the relevancy ranking for EDS was critical, allowing us to tune relevance ranking for eBooks.

2. Online Viewing. We wanted the online viewing experience to be as rich and functional as any tool that existed — on the Web or on the desktop. Similar to our work on **Digital Archives**, we wanted to provide the user with the perfect combination of computer-enhanced capabilities such as speed, zoom, search within, cite and bibliographic exports, and tactile features such as easy access to the table of contents, or knowing exactly “where you are” in the book.

3. Printing/Emailing. A key part of using eBooks is allowing the users to extract specific pages as part of their research process. We wanted to provide easy and flexible ways to facilitate this within our platform that worked well for users as well as publishers.

4. Downloading. Downloading and eBook readers are a hot topic, and we believe this usage will become more and more common — so we had to make sure it was easy and intuitive for users to download our eBooks.

Figure 1: The eBook Landing Page

We tested each of these functional areas and refined our designs until we arrived at what we thought were the optimal approaches given all needs and constraints.

As much as we focused on the unique aspects of using eBooks, we also focused on the larger platform, looking to make eBooks feel totally integrated and able to leverage all of the features that are available for all other content types. We felt that the users of eBooks were the same users that have already been using our platform to accomplish their research goals, and so we needed to make sure that adding eBooks to that experience was seamless and natural.

Overall the process led us to not only enhance the platform with eBook specific functionality, but we also made several design changes based on the eBook research that improved the overall user experience beyond just eBook usage. One example can be seen in our handling of email dialog with viewing the full text of an eBook or a Journal article. Prior to eBooks, an email request caused the user to navigate to a new page with the email dialog. However, during the work for adding eBooks, we devised a new mechanism that allowed the user to stay within the viewer, but still complete the email dialog. See Figures 2 and 3.

Figure 2: eBook View – Email dialog

Figure 3: Journal Article PDF View – Email dialog

So, we built eBook specific functionality, and we built functionality because of eBooks that helped all of the other content types (and users). The last piece worth acknowledging is the plethora of features that the platform had that eBooks could immediately take advantage of.

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Perhaps the best example here came from our experience building **EDS** to maximize the value that end users get from book-related information. When we added catalogs to **EBSCO Discovery Service**, we had to ensure that all catalog content, and book information in particular, was highly accessible and optimally presented to users. For example, on the detailed record for a catalog item, we show the following important widgets — *Other Books by this Author*, *Related Books*, *Reviews of this Book*, and soon-to-be-released *Other Editions and Formats* — bringing all the institution's book information together in one integrated cohesive view. eBooks will fit seamlessly into this view and will automatically have equivalent widgets.

In the end, we had undertaken the largest development project that our company had ever executed. We extended an already fully-featured platform that allowed eBooks to be found using the same tools and within the same site as many students were accustomed to using for their research. We are eager to see eBook usage and awareness increase, and for libraries to be able to get greater value out of their eBook investments. 🌱

Endnotes

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Next Generation E-content Integration: If You're Not Open, You're Not Integrating

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I. Non-Traditional Information, User Workflows, and Supplier Choice in Open Platform Solutions

Ask a researcher, scholar, society member, or student what "e-content integration" means to him/her and chances are you will receive one of two responses: a quizzical look indicating that your information industry jargon has no meaning in his/her world, or a general statement about "getting the information I need when I need it the way I want it." The latter response is the more useful, of course, because it tells us something about the nature of e-content integration, namely: a) that it involves integrating more than "content" in the traditional sense (journals, books, databases), b) that it is only truly achievable if it is accomplished within the end user's established workflow, and c) that it depends in large part on the degree to which the technologies we employ are interoperable. Integration options are only feasible if there is the requisite technology to support it: only those technologies that are fundamentally open and interoperable — that "can play nicely together" — will be able to serve as the foundation we need. Whether we are approaching this task from a librarian or a publisher perspective, we need to collect, connect, and integrate resources — whether ones we offer ourselves or those available externally through others — around the end-user experience in ways that are more personalized, more relevant, and more targeted. As one of last year's popular **Charleston Library Conference** preconference sessions clearly illustrates, what we really mean is "e-everything integration."

At **HighWire**, our 16+ years of experience with society publishers has allowed us to see the evolution of e-content integration from its infancy (isolated journal sites connected through cited reference hyperlinking), through its adolescence (suites of inter-searchable and multi-linked journals, reference works, books, conference proceedings, and member newsletters, with extended links to external databases, platforms, and search engines) to where we are today

(the emergence of open integration platforms for co-development across boundaries). Today, societies and associations are advancing enterprise-wide strategic initiatives that assemble the full range of information resources from across their organizations. This includes the traditional content from the publishing divisions as noted above, but also encompasses layering on additional member resources, student offerings, conferences, training, jobs, and community activities, and allowing new levels of personalization and user targeting. No longer just the purview of the Society publishing division alone, e-content integration has become an organizational directive.

This means that both publishers and librarians need to embrace the three core aspects of next-generation integration: going beyond traditional content sources, moving information to the moving user (addressing both discoverability and visibility), and ensuring best-of-breed technology and service partners (supplier choice).

II. Cross-Organizational E-content Integration: The Society Publisher Approach

Going beyond traditional content sources

Societies and publishers have always been multi-divisional businesses — journals, books, indices, membership, meetings, training, standards, advocacy, outreach, etc. In the past, these divisions have been siloed, each distributing content as if its audience was segmented by type of information (e.g., training vs. journal articles) rather than topic (e.g., pediatrics vs. cardiology, or biomechanics vs. aerospace engineering) or audience or purpose. Now that all divisions have their resources available online in some fashion, for the first time societies have the opportunity to integrate that information in more meaningful ways. RSS-based dissemination of news from the membership division, podcasts and video of presentations at the Annual Meeting or related symposia, 24x7x365 online continuing education testing, and article-

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