Patron-Driven Acquisitions (PDA) of e-books: New life for the library catalog?[1]

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Abstract: *This paper highlights an overview of the conceptual approach to e-resource discoverability in academic libraries with a focus on research on the assessment of library catalog performance in the Patron-Driven Acquisitions (PDA) model for e-book collection development. Although the published literature stresses the key role of the library catalog in the PDA model for e-book acquisitions, the findings in this paper show that, until now, there has been a lack of research on users' e-resources searching behavior and PDA. As a conclusion, the authors think that in such a large universe of digital information on the Web, a new branded local catalog could be the way to visualize a more "tangible" experience between users and e-book collections.*

Keywords: Patron-Driven Acquisitions (PDA), e-books, library catalogs

Introduction

Patron- (or Demand-) Driven Acquisitions (PDA/DDA) is a widely adopted model for automated purchases of e-books based on patron usage in academic libraries. Through this model, a library provides access to a predetermined set of e-books to authorized users by making these books' bibliographic records available in the library catalog. Patrons discover and use e-books via the library catalog, unaware as to whether a particular title is a PDA e-book available for purchase or an item that has already been acquired. Once cumulative patron usage of an e-book exceeds a certain threshold level, the library automatically buys it.

Previous research has shown that library catalogs play an important role in the success of PDA for e-books, and that catalogs require improvement to be better integrated with new discovery tools based on metadata aggregation. Based on a systematic analysis of literature, this paper aims to explore how library catalogs may be reengineered to face the challenging and quickly evolving landscape of the Googlization of information resources.

Methods

After our involvement in a series of studies of PDA for e-books at Kent State University Libraries (Downey, Zhang, Urbano, & Klingler, 2013, 2014a, 2014b; Urbano, Zhang, Downey, & Klingler, 2013), it has become evident that a more systematic approach is needed to understand how library catalogs could enhance their key role in PDA implementation.

The literature to be examined in this paper covers library catalogs and other discovery tools for finding e-books. A search in the *Library and Information Abstracts* (LISA) returned 62 records on PDA e-book acquisition method at the beginning of December 2013, all published between 2010 and 2013, showing a great interest and concern on this issue, mainly in academic libraries. Only one (McLure & Hoseth, 2012) of the 62 works retrieved from LISA focused on the evaluation of local catalog use as a method to assess PDA systems. We also

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located other works through our readings and through a search alert in Google Scholar for e-book, PDA or DDA, that returned a second work on catalog use evaluation for libraries with PDA programs (Urbano et al., 2013).

Findings

The changing face of academic library collections

PDA is still new in collection management. Due to the recent acceleration in e-book acquisitions there have been a large number of PDA case studies published in the past few years on the subject (Blummer & Kenton, 2012; Kumbhar, 2012; McLure & Hoseth, 2012; Schroeder & Wright, 2011; Swords, 2011; Walters, 2012). The Association of College and Research Libraries (ACRL) has recognized patron-driven e-book acquisition as one of the "2012 Top Ten Trends in Academic Libraries" (ACRL Research Planning and Review Committee, 2012).

In the context of library collections, PDA could be framed as part of a more general trend: the shift from print collections to new electronic collections. Lewis (2013) predicts that by 2020 academic libraries will experience a shift from physical print collections to virtual collections with at least an 50% decrease in print materials, with an increasing role of the subscription and PDA models.

As noted in the *2013 Environmental Scan* report, there has been some collaborative effort in developing consortium shared PDA to allow e-books to be accessed by users from multiple academic libraries (ACRL Research Planning and Review Committee, 2013). An important consideration for library catalogs to fit PDA into the increasingly digital environment is the collection scope for the catalog: local catalog for institution-level PDA or union catalog of the consortium-wide shared PDA. The report suggests that PDA will continue to serve as an acquisition model as libraries work towards share costs and access to resources.

Besides resource sharing and access, another benefit of PDA for e-books is in terms of use. Research suggests that PDA-acquired e-books tend to have more subsequent use than library selected e-books (Chad, 2011). In another study that compares use of e-books acquired via PDA and the circulation of print books, e-books received more active use overall (Downey et al., 2014a). Given that e-books are still relative new in the library collection, a longitudinal study would reveal a complete and fair comparison of uses between e-books and print books.

The changing face of publishers and vendors shopping window

With this new PDA-based acquisition model, e-book providers, such as publishers, vendors, and aggregators, want their books to be well-displayed to users. As part of their marketing effort, providers are now very interested in supplying metadata to facilitate e-book access, because book sales in the PDA model are triggered by library users. Providers are motivated to have more of their e-books represented in library catalogs, and have more detailed, high-quality metadata of those books to prompt users to read more (Esposito, 2012).

In addition, PDA e-book discovery in essence is also a search engine marketing, where one or more search engines with a variety of tools that can help a user to find and view a specific bibliographic record (Esposito, 2012). Clearly, traditional and passive library catalogs do not meet PDA e-book providers' expectations for book discovery and access and have the

incentive to be involved in e-book discovery, which is the critical step leading to PDA purchases.

PDA and the library catalog: a key new role but in a challenging environment

Traditionally, library catalogs only contain metadata records of collections; patrons cannot access contents of library materials directly. With the addition of e-resources, library catalogs now can lead to full and direct access to content. However, library users still associate libraries and library catalogs to print books and tend to use Google-like discovery tools for digital content (Asher, Duke, & Wilson, 2013).

Promoting e-book use and undertaking PDA programs have put library catalogs in the spotlight again. However, this shift occurs at the same time that the debate about the future of the catalog is gaining momentum in the broader, fuzzy fields of Web searching, metadata harvesting, and the umbrella term "discovery tools". What is interesting to observe is that all vendors say that PDA for e-books relies on the library catalog as a key piece for discovery, and yet due to competition from Web search engines and other social Web tools, library catalogs are at a crossroads, with change seeming inevitable. Some suggest that the role of the catalog as a discovery tool in this Web-centric scenario is in crisis because libraries should focus on the delivery side of the work rather than on the discovery role (Kortekaas, 2012). Others bid for the next generation of library discovery tools or for future catalogs shaped as new social Web spaces (Luther & Kelly, 2011; O'Hara, 2012; Tarulli & Spiteri, 2012; Tarulli, 2012).

Given other e-book discovery and access options such as Web-scale discovery services, federated search tools, vendor platforms, and library website guides, there is a call for a research agenda on the complementarity between catalogs and these other tools for e-book discovery and access (Dinkelman & Stacy-Bates, 2007; Walters, 2013).

Another factor that comes into play in a changing environment for library catalogs is the wide use of mobile and handled devices (ACRL Research Planning and Review Committee, 2013) that work with reading apps for e-book platforms. Libraries need to integrate such access into catalog searches.

Inside the catalog: e-book discovering weakness

Turning library catalogs into a reliable e-book discovery tool has been challenging. Some libraries with large e-book collections do not catalog their e-books by title by title. This may be because large subscription deals, or PDA programs involve significant investment in cataloging and in catalog maintenance for non-permanent holdings: the value-for-money issue challenges the catalog as the central tool to access e-books (Belanger, 2007; Blummer & Kenton, 2012; Downey, 2014). Such large-scale management of bibliographic records and new practices of exposing metadata from various e-book providers are beyond traditional cataloging workflow (Wu & Mitchell, 2010; Zhao & Zhao, 2010).

Current library catalogs have some known shortfalls in meeting effective searching and browsing needs. The lack of integration of users' searching behaviour into catalog design as identified by classic catalog studies by Borgman (1986, 1996) remains largely true even today. Given the competition from discovery tools that are more user-friendly, libraries are motivated to rebuild catalogs with user involvement in the process. Related studies have shown further efforts are needed in the several areas: (1) support in the discovery process, (2)

help with the evaluation of search results, (3) efficiency and promptness for getting search results with some new relevance ranking algorithms (Christensen, 2013).

However, there has been a lack of research examining actual use library catalogs as a tool for e-book discovery. Among the limited published literature, it was found users seldom utilize the common catalog feature to filter retrieval results by document type "e-resource/e-book." This might be due to problems with the search form layout or catalog features (Belanger, 2007) as well as due to the lack of users' awareness about the availability of e-books in the catalog (Cassidy, Martinez, & Shen, 2012). Nevertheless, the low level of filtered searches for e-resources/e-books could be an unfavorable indicator of the centrality of the catalog to users' searches for e-books and e-resources in general.

Alongside the catalog: A-Z packages listing, e-reserves and subject guides

The main argument for providing these access alternatives is based on the assertion that a virtual bookshelf or reading room could work for e-books now that the book contents are directly accessible. The counter argument against this simple listing approach is that the books in question are PDA e-books. Listings outside library catalogs run the risk that users, once they reach the vendor portal, may trigger book purchases unknowingly without reviewing similar books that are already in the library collections (Urbano et al., 2013). A remedy to address listing e-books without library context is to have links to packages with PDA e-books through permalinks to catalog records or to "canned searches."

Course related reading lists for e-books offers great opportunity to bring users to the catalog with instructors reserving e-book readings for classes. If an instructor uses the direct link to the provider portal, an incorrect message is sent to the students that e-books are only discoverable and accessible via those commercial places, despite they are accessible through the library via its library catalog. Chad (2010) suggests that to promote the value of library services and the library catalog as a destination site, library functions need to be embedded in the institutional portal and in other sites that utilize library services. The library should come to the user rather than the other way round. Current library catalogs have room for improvement in light of their listing and browsing capabilities. As pointed out by Dinkelman & Stacy-Bates (2007), a catalog should improve the look and feel to be a surrogate of former "pick and choose" browsing in the reading room.

Beyond the catalog: new Web-scale discovery tools

New Web-scale discovery tools offer the capability to harvest content from both internal resources and external resources, whether open or licensed, into a single index. Today's library users expect a search experience that is simplified, fast, effective, and all-inclusive, but seamlessly across a variety of resources, which is "similar" to their use of Google and other search engines (Asher, Duke, & Wilson, 2013; Vaughan, 2011). However, some argue that library catalog records alone do not sufficiently provide e-book access without being incorporated through the website to offer effective discovery capability with a more dynamic, flexible, and user-oriented approach (Dinkelman & Stacy-Bates, 2007).

The fundamental concept behind such discovery tools is to have a search that can break the independent silos of resources and searches with better performance than the former federated searching tools that have commonly known limitations such as a long waiting time, ineffective search refinement capability, and problematic interfaces, particularly, result displays (Asher et al., 2013).

A potential benefit of having a library-centric discovery service is to avoid batch-loads of PDA e-book records in the local catalog. With the "Web-scale discovery" service, PDA e-books could be included in the metadata. Library users could seamlessly and transparently retrieve books after a search in the discovery services, without knowing whether a book is actually in the local catalog. This requires that e-book providers supply their e-book metadata to the discovery service company, and that the library customize the use of that metadata to restrict the discovery records only to those e-books in the library collection or in the library PDA pool. As part of this effort, NISO has launched an 'Open Discovery Initiative' to improve the flows and sharing of metadata (Chad, 2011).

However, this "magic solution" is challenged by several major unsolved issues. First, the commercial Web-scale discovery tools are under huge criticism: not all metadata for e-books that a library could license are available in all discovery services providers. When the metadata is available, usually it is for the whole inventory of the e-book aggregator or publisher. Some filter should be done to focus on the relevant e-books for a library.

Furthermore, there is a debate on whether commercial discovery tools are truly comprehensive for the entire e-resource universe, and whether all e-resource providers are e-content providers and discovery service providers, who act in a neutral way without potentially biased algorithms to favor use of their own e-content.

Discussion and conclusions

Library collection context checking should be a condition for PDA

The only way to put an e-book in library collection context ready for PDA is through the local catalog data. For an efficient management of the acquisitions budget, the user should be placed in the full range of library collections. If users bypass the local catalog data through direct links to e-book packages at the portal vendor, they could trigger e-books without the collection context; consequently, overlapping and duplications could undermine the collection development. Therefore, if users become more loyal to other discovery tools (social networks, reading lists, Web-scale discovery tools, etc.), the catalog should act as the source for localization for users' triggering acquisitions.

Web-scale discovery tools need catalog integration

These tools might help eliminate the "silo effect" of an academic library's diverse collection of e-books from more than one e-book provider, but so does the library catalog itself for books and e-books in the collection, with a more focused approach, especially if the user is looking for a book (not journal papers, thesis, reports, etc. represented in such discovery tools). Furthermore, a detailed analysis of features of Web-scale discovery services shows that the comprehensiveness of library e-book collections cannot be always complete through the present metadata harvesting practices by the major vendors of discovery solutions. So, the local library catalog is the most reliable metadata provider of library licensed e-book collections and PDA pools.

Catalog new ways: service, integration and branding

The catalog is not dead despite the fact that it needs a major overhaul in the years to come. PDA is an important reason for it to revive and to adapt to the new environment, through integration with mobile devices, federated or Web-scale discovery search, link resolver tools,

ERM software, or learning management systems. All these tools need e-book metadata to function, and the library catalog could be an efficient central pivot point with a new data management approach, also with a new branding strategy. It also provides a kind of virtual venue for the encounter between users and the collection of books, or PDA bibliographic records that a library subsidizes.

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