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# Give 'Em What They Want: A One-Year Study of Unmediated Patron-Driven Acquisition of e-Books

Karen S. Fischer, Michael Wright, Kathleen Clatanoff, Hope Barton, and Edward Shreeves

In September 2009, the University of Iowa Libraries embarked on an experiment with patron-driven acquisition (PDA) of e-books with ebrary and YBP. An e-book-only PDA plan was initiated, entirely unmediated and with instantaneous access to the content. MARC records were loaded for each title, determined by our YBP approval profile and other limitations, for a total of 12,000 PDA records. Usage, cost, subject, and publisher data were analyzed for 850 purchased PDA e-books and thousands of other ebrary subscription titles. Results indicate that PDA can be a useful and effective tool for meeting user needs and building the local collection, but the role of PDA in the library's collection management program presents challenges as well as opportunities.



In September 2009, the University of Iowa Libraries embarked on an experiment with patron-driven acquisition of e-books (referenced throughout this paper by the acronym PDA, and also known as DDA, or demand-driven acquisition). With the endorsement of the committee overseeing collection management activities—and despite some ambivalence among collection management librarians—we set aside central funds to pay for e-book purchases that our students, faculty, and staff triggered by a pre-defined level of usage. We chose ebrary,

then an independent company (though now a part of ProQuest), as our e-book vendor and from the beginning worked closely with YBP. From a desire to observe how user preferences and the availability of e-books interacted with our traditional selection program, we intentionally put few limits on the plan. Thus the universe of ebrary titles made available was large, the price limit and other constraints liberal, and no extraordinary measures to prevent duplication, either prospectively or retrospectively, were applied. In this paper we report on some of the early results of this experiment, one of many now

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under way in academic libraries. While a longer span of data would give more refined and assured results, the data we have are sufficiently provocative to merit the report. The results, in brief, have been sufficiently positive that the experiment has continued and PDA seems on the way to becoming, at least for the foreseeable future, a standard part of the libraries' collection development program.

In May 2009, a group of collection management librarians attended a conference in Bloomington, Indiana, titled "Off the Shelf: Defining Collection Services," one in a series of annual events produced by Center for Library Initiatives of the Committee on Institutional Cooperation (CIC), the academic consortium of the "Big Ten" institutions plus the University of Chicago. There, among a number of offerings, the attendees heard two that prompted us to give serious thought to initiating a PDA program. Rick Lugg of R2 Consulting reviewed the unimpressive results of what he termed "expert selection" and strongly suggested that low circulation rates for librarian-selected books demanded the exploration of alternatives. In another talk in the same session, Dennis Dillon of the University of Texas spoke again of the failure, as measured by use, of traditional methods of collection development in research libraries. While the ideas in these presentations were not new or unfamiliar, they encouraged several of us attending from Iowa to take a closer look at PDA as a selection methodology. From other conferences and vendor visits, we were broadly familiar with PDA products from several vendors, including MyiLibrary (Coutts) and EBL as well as the then-new plan from ebrary, which was establishing a partnership with YBP, our primary monograph vendor.

Expert selection, to adopt Lugg's term, refers to the practices that grew out of the emergence in the late twentieth century of collection development and management as a functional specialization in librarianship. It assumes a "just in case" model of building collections, ideally based on se-

lectors' knowledge of their subject areas, their familiarity with academic programs and institutional research emphasis, and frequent communication with users, especially faculty. While user demand has always played an important role, in the form of requests for specific titles or further development of weak subject areas, the constraints of print acquisition and user attention have always relegated it to a supplementary place. The growing availability of e-books relevant to academic audiences and their increasing acceptance in the marketplace offered a chance to expand the role of the user in building the collection. With PDA we could implement a "just in time" method of acquisition that allowed immediate access to content and guaranteed at least minimal usage of selections.

### Literature Review

Circulation behavior and use of monographic collections in academic libraries has been an object of research for many years. In light of faltering acquisitions budgets that have seen either no increases or increases below the rate of inflation, analysis of circulation data has again come to the fore, with a focus on its implications for usage of space and collection development. This discussion has increasingly focused on the merit and usage of materials acquired through expert selection compared to that of materials acquired through patron- or demand-driven selection. The earliest studies, however, were conducted in an environment where demand-driven selection as presently understood was not an option.

In 1969, Richard Trueswell, an academic research engineer began studying library systems analysis with an emphasis on circulation requirements. The intent of his research was to identify a core for collection development and determine the optimal size of any given library's holding. His ultimate goal was to identify the core collection that an institution needed to meet the majority of user needs and define what could be reasonably

obtained through interlibrary loan or regional library centers. He determined that there was a strong similarity between the circulation behavior of monographic collections and business inventory holdings, such that 80 percent of the transactions are generated by 20 percent of the collection.<sup>1</sup>

Ten years later, the famous University of Pittsburgh study (famously known as the Kent Study after its primary author) was published, bringing forth much data on monographic circulation at that institution. Interestingly, the impetus behind the study was similar to pressures leading to current discussions on expert selection and large monographic collections. These include decreasing purchasing power and flat or decreasing budgets; diminishing likelihood of new library buildings; and technological advances leading to alternative ways to deliver information to users. The major hypothesis of the study, that a small portion of the collection accounted for the major portion of circulation, proved to be true. If the criterion for a cost-effective acquisitions program was based on a minimum of two circulation uses, 54.2 percent of the titles purchased in 1969 would not have been ordered. In fact, 39.8 percent of the new books tracked from 1969 through 1975 never circulated during their first six years on the library shelves.<sup>2</sup>

In the early 2000s, new reports of e-book usage and the user experience began to emerge. Dennis Dillon was among the first to perform subject analysis of e-book use based on experience at the University of Texas, Austin. Texas began providing access to 20,000 e-books in the fall semester of the 2000 school year. This early large-scale e-book offering consisted of three e-book collections. While there was some variation in use of these collections, general congruency existed for the most heavily used subject areas, with computer science, economics, and business comprising the most heavily used subjects, while medicine, and sociology, American history, and literature represented a strong second tier. In light of their findings demonstrating measurable e-book

use in all subject areas, the decision was made to continue e-book purchases across all areas, not just those subject areas with the heaviest use.<sup>3</sup>

In a related development in the early 2000s, libraries began to look into an approach for print monographic acquisitions that resembled the oft-discussed "just in time" inventory model. Early applications of this concept emerged in interlibrary lending (ILL) settings where user-requested titles could initiate a purchase instead of a borrowing transaction. As noted by Judith Nixon, Robert Freeman, and Suzanne Ward in their literature review on patron-driven acquisitions, this was an efficient way to let specific user needs direct the expenditure of scarce collection funds and to acquire titles that would likely be of interest to future users as well.<sup>4</sup>

Purdue University Libraries implemented such an ILL-based print monographic acquisitions program, called Books on Demand, in 2000. After two years of experience with this model, five subject bibliographers analyzed 800 titles acquired through the program in their respective subject areas and compared them to titles purchased during the same period through the normal selection process. Their analysis concluded that, in general, titles selected through the Books on Demand program had the same potential long-term value as the ones they had acquired by traditional means. The bibliographers also judged that, while a few titles fell short in terms of quality or programmatic relevance (ranging between 2% to 20% depending on the subject area), the cost of these titles was far less than the cost of broadening approval profiles to include most of the requested books that were of value. Perhaps the most interesting and important trend was one that was observed across all participating disciplines. Titles selected by patrons repeatedly reflected the impact of interdisciplinary studies and interests falling outside the classification ranges that selectors typically associated with their areas of collection responsibility.<sup>5</sup>

After ten years of experience with this program, the Purdue Libraries revisited use of their Books on Demand program and published their results across various disciplines. Results for the liberal arts again pointed to patrons' interest in materials in related or tangential fields, indicating strong cross-disciplinary activity.<sup>6</sup> Patron-selected titles in what would be considered out-of-scope call number ranges were deemed to be useful for providing background materials or in meeting interdisciplinary research needs. Some areas were also found to be used heavily by nonprimary users, an aspect that may not be easily known by a selector. Science and technology titles were not studied in the 2002 study because they made up only a small percentage of the titles.<sup>7</sup> They were, on the other hand, considered in the ten-year study, where the researchers reported that 15 percent of the titles purchased through Books on Demand were in the science and technology areas and 96 percent of those were deemed to be appropriate for a research collection. These results indicated the importance of collecting holistically, with a perspective conscious of the needs of all campus constituencies and disciplines, including content levels ranging from the most basic to cutting-edge research. The science and technology analysis also revealed the importance of patron-driven acquisitions for providing materials supporting emerging areas of study and research in the institution.

As patron-driven models began to emerge for e-books, librarians have often expressed alarm about the possibility of users selecting books that no one else would use or that would, in the aggregate, lead to an unbalanced collection. A study comparing librarian-selected and patron-selected EBL e-books at five academic libraries from 2005 through 2009 showed this not to be the case. User-selected titles were, in fact, used twice as often as librarian-selected titles, on average 8.6 times per year vs. 4.3 times per year for librarian-selected titles. In addition, user-selected

titles were also used by almost twice as many unique users as librarian-selected titles (4.7 unique users vs. 2.4 unique users respectively). In terms of collection balance, at four of the five libraries, the subject profiles for the user-selected and librarian-selected titles were similar. In the library where the profiles appeared to be at variance, the librarian-selected collection appeared to overemphasize the science and technology titles.<sup>8</sup>

### Getting Started with PDA

In the initial discussions with YBP, we made it clear that we were looking for an e-book-only PDA plan, entirely unmediated (library staff would have no veto on whether or not a user-selected title would be purchased) with instantaneous access to the content as soon as the user discovered an item of interest. In addition, we decided locally that the PDA pilot would not be announced to the public to avoid any possible skewing of purchases, though titles in the program were recorded in the catalog and the availability of the ebrary platform was public. The intent was for users to find these titles in the online catalog and purchase them unknowingly with their clicks entirely on their own. For the trial, ebrary set our "trigger" for purchases at the tenth click on any page of the e-book, a generous level, which was a result of ebrary's vigorous pursuit of publisher commitment to these terms. Unlike PDA programs from some other vendors, use of any part of the e-book could trigger a purchase, even just a cursory glance at the title, table of contents, preface, or index.

With these terms and conditions in mind, we decided to provide access to all 96,000 titles in the ebrary PDA pilot database via MARC records loaded into our local catalog. The free MARC records supplied by ebrary were loaded into the Libraries' Aleph system in a batch. Since we found no significant quality issues with the records, they were accepted "as is." Codes were added to the records in MARC field 945 to enable global changes,

batch removal, etc. Through what turned out to be a fortunate error, however, only 19,000 of the 96,000 records were loaded. Given the high use this accidentally limited selection received, having the full complement of titles available would likely have swamped earmarked funds in record time.

### Keeping PDA Sustainable

The budget for patron-initiated purchases was set at \$50,000, with an initial \$25,000 set aside in a deposit account with ebrary. The mechanics for PDA were in place by early September 2009, but the actual pilot did not begin until October 1. As soon as the titles were made available through the online catalog, their use took off at a swift pace. During the partial "free" month of September, when patron uses did not count toward a purchase (it was essentially a trial in the usual sense), Iowa logged 2,944 user sessions for 1,035 e-books. Users viewed 24,020 pages and printed 804. As judged from the high level of usage, the effect of placing potential purchases in the library catalog was to put the catalog front and center as a discovery tool for patrons.

By the end of November, the PDA pilot at the University of Iowa was playing out as it had at several other institutions, including The Ohio State University Libraries.<sup>9</sup> The e-books were popular and the budgeted funds were disappearing faster than anyone had anticipated. In the first two months, spending crested \$28,000. Our users had purchased 262 e-books, and the weekly expenditures were increasing. While pleased with the enthusiastic response to the PDA collection, we quickly realized that this level of spending would not be sustainable through even the end of the academic year, much less the fiscal year. Rather than terminate the pilot for a service that users clearly found valuable, as happened with Ohio State's first PDA pilot, the decision was made to explore ways of making the PDA pilot affordable over a longer period. The most obvious way to do this was to

limit the size of the set of titles that users could purchase with their clicks. To do so, the libraries contacted YBP for assistance.

At this stage of the pilot program, YBP staff applied "front-end mediation" to the titles available. After some consultation, YBP suggested the possibility of using our virtual approval plan profile as a tool to limit the PDA offerings. The YBP profile for printed books had been carefully tailored to mirror the curricula and programs at the University of Iowa. YBP matched the pilot titles against the print approval plan rules in a simulation, and the results gave us all pause, as the net result in titles was low. It was a case of overdoing the specifications. The approval print plan had 105 exclusions in LC subject areas, 31 exclusions in nonsubject areas, and 2,000 exclusions by publisher and series. There was some back and forth at this point as we tried customizing the exclusions in various ways to yield different results with respect to the number of titles to be offered for patron selection. YBP indicated that another option would be to write an actual e-book-only plan that would deliver e-book titles just as our print plan delivered print titles. This in turn raised the question whether we truly wanted patron input across the whole spectrum, or if we in fact preferred to use the existing criteria for selection as expressed in the traditional print plan. Our decision was to try to minimize exclusions, and let the users decide.

In addition to applying the limits of the YBP profile, we took steps to block e-book content available elsewhere. Iowa had recently purchased e-book packages from Elsevier, Wiley, and Springer, and those publishers and associated imprints were blocked from the PDA collection. Titles available through ebrary's Academic Complete leased collection, to which the libraries had subscribed at the beginning of the pilot, were also excluded. We chose to winnow the collection further by including titles published 2008 and on, reducing the price limit for individual titles to \$250. We continued to exclude popular

content level (as defined by YBP profiling) and the K subclasses (Iowa’s Law Library operates independently). Together these limits resulted in narrowing the pool to just under 8,000 titles. When the date limitation was moved to include titles published 2005 and later, the collection rose to about 12,000 titles, which seemed to be a reasonable number.

**Selection in the PDA Environment**

A concern from the beginning of the pilot was duplication by PDA of selector-chosen e-books, which are available to purchase title by title through Global Online Bibliographic Information (GOBI). Through a manual process during the trial phase, YBP loaded into their GOBI software those titles reported by ebrary as user selections. As a result, GOBI would display as owned any of the titles acquired via PDA, preventing selectors from reordering the titles without specifically overriding the exception displayed for that title. Obviously, patrons could not see this information in the catalog, so the pilot underwrote duplicate titles by accepting any such as returns. The automated integration of the YBP-ebrary Demand Driven service, implemented in March 2011, will provide continuous history of purchases, as well as notice of PDA availability, as part of the status of each title in YBP’s GOBI.

By the end of the first year of the pilot, we felt the experience had been positive enough to warrant continuation. As ebrary shifted their provisional PDA program to a production environment, they adjusted the criteria that would trigger a purchase. Beginning in October 2010, ebrary redefined a triggering event to be ten page views (in the body of the work, excluding tables of contents and indexes) within a user session; ten minutes of real usage of a title within a user session; or one instance of copying or printing, excluding views of table of contents and index.

As we concluded the first year of experience, we began to examine the results of our experience and to ask how the selection and use of the patron-chosen collection was similar to and different from that of our traditionally selected one. What were the general characteristics of the PDA selections our users had made? Were user-triggered titles more or less likely than print selections to be reused? How did the availability of e-books affect the use of print equivalents when we held both?

**ebrary Usage Analysis**

Libraries staff analyzed up to twelve months of data (between September 2009 and September 2010) for PDA purchases as well as for all ebrary usage, including the subscription titles in ebrary’s Academic Complete collection. Iowa ultimately loaded 12,947 PDA titles and 47,367 subscription titles into the online catalog, for a total of 60,314 e-book records. For the purposes of

<b>Month</b>	<b>Weekly Average Cost (\$)</b>	<b>Books Purchased/ Month</b>	<b>Average Cost/ Book (\$)</b>
Oct. 2009	3,549.08	133	106.74
Nov. 2009	3,906.56	145	107.77
Dec. 2009	3,015.04	119	101.35
Jan. 2010	810.66	31	104.60
Feb. 2010	1,556.88	35	177.93
Mar. 2010	1,737.49	77	90.26
Apr. 2010	1,400.47	58	96.58
May 2010	1,034.14	44	94.01
June 2010	987.90	36	109.77
July 2010	967.79	45	86.03
Aug. 10	1,540.93	58	106.27
Sept. 10	1,669.83	69	96.80
Average	1,848.06	71	106.51

usage analysis, "user sessions" were used; these are defined by ebrary as the number of times a patron uses a book in a unique ebrary session and is equivalent to COUNTER's "user session" for electronic books. For example,

in a unique session within ebrary, a user may navigate and read several books, and the usage counts only as one "user session" for each book viewed. Once the user closes the browser window or logs out, the session ends.

**TABLE 2**  
**Publishers Purchased on PDA Sorted by Titles Purchased**

<b>Publisher</b>	<b>Titles Purchased</b>	<b>Total Uses</b>	<b>Average Use per Publisher</b>
Taylor and Francis	211	758	3.6
Elsevier*	184	1,309	7.1
Wiley*	83	347	4.2
Cambridge University Press	60	246	4.1
McGraw-Hill	53	942	17.8
Oxford University Press	53	332	6.3
Guilford Press	46	430	9.3
Palgrave Macmillan	32	145	4.5
Sage	23	107	4.7
Princeton University Press	14	134	9.6
Duke University Press	12	69	5.8
Brill	12	66	5.5
Ashgate	11	37	3.4
University of Minnesota Press	10	114	11.4
AMACOM	8	104	13.0
University of Chicago Press	7	27	3.9
MIT Press	6	23	3.8
Continuum International Publishing	5	66	13.2
Emerald	5	14	2.8
Zed Books	5	9	1.8
University of North Carolina Press	2	13	6.5
University of Toronto Press	2	4	2.0
ME Sharpe	1	13	13.0
Louisiana State University Press	1	11	11.0
Springer	1	3	3.0
University of Michigan Press	1	3	3.0
CABI Publishing	1	2	2.0
IGI Global	1	1	1.0
Total	850	5,329	6.3

\*Elsevier and Wiley were blocked from profile in Feb 2010 because of consortial deals.



**Patron-Driven Acquisitions Usage Data**

For patron-driven purchased books, Iowa analyzed twelve months of data (October 2009–September 2010). The library spent nearly \$90,000 on 850 PDA books during this period, at an average of \$1,848 per

week and \$106 per book (see table 1). It is worth noting the variation in spending by month over the past year; primarily the result of changes in the set of books available, as described above. When the profile was scaled back at the end of December

**TABLE 3  
Publishers Purchased on PDA, Sorted by Average Use per Publisher**

<b>Publisher</b>	<b>Titles Purchased</b>	<b>Total Uses</b>	<b>Average Use per Publisher</b>
McGraw-Hill	53	942	17.8
Continuum International Publishing	5	66	13.2
AMACOM	8	104	13.0
ME Sharpe	1	13	13.0
University of Minnesota Press	10	114	11.4
Louisiana State University Press	1	11	11.0
Princeton University Press	14	134	9.6
Guilford Press	46	430	9.3
Elsevier*	184	1,309	7.1
University of North Carolina Press	2	13	6.5
Oxford University Press	53	332	6.3
Duke University Press	12	69	5.8
Brill	12	66	5.5
Sage	23	107	4.7
Palgrave Macmillan	32	145	4.5
Wiley*	83	347	4.2
Cambridge University Press	60	246	4.1
University of Chicago Press	7	27	3.9
MIT Press	6	23	3.8
Taylor and Francis	211	758	3.6
Ashgate	11	37	3.4
Springer	1	3	3.0
University of Michigan Press	1	3	3.0
Emerald	5	14	2.8
University of Toronto Press	2	4	2.0
CABI Publishing	1	2	2.0
Zed Books	5	9	1.8
IGI Global	1	1	1.0
<b>Total</b>	<b>850</b>	<b>5,329</b>	<b>6.3</b>
*Elsevier and Wiley were blocked from profile in Feb 2010 because of consortial deals.			

<b>TABLE 4</b>		
<b>Subject Areas Purchased on PDA</b>		
<b>LC</b>	<b>Class</b>	<b>PDA Titles Purchased (12 months)</b>
R-RJ, RL-RM	Medicine	133
HM-HT	Sociology	72
HD, HF-HJ	Economic History, Commerce	58
L-LG	Education	54
QH-QL	Natural History, Biology, Botany, Zoology	43
BF	Psychology	37
JA-JZ	Political Science	34
QM-QT	Human Anatomy, Physiology, Microbiology	28
TA-TN	Engineering	28
BL-BX	Religion	24
B-BD, BH-BJ	Philosophy	19
HV	Social Pathology. Social and Public Welfare	19
P	Philology. Linguistics	19
QA	Mathematics	18
M-MT	Music	17
PR-PS	English Literature, American Literature	17
QB-QC	Astronomy and Physics	17
QD	Chemistry	17
HB-HC	Economic Theory	16
QA 75-76	Computer Science	15
PB-PF, PH-PJ	Languages and Lit	12
GN-GT	Anthropology	9
N-NX	Visual Arts	9
DA-DR	History. Europe	8
E-F	History. America	8
G-GF	Geography (General)	8
GV	Recreation. Leisure	8
RS	Pharmacy	8
TR	Photography	8
D, DS, DU-DX	History (General)	6
K	Law	6
PN	Literature. General and Universal Literary History	5
TP	Chemical Technology	5
TS	Manufactures	5
U-UH	Military Science	5

**TABLE 4**  
**Subject Areas Purchased on PDA**

LC	Class	PDA Titles Purchased (12 months)
RK	Dentistry	4
T	Technology (General)	4
Z-ZA	Bibliography. Library Science and Information Resources	4
DT	History. Africa	3
HE	Transportation and Communications	3
PA	Classical Languages and Literature	3
H	Social Sciences (General)	2
HA	Statistics	2
PK-PM	Languages and Lit. Indo-Iranian	2
QE	Geology	2
SF-SH	Animal Culture, Aquaculture	2
GV 1580-1799	Dance	1
HX	Socialism. Communism. Anarchism	1
PG	Languages and Lit. Slavic. Baltic	1
PQ	Romance Literatures, American Literature	1
PT	Germanic Literature	1
Q	Science (General)	1
S	Agriculture (General)	1
TT	Handicrafts. Arts and Crafts	1

2009, it was restricted too much, which in turn curbed buying dramatically. By April 2010 the profile had stabilized following further adjustments.

Twenty-eight publishers were represented among our PDA purchases. Elsevier and Wiley were blocked from our profile in February 2010 due to consortial e-book acquisitions. The publisher data in tables 2 and 3 are sorted differently; the first shows the number of books purchased from each publisher, and the second shows the average use per publisher.

The average use per publisher can be viewed as an indicator of the “value” of the publisher to the reader (see table 3). Several publishers with relatively high average use per publisher have very few books purchased, such as Continuum International

Publishing and M.E. Sharpe. But the high usage per title among those purchased from such publishers suggests a high degree of value to patrons. Furthermore, the top six publishers in terms of average use per title produce books on a wide spectrum of subject matter. McGraw-Hill is a general higher education publisher with a focus on medicine and math, Continuum a general social science and humanities publisher, AMACOM a division of the American Management Association, and M.E. Sharpe primarily a publisher in the social sciences, humanities, and business.

Examination of the subject areas purchased via PDA show a spread across all subject areas, with an emphasis on medicine, sociology, and economics, as illustrated in table 4. The subject areas were

**TABLE 5**  
**Use of PDA Books**

<b>Titles with...</b>	<b>Number of Titles</b>	<b>Total Titles Used (%)</b>
1 use	199	30.6
2–5 uses	393	60.4
6–10 uses	134	20.6
11–20 uses	78	12.0
21–30 uses	30	4.6
31–49 uses	7	1.1
50+	9	1.4

categorized according to LC class ranges. A variety of reasons may explain why certain subject classes had considerably more purchases than others. Users in certain disciplines may be more comfortable with the e-book format. Perhaps the current monographic collection is not adequately supporting certain subject areas due to budget constraints or librarian decisions. For many years, collection management librarians in the sciences have limited book acquisitions in favor of journal subscriptions in response to faculty demand. It may also be that there are relatively more books offered in the PDA plan for these subject areas. We plan to conduct further analysis on the 13,000 PDA books

offered to our patrons to determine how the distribution by subject of PDA titles affects and aligns with user behavior.

Books purchased by PDA show persistent downstream use once triggered. The majority (60%) of PDA books experienced between two and five user sessions in the past year, and more than 80 percent of the books saw between two and ten user sessions (see table 5). This represents significantly more use than most print books receive as measured by circulations in a given year, according to the 1979 Kent Study<sup>10</sup> and the results of informal circulation surveys reported by Rick Lugg.<sup>11</sup> Preliminary statistics from a similar study done at the University of Iowa, an examination of five years of circulation for print books purchased in 2004, indicate that 48 percent of the books have not circulated at all, and another 15 percent have circulated only one time. A comparable study of print circulation recently done at the University of Denver again pointed to very low circulation rates for a large portion of their collection.<sup>12</sup>

Examination of the most heavily used PDA titles raises interesting questions. Two of the top three titles are test prep books—workbooks supporting preparation for various standardized tests (see table 6). In the past, most academic librar-

**TABLE 6**  
**Top Ten Used PDA Titles**

<b>Title</b>	<b>User Sessions – 12 Months</b>
<i>First Aid for the USMLE Step 3 (2nd Edition)</i>	311
<i>Current Diagnosis and Treatment: Pediatrics (19th Edition)</i>	97
<i>McGraw-Hill's GRE (2010 Edition)</i>	87
<i>Theory of the Leisure Class</i>	70
<i>Agricultural Revolution in Prehistory: Why Did Foragers Become Farmers?</i>	66
<i>Time Trap: The Classic Book on Time Management</i>	55
<i>Principles and Practice of Structural Equation Modeling</i>	55
<i>Harrison's Manual of Medicine</i>	51
<i>Women, Ideology and Violence</i>	50
<i>Does God Belong in Public Schools?</i>	47

ies have not routinely purchased these materials since they often get stolen or written in, rendering them unusable. The data strongly suggest that test prep books are valued by our patrons, and the e-book format seems to remedy the problems that result from supplying consumable print versions. The data support the idea that e-book availability should provoke reexamination of some long-standing collection development policies and practices.

Perhaps academic libraries will purchase more materials like test prep materials now that they are available in e-book formats. A complete list of the 850 PDA titles and their usage is available in the online appendix ([http://ir.uiowa.edu/lib\\_pubs/80](http://ir.uiowa.edu/lib_pubs/80)).

### PDA and Print Duplicates

By the end of the eleven-month period, the libraries held 166 print duplicates (some purchased during this period, others previously) of PDA selections, equaling 23 percent of the 714 PDA titles purchased in the same time span. The print duplicates were acquired for several reasons. First, some titles were parts of a series, such as *Methods in Cell Biology*, which could not be easily identified through the process of matching cataloging records. The local record for the series resides under a series title while ebrary produces a separate record for each individual title within the series. Second, some print books had been purchased before the e-book was triggered. Despite the availability of the title in print, users were demonstrating their preference for electronic versions. Third, some print titles were purchased after the e-book was acquired, possibly an

**TABLE 7**  
**Print Duplicates of ebooks Purchased Via PDA**  
**from Ebrary**

Number of Print Circulations	Number of Titles	Total Circulations (%)
0 circs (before and after PDA)	123	14.0
1 circs (before PDA)	40	50.1
1 circs (after PDA)	39	49.9
2 circs (before PDA)	41	77.0
2 circs (after PDA)	12	23.0
3 circs (before PDA)	19	86.0
3 circs (after PDA)	3	14.0
4+ circs (before PDA)	49	89.0
4+ circs (after PDA)	6	11.0
Total circs before PDA	541	85.0
Total circs after PDA	100	15.0

oversight by the librarian placing the order or perhaps an indication of the selector's preference for print books on the basis of their perceived convenience, readability, or long-term preservation. Occasionally a patron has requested that a liaison acquire a book in print form in addition to the e-book as a preferred medium for extended use.

An analysis of the print circulation statistics indicates a remarkable preference for online materials when they are available. Leaving aside books with no print circulations, it is very apparent that the circulation of the print copy drops dramatically once the electronic version is available, especially for those books that had received two or more print circulations prior to the start of the PDA program (October 2009) (see table 7).

Comparing total circulation of the print titles after the PDA program began (100 circulations) with the user sessions of the 166 titles in ebrary (1,030 user sessions) reveals a ten-fold increase in "use." While print books, by their nature, cannot generate as much use since they are only available to one person at a time during their longer checkout period, the data show a notable preference for the electronic books.

<b>Publication Date of Duplicates</b>	<b>Titles Purchased</b>
2008	33
2004	26
2007	26
2009	21
2005	16
2006	12
2003	8
2001	6
1980–1989	5
pre-1980	4
2002	4
1990–1995	3
2000	2

Further analysis of the duplicates shows quite a few older publication dates for purchased e-books (2005 and older) (see table 8). The data further support the supposition that users prefer online access, even when a newer print edition may be available in the library (cases were noted where this happened). Publishers would do well to take note of this preference and offer a wide variety of backlist titles in electronic format when they are still relevant and useful to users of academic libraries.

### **Total ebrary Usage**

Eleven months of data (September 2009–July 2010) were used to examine total ebrary usage, combining usage reports for our PDA-purchased titles and our Academic Complete subscription titles. From a total of more than 60,000 ebrary titles in our catalog, 9,387 titles were used by patrons, representing about 15 percent of the titles available. We had 88,688 total user sessions in the time period examined, and 40 percent of the ebrary titles that were used saw three or more user sessions (see table 9).

A list of the most heavily used publishers sorted by user sessions shows a robust variety of publishing houses (see table 10). The fact that the largest number of user sessions are found in the “Other” category and the prominent presence of university presses indicate the substantial range of publishers represented in ebrary, and our users take advantage of that variety. The data become particularly interesting when the same data are sorted by average use per title. An entirely different set of publishers rises to the top.

The average use per publisher gives evidence of the “value” of the publisher to our users, indicating which publishers issued the titles that users returned to most often. The average for all publishers was 4.8 user sessions per publisher title, while those at the top nearly doubled the average. Beacon Press (an affiliate of the Unitarian Universalist Association), AMACOM, and World Bank all publish primarily nonscientific texts, affirming the trend that more and more social scientists and humanists are using e-books.

When the university press publishers were analyzed in the same manner, there were no surprises concerning which publishers enjoyed the most user sessions. They tended to be the largest university presses with more than 200 titles used in ebrary. Those publishers include Oxford University Press (3,130 user sessions), Cambridge University Press (1,872 user sessions), University of Minnesota Press

<b>User Sessions</b>	<b>Titles Used</b>	<b>Total Ebrary Usage (%)</b>
1	3,049	32.5
2	2,580	27.5
3-5	1,982	21.1
6-10	1,042	11.1
11-49	661	7.0
50-100+	73	8.0
Total	9,387	

(1,426 user sessions), and the University of California Press ( 1,426 user sessions). Surprisingly, when the average use per

publisher is analyzed, entirely different publishers rise to the top. Many of those publishers have a limited number of titles

**TABLE 10**  
**Top 30 Ebrary Title Usage by Average Use per Title**

<b>Publisher</b>	<b>Titles Accessed</b>	<b>Total User Sessions For Titles Accessed</b>	<b>Average Use/Title</b>
Beacon Press	25	207	8.3
AMACOM	61	488	8.0
World Bank	45	342	7.6
University Presses (various) <sup>a</sup>	325	2,266	7.0
MIT Press	136	947	7.0
Random House	56	375	6.7
Crown Publishing	31	206	6.6
University of California Press	217	1,426	6.6
Brookings Institution	57	370	6.5
McGraw-Hill	525	3,396	6.5
Knopf	119	762	6.4
I. B. Tauris	47	291	6.2
Yale University Press	116	683	5.9
M.E. Sharpe	37	213	5.8
Columbia University Press	66	376	5.7
Guilford Press	162	901	5.6
Stanford University Press	50	272	5.4
Princeton University Press	95	510	5.4
Other <sup>b</sup>	1,276	6,821	5.3
University of Minnesota Press	267	1,426	5.3
Multilingual Matters	43	222	5.2
NYU Press	92	474	5.2
Kogan Page, Limited	34	175	5.1
Oxford University Press	627	3,130	5.0
Indiana University Press	62	309	5.0
University Press of Mississippi	29	143	4.9
John Benjamins Publishing Company	120	577	4.8
University of Chicago Press	59	278	4.7
Rand Corporation	31	143	4.6
McGill-Queen's University Press	41	185	4.5

<sup>a</sup> “University Presses (various)” publisher category includes any university press with less than 35 user sessions.

<sup>b</sup> The “Other” publisher category includes any publisher with less than 25 user sessions.

University Press	Number of Titles	User Sessions	Average Uses/Title
Northwestern University Press	2	42	21.00
University of Alabama Press	10	192	19.20
University of Hawaii Press <sup>a</sup>	19	203	10.68
MIT Press	136	947	6.96
Purdue University Press	4	27	6.75
University of California Press	217	1,426	6.57
Yale University Press	116	683	5.89
Columbia University Press	66	376	5.70
University of Nebraska Press	18	102	5.67
Texas A & M University Press	6	33	5.50
Stanford University Press	50	272	5.44
Princeton University Press	95	510	5.37
University of Minnesota Press	267	1,426	5.34
NYU Press	92	474	5.15
Oxford University Press	627	3,130	4.99
Indiana University Press	62	309	4.98
University Press of Mississippi	29	143	4.93
Amsterdam University Press	15	73	4.87
Harvard University Press	20	96	4.80
University of Chicago Press	59	278	4.71
<sup>a</sup> One outlier from University of Hawaii Press titles was removed due to extraordinary usage. Japanese Communication: Language and Thought in Context received 972 user sessions and would have skewed results.			

that received remarkable use (see table 11). While the average use per title for university press publishers was only slightly higher than for all publishers (4.97 and 4.8 respectively), the top three publishers on table 11 received exceptionally heavy use.

The last element in our evaluation of total ebrary data involved subject analysis. This analysis is limited only to those titles that received use. In the future, it would be useful to determine how the subjects break down within our total ebrary offerings (in our case over 60,000), allowing analysis of what percentage of each subject area received use. These data were not available from ebrary, and extracting it from

our catalog was not possible. In terms of the most titles used, medicine came in first, which is not surprising since the University of Iowa has a large medical school and four other health sciences colleges, plus a large teaching hospital. After medicine, however, the most used subject areas fall into social sciences and humanities categories. Table 12 indicates the number of titles that were used in each subject area, while table 13 indicates the subjects with the most user sessions.

Subject analysis of the titles used demonstrates that users of social sciences and humanities books are ready and willing to use online content, supporting the notion



<b>LC</b>	<b>Class</b>	<b>Titles</b>	<b>Total Titles (%)</b>
R-RJ, RL-RM	Medicine	1,118	12.00
HD, HF-HJ	Economic History, Commerce	775	8.32
HM-HT	Sociology	640	6.87
PR-PS	English Literature, American Literature	453	4.86
L-LG	Education	401	4.30
E-F	History. America	368	3.95
BL-BX	Religion	352	3.78
PN	Literature. General and Universal Literary History	339	3.64
P	Philology. Linguistics	271	2.91
JA-JZ	Political Science	267	2.87
BF	Psychology	264	2.83
HV	Social Pathology. Social and Public Welfare	261	2.80
TA-TN	Engineering	236	2.53
M-MT	Music	228	2.45
QH-QL	Natural History, Biology, Botany, Zoology	222	2.38
D, DS, DU-DX	History (General)	220	2.36
B-BD, BH-BJ	Philosophy	217	2.33
QM-QT	Human Anatomy, Physiology, Microbiology	208	2.23
K	Law	198	2.13
QA	Mathematics	196	2.10
HB-HC	Economic Theory	177	1.90
DA-DR	History. Europe	165	1.77
QA 75-76	Computer Science	141	1.51
QD	Chemistry	112	1.20
PB-PF, PH-PJ	Languages and Lit	111	1.19
GV	Recreation. Leisure	109	1.17
QB-QC	Astronomy and Physics	106	1.14
N-NX	Visual Arts	106	1.14
GN-GT	Anthropology	101	1.08
G-GF	Geography (General)	89	0.96
PA	Classical Languages and Literature	82	0.88
Q	Science (General)	58	0.62
TR	Photography	53	0.57
Z-ZA	Bibliography. Library Science and Information Resources	52	0.56

**TABLE 12**  
**Subject Analysis Of All Ebrary Titles Used**

LC	Class	Titles	Total Titles (%)
PK-PM	Languages and Lit. Indo-Iranian	48	0.52
U-UH	Military Science	48	0.52
PQ	Romance Literatures, American Literature	46	0.49
TP	Chemical Technology	44	0.47
T	Technology (General)	39	0.42
DT	History. Africa	36	0.39
C-CT	Aux Sciences Of History	35	0.38
RS	Pharmacy	32	0.34
H	Social Sciences (General)	29	0.31
S	Agriculture (General)	29	0.31
HX	Socialism. Communism. Anarchism	29	0.31
RT	Nursing	24	0.26
SF-SH	Animal Culture, Aquaculture	22	0.24
SB-SD	Plant Culture and Forestry	20	0.21
HE	Transportation and Communications	19	0.20
TS	Manufactures	19	0.20
QE	Geology	18	0.19
PT	Germanic Literature	17	0.18
TX	Home Economics	15	0.16
PG	Languages and Lit. Slavic. Baltic	10	0.11
GV 1580-1799	Dance	9	0.10
RK	Dentistry	8	0.09
A-AZ	General Works	8	0.09
V	Naval Science	6	0.06
HA	Statistics	6	0.06
TT	Handicrafts. Arts and Crafts	4	0.04

that acceptance of digital scholarship in these areas is becoming much more widespread than in the past. We hope that publishers will take note of these data and offer more e-books in these areas. Music serves as a good example: 228 music titles were used over the past year; these received over 2,300 user sessions, giving an average of more than ten uses per music title.

The list of the fifty top-used ebrary titles shows an eclectic and varied group of titles (see table 14). Because the Univer-

sity of Iowa has purchased large e-book packages from science publishers such as Elsevier and Springer, fewer science titles and more social sciences and humanities titles appear on the list.

### Future Analyses

In the coming year, with more statistics generated weekly as we continue our PDA and subscription programs with ebrary, we hope to obtain more complete data to assist in the analysis of our subscription titles. En-

**TABLE 13**  
**Subject Analysis Ebrary Titles By User Sessions**

LC	Class	User Sessions	Total User Sessions (%)
R-RJ, RL-RM	Medicine	5,356	12.08
HD, HF-HJ	Economic History, Commerce	3,485	7.86
HM-HT	Sociology	2,959	6.67
M-MT	Music	2,374	5.35
PR-PS	English Literature, American Literature	1,882	4.24
L-LG	Education	1,774	4.00
E-F	History. America	1,696	3.82
PN	Literature. General and Universal Literary History	1,659	3.74
JA-JZ	Political Science	1,417	3.20
P	Philology. Linguistics	1,345	3.03
HV	Social Pathology. Social and Public Welfare	1,261	2.84
BL-BX	Religion	1,147	2.59
TA-TN	Engineering	1,122	2.53
PK-PM	Languages And Lit. Indo-Iranian	1,107	2.50
D, DS, DU-DX	History (General)	1,036	2.34
BF	Psychology	1,000	2.26
K	Law	998	2.25
B-BD, BH-BJ	Philosophy	973	2.19
QM-QT	Human Anatomy, Physiology, Microbiology	944	2.13
QH-QL	Natural History, Biology, Botany, Zoology	857	1.93
DA-DR	History. Europe	817	1.84
HB-HC	Economic Theory	813	1.83
QB-QC	Astronomy And Physics	728	1.64
QA	Mathematics	725	1.63
GN-GT	Anthropology	703	1.59
N-NX	Visual Arts	565	1.27
PB-PF, PH-PJ	Languages And Lit	554	1.25
QA 75-76	Computer Science	541	1.22
GV	Recreation. Leisure	462	1.04
QD	Chemistry	331	0.75
G-GF	Geography (General)	303	0.68
Z-ZA	Bibliography. Library Science and Information Resources	265	0.60

**TABLE 13**  
**Subject Analysis Ebrary Titles By User Sessions**

LC	Class	User Sessions	Total User Sessions (%)
PA	Classical Languages and Literature	255	0.58
DT	History. Africa	229	0.52
TR	Photography	217	0.49
Q	Science (General)	207	0.47
U-UH	Military Science	198	0.45
PQ	Romance Literatures, American Literature	159	0.36
TP	Chemical Technology	152	0.34
RS	Pharmacy	144	0.32
HE	Transportation and Communications	144	0.32
TS	Manufactures	141	0.32
RK	Dentistry	129	0.29
A-AZ	General Works	127	0.29
T	Technology (General)	122	0.28
H	Social Sciences (General)	120	0.27
C-CT	Aux Sciences of History	105	0.24
RT	Nursing	104	0.23
S	Agriculture (General)	84	0.19
SB-SD	Plant Culture and Forestry	80	0.18
HX	Socialism. Communism. Anarchism	76	0.17
SF-SH	Animal Culture, Aquaculture	75	0.17
PT	Germanic Literature	75	0.17
QE	Geology	56	0.13
TX	Home Economics	48	0.11
PG	Languages and Lit. Slavic. Baltic	27	0.06
V	Naval Science	19	0.04
HA	Statistics	18	0.04
GV 1580-1799	Dance	17	0.04
TT	Handicrafts. Arts and Crafts	17	0.04

hanced reports released by ebrary in early 2011 increased the granularity of the data: for example, distinguishing between subscription and PDA titles in our usage reports and including publication dates for each title. Furthermore, future analysis should benefit from the partnership between YBP

and ebrary. To better determine which subject areas are benefitting from PDA, Iowa hopes to attach fund information to our purchased PDA titles someday (whether or not individual funds are charged or not). In addition, the YBP ebrary partnership will also more effectively eliminate unintentional

**TABLE 14**  
**Top 50 Ebrary Titles By User Sessions**

<b>Title</b>	<b>Publisher</b>	<b>User Sessions</b>
Japanese Communication: Language and Thought in Context	University of Hawaii Press	972
This is Your Brain On Music: The Science of a Human Obsession	Penguin Group (USA) Incorporated	899
First Aid for the USMLE Step 3 (2nd Edition)	McGraw-Hill Medical Publishing Division	304
Democracy Reader	International Debate Education Association	237
Beyond 1492: Encounters in Colonial North America	Oxford University Press, Incorporated	220
World Development Report 2006: Equity and Development	World Bank, The	174
Origins of Agriculture: An International Perspective	University of Alabama Press	157
Radical Innocent: Upton Sinclair	Random House Adult Trade Publishing Group	140
On the Postcolony	University of California Press	131
Latinos, Inc.: The Marketing and Making of a People	University of California Press	122
Rousing Drum: Ritual Practice in a Japanese Community	University of Hawaii Press	121
Lange Outline Review: USMLE Step 2	McGraw-Hill Medical Publishing Division	119
Empire of Magic: Medieval Romance and the Politics of Cultural Fantasy	Columbia University Press	115
Programming and Customizing the AVR Microcontroller	McGraw-Hill Professional	115
GRE Prep Course eBook	Nova Press	115
Confident Hope of a Miracle: The True Story of the Spanish	Knopf Publishing Group	111
First Aid for the USMLE Step 3	McGraw-Hill Professional Publishing	106
First-Time Manager's Guide to Team Building	AMACOM	93
Tunes for 'Toons: Music and the Hollywood Cartoon	University of California Press	92
Britannica Concise Encyclopedia	Encyclopaedia Britannica, Inc.	91
Theoretical Neuroscience: Computational and Mathematical Modeling of Neural Systems	MIT Press	91

**TABLE 14**  
**Top 50 Ebrary Titles By User Sessions**

<b>Title</b>	<b>Publisher</b>	<b>User Sessions</b>
Cultural Defense	Oxford University Press, Incorporated	89
Lange Outline Review: USMLE Step 3 (5th Edition)	McGraw-Hill Medical Publishing Division	88
Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed	Yale University Press	88
Cambridge History of Nineteenth-Century Music	Cambridge University Press	85
Indexes: A Chapter from the Chicago Manual of Style (15th Ed)	University of Chicago Press	84
Russian Foreign Policy in Transition: Concepts and Realities	Central European University Press	83
Purity and Danger: An Analysis of the Concepts of Pollution and Taboo	Routledge	83
Translation Studies Reader	Routledge	81
Unequal Childhood: The Importance of Social Class in Family	University of California Press	81
Working Girls: Gender and Sexuality in Popular Cinema	Routledge	80
Handbook of Bilingualism: Psycholinguistic Approaches	Oxford University Press, USA	76
Modernity at Large: Cultural Dimensions of Globalization	University of Minnesota Press	76
Black Chicago's First Century: Volume 1, 1833-1900	University of Missouri Press	76
Crisis in U. S. Foreign Policy: An International History Reader	Yale University Press	76
Going Lean: How the Best Companies Apply Lean Manufacturing	AMACOM	75
Iran Awakening: From Prison to Peace Prize: One Woman's Struggle at the Crossroads of History	Alfred A. Knopf Incorporated Canada	74
Sweet Anticipation: Music and the Psychology of Expectation	MIT Press	74
Future of Europe: Reform or Decline	MIT Press	73
Cobra II: The Inside Story of the Invasion and Occupation of Iraq	Pantheon	73
Hard Work: Remaking the American Labor Movement	University of California Press	73

**TABLE 14**  
**Top 50 Ebrary Titles By User Sessions**

Title	Publisher	User Sessions
State Failure and State Weakness in a Time of Terror	Brookings Institution Press	72
University As Urban Developer: Case Studies and Analysis	M.E. Sharpe, Inc.	69
Colonialism - Postcolonialism	Routledge	69
Music and Conflict Transformation: Harmonies and Dissonance	I. B. Tauris and Company, Limited	68
Braided Relations, Entwined Lives: The Women of Charleston's Urban Slave Society	Indiana University Press	68
Country of My Skull: Guilt, Sorrow and the Limits of Forgiveness in the New South Africa	Crown Publishing Group, Incorporated	67
Ventilation for Control of the Work Environment	John Wiley and Sons, Incorporated	66
Agricultural Revolution in Prehistory: Why Did Foragers Become Farmers?	OUP Oxford	66
Unmarked: The Politics of Performance	Routledge	66

duplicates between print and electronic titles offered from ebrary.

Finally, the changes in the criteria for triggering purchases, explained above, will likely affect our statistics in ways as yet unknown. The rate of purchases may slow, but examination of purchases since October 2010 (when the new triggering parameters were implemented), show an increase in purchasing, with the average number of books purchased per month increasing from 71 to 78. In the end, the many variables operating simultaneously make it nearly impossible to make predictions with confidence. These variables include, among many others, growing user familiarity with e-books in general and ebrary in particular; the changing universe of titles available in the PDA program; a dynamic user base (new faculty, new students); and changing curricula.

### Conclusions and Questions

As noted at the outset, experience to date has persuaded us that PDA can be a useful and effective tool for meeting user needs

and building the local collection. Given the still spotty coverage of academic publishing showing up in PDA corpora, it represents at present only one tool of many. Expert selection as practiced by liaison librarians is likely to continue playing a vital role for some time to come. Despite its success and promise, however, the role of PDA in the library's collection management program raises a number of hard questions. The questions addressed below form part of a larger set of issues surrounding the inexorable move from print to electronic delivery of information. These issues, which lie beyond the scope of this paper, relate to licensing terms and copyright, effects on interlibrary cooperation, long-term preservation, user experience, pricing models, the calculation of value (or cost/benefit), and the continued role of print, among others.

One of those hard questions relates to budgets and funding. How does the library responsibly budget for selection decisions being made unknowingly and on the fly by an unidentified subset of our

40,000+ potential users? For the sake of simplicity, we set aside central funds to cover the cost of PDA selections. In the traditional print environment, most monographic acquisitions have been funded to subject funds, allowing for tracking of expenditures by subject and program as well as control on overspending. While tracking by subject is easy enough for e-books bought through a PDA program, the application of control mechanisms is much more tenuous. It seems likely that the centralization of funding encouraged by other kinds of package deals and the high cost of electronic databases of all kinds may well be replicated with e-books. At the same time, it will be important to find ways to maintain some degree of balance in collecting intensity among programs needing support as patron-selected collections are built.

New methods and intermediaries for acquiring e-books seem to emerge weekly. Growing numbers of publishers are offering both individual titles and bundles. Other aggregators (JSTOR, Muse) are preparing to offer multipublisher collections of interest to academic libraries. Some vendors offer primary delivery of their e-book content through such e-reader devices as Kindle and Nook, though many librarians and users are eager to see access through these devices as simply one among several options for viewing purchased or leased content. Leasing models, both within PDA programs (ebrary, EBL) and outside them, are increasingly common. What then is the role of a PDA program in the overall collection development effort, particularly among this growing panoply of methods for acquiring e-books? PDA seems ideal for immediate satisfaction of user needs—certainly one of the primary goals of collection development. It does a good job of satisfying the sometimes unrecognized demand for interdisciplinary materials often overlooked through traditional selection methods. PDA can provide early warning about new research areas and alert liaisons to under-

supported parts of the collection. With their high rate of reuse, e-books coming via PDA by their very nature counter the problem presented by the disturbingly low rate of circulation of library selected collections. To the extent such e-books are represented in the set presented to users, PDA programs may also allow libraries to deliver new kinds of material not easily handled in the print environment, such as test materials. Still, it is not clear how a PDA program might work most effectively in combination with the other tools for collection building—approval plans, firm orders, continuations, and so on. How will, or should, liaisons adjust their behavior as selectors to take into account what users acquire, or may acquire, through their clicks? What becomes of the rapidly eroding expectation that libraries, at least research libraries, build collections for the future?

Iowa has participated in a number of consortially negotiated purchases of bundled publisher content (Springer, Brill, Elsevier, Wiley), where all or a substantial portion of a publisher's list of titles, both front- and backlist, is acquired at a highly favorable price per title. This "big deal" approach to e-book acquisition has delivered some impressive discounts, but it does not seem scalable across the wide range of academic publishers. Like the low use (or nonuse) of many journals in the traditional "big deal," many titles in these publisher e-book packages have seen no use, despite respectable usage numbers for the package as a whole. In comparison, PDA e-books tend to be priced at list, or even higher for multiple simultaneous users, but are charged of course only at the point that purchase is triggered by use. Are these two approaches to collecting e-books complementary or mutually exclusive and competing models, one of them doomed to obsolescence? What of the emerging aggregations of university press e-books being offered by Project MUSE, JSTOR, and others? The confusing and chaotic e-book marketplace sets before us an abundance of



ways to purchase or lease e-books, and little certainty about which approach will carry the day.

Publishers have been famously ambivalent, if not alarmed, about the effect of e-books in general, and PDA in particular, on their revenues, even their survival. Scant comfort arises from assurances by librarians that libraries will continue to pay in some fashion for access to needed content, for good reason. It seems quite likely that PDA programs could further marginalize the marketability of specialized monographs in academic fields with few readers. If libraries no longer buy the 40 percent of monographs never or rarely checked out, the effect on sales is undeniable. Will the paltry usage of monographs produced for academic reward systems eventually lead to what many would consider a more reasonable and economic system of distribution for such books?

While publishers are justifiably nervous, librarians at the same time encourage them to improve the viability of PDA programs by ensuring that e-book versions of new titles are available as soon as, if not before, the print equivalent. Other questions affecting the publishing environment include the potential effect of increased deployment of added material dependent on a digital platform (such as simulations and video). When will the availability of such enhanced content begin to affect the e-book landscape?

In the roiling cauldron of change now being felt by academic libraries, it would be foolhardy to hazard definitive responses to most of these questions, though some futures seem more attractive than others and worth some effort to bring into being. User-directed acquisition in some form has a valuable contribution to make in negotiating the transition to one of those futures.

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### Notes

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