

Implementing Patron-Driven Acquisitions Models for E-books: A Case Analysis at a University Library in U.S.

Shali Zhang

Maureen and Mike Mansfield Library, University of Montana
Missoula, MT 59812-9936, USA
shali.zhang@mso.umt.edu

Abstract. *Patron-driven acquisitions (PDA) model for acquiring electronic books is a relatively new concept which has helped redefine the collection development policies and ensure the purchased materials are used. At the University of North Carolina at Greensboro (UNCG) Libraries, the pilot PDA project for computer science books and the expanded PDA project for four additional disciplines were successful and the usage data show that all e-books selected by users and purchased by the Libraries were used more than the numbers of their counterparts of print books. The libraries are now using this Patron-Select model for all disciplines to select and purchase electronic books. The impact of the PDA e-book projects on collection development includes increased user access to PDA e-book; more students' participation in selection of PDA e-books; critical budget planning process, and decisions on avoiding duplicate formats.*

Keywords: Patron-driven Acquisitions, Collection Development, Academic Libraries

1. Introduction

The advancement of technologies is rapidly changing the methods of delivering scholarly and instructional contents to library users. When the number of circulation for print monographs has declined, academic and research libraries in the U.S. are looking for new ways in acquiring monographic contents in order to meet the needs of their users who are “digital natives”. Upon the waves of successfully replacing most print reference materials (i.e., indexes and abstracts, statistics, dictionaries, bibliographies, etc.) with electronic platforms such as databases and data sets, and replacing many print journals with electronic journals, scholarly and instructional monographs in an electronic format have witnessed rapid growth. Libraries have continued spending more on acquiring e-books than before. In the Primary Research Group’s annual report, it provides data of the survey results for the library use of e-book. The Report shows that libraries in the sample anticipated in spending a mean of \$128,712 on e-books in 2012, representing an increase of 43 percent from the previous year (PRG, 2012). The data on expenditures of e-books from 38 research libraries within the Association of Southeastern Research Libraries (ASERL), the largest regional research library consortium in the United States, indicate that these libraries increased spending on e-books from \$3,545,607 in 2006 to \$10,384,484 in 2011 (Chart 1), though the 2012 expenditure data are not available. The number of e-books has grown from 5,452,850 volumes in 2006 to 21,346,014 in 2012 (ASERL Data, 2012).

Academic libraries in U.S. are continually looking for new ways in selecting and purchasing electronic books to meet the needs of users. One of the methods is patron-driven acquisitions (PDA) model for electronic books which have helped redefine their collection development policies and ensure the purchased materials are being used.

In responding to the needs of users from different subject disciplines, the University of North Carolina at Greensboro (UNCG) Libraries in U.S. started a pilot project by using a Patron-Select model from Mylibrary, a patron-driven acquisitions platform provided by Coutts Information Services in purchasing electronic books for the subject of computer science in summer 2008. The pilot project was a successful one. The usage data show that all e-books selected by users and purchased by the Libraries were used more than the numbers of their counterparts of print books. Based on the pilot project data, one year later, the Patron-Select model was expanded to four additional

disciplines which achieved the similar positive outcomes. The libraries are now using this Patron-Select model for all disciplines to select and purchase electronic books.

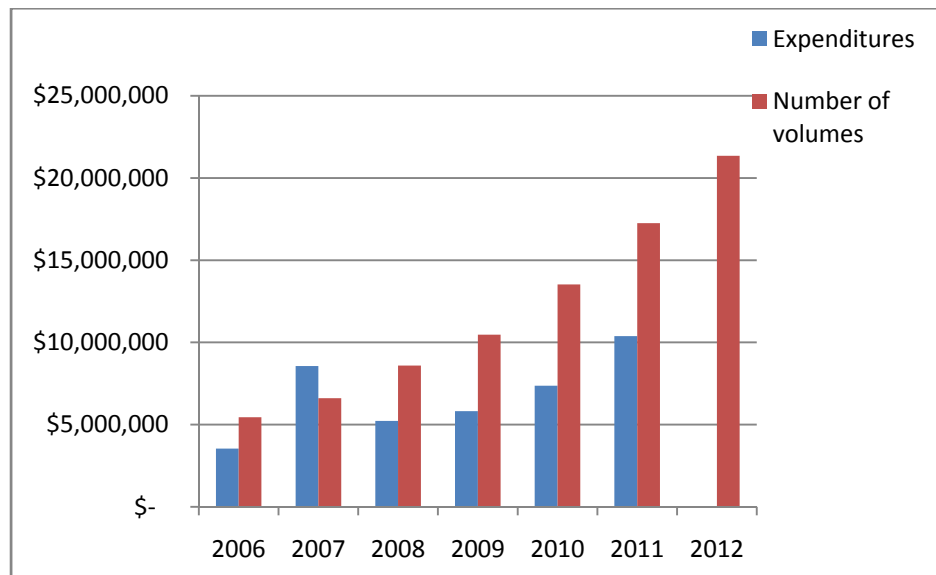


Chart 1. ASERL e-books information, 2006-2012

2. The institutional context

The University of North Carolina at Greensboro (UNCG), located in the southeast region in the U.S., is one of the seventeen campuses of the University of North Carolina System, with more than 18,000 students and over 2,000 faculty and staff on this campus. In 2006, UNCG was classified by the Carnegie Foundation for the Advancement of Teaching as a Research University with “*High Research Activity*”. The designation is expected to help UNCG attract outstanding faculty and graduate students, and to raise the university’s profile in North Carolina and beyond. With this new classification, transitioning funding in recurring money was provided to the university subsequently, including additional funding for library resources.

The students at the UNCG campus are diverse in their cultural backgrounds, social-economic status, learning styles, and residence choices. Among over 18,000 students, only 21 percent of undergraduate students live on campus housing or other living facilities provided by the University. Most of the students commute to and from the campus daily (UNCG Common dataset, 2012-2013). Furthermore, the University offers numerous distance learning programs through which the students are able to complete their academic degrees without coming to the campus. Accessing library resources through electronic platforms via the internet has become a necessity for students on campus and off campus in pursuing their education goals.

The UNCG Libraries have been recognized by faculty, students, and communities as an intellectual hub of the University. The Libraries have been a leader in the region to support teaching, research, and lifelong learning activities of the University and local communities through enhanced access to library materials. By December 2012, the Libraries provided users with more than 65,000 subscribed serials. Among these titles, less than 2,000 are counted as print journals. The Libraries offer more than 600 databases which have replaced most print reference materials. With shifting from checking out print materials within the library building to accessing scholarly and instructional resources anytime and any places, the UNCG libraries have aggressively expanded and facilitated access to monographic materials through electronic platforms.

3. A case analysis at the UNCG Libraries

In responding to the needs of faculty and students from various subject disciplines and from different locations, the

UNCG Libraries started exploring access to e-books in early 2008. Several vendors provided patron-driven acquisitions (PDA) e-book platforms, including ebrary, ebook library (EBL), and Mylibrary. Because the UNCG Libraries used Coutts Information Services for some of the print materials at that time, the representatives from the company provided a demo on the platform during their visits at the Libraries. Based on Patron-Select Model offered by Coutts, the vendor offers Mylibrary as an electronic platform to deliver e-book contents. The aggregated platform is integrated with libraries' OPAC for searches and views. The full MARC records are down-loaded into libraries' cataloging systems. The loaded records are integrated with other MARC records so that users' searches to e-books on OPACs are seamless. When users view and download an e-book title twice, the title is considered for a purchase. Libraries then are charged for a payment on the title. After the demo, the librarians at the UNCG Libraries had good impressions on Mylibrary for its ability of being able to search e-books through OPAC and on the Libraries' web site respectively.

Back in early 2008, purchasing e-books was still a new phenomenon. One of the library liaisons did a couple of informal pooling with students in the instructional classes on using e-books. None of the students showed any favor on this new monographic format. Nonetheless, seeing promising on the e-book platform such as Mylibrary encouraged the UNCG Libraries to explore the potential benefits of this new format. In order to gain needed experience and usage data, the Department of Computer Science at UNCG was initially chosen to participate in the pilot project. With uncertainty on how many titles would be chosen by users each year and on how much would be spent on e-books for one department, the Libraries looked into the pilot project to provide answers to these questions. Once the decision was made, several steps were taken to implement this pilot project.

- **Determine the budgetary amount**

Each year, the Libraries allocate \$4,000 annually to the Department of Computer Science on print monographs. Because of a short lifespan on publications for the discipline, the department liaison agrees to use the print monographic fund for the e-book pilot project. If expenditures on the pilot project went over the original allocation, additional funding from the general collections budget would be added. Therefore, the funding was not a major issue for this pilot project.

- **Set up profiles**

The initial subject profile was set up based on Library of Congress classification schemes. The non-subject parameters on the profile focus on e-books published by university presses, with publication dates from 2008 to present, and \$300 as a maximum ceiling price per item. Other non-subject parameters specify countries of publications, languages, readership levels, sets and series, and editions. These are the similar criteria on the profiles for e-books with that of print materials.

- **Review license agreement**

As it is with the case of procurement of any other electronic products, prior implementing the Coutts' Patron-Select e-book platform, a license agreement with the vendor was reviewed by a UNCG Counsel who is responsible for examining all license agreements related to purchasing electronic materials at the University. Fortunately, all major classes were reviewed, negotiated, and agreed upon quickly by both parties.

- **General workflow**

Prior to down-loading MARC records according to the Libraries' e-book profiles, the vendor offers to check the Libraries' integrated cataloging system on a monthly basis to avoid duplications. In this way, the MARC records for the duplicated titles on e-books would not be down-loaded into the libraries' cataloging database. Since then the vendor has continued this practice.

Each month, the profiled MARC records for e-books are down-loaded into the Libraries' cataloging system by one of staff at the Department of Cataloging. During the pilot period, the library liaisons were informed on loaded MARC records for e-books. Subsequently, the liaisons have included the option of e-books in their instructional classes, but did not use any of these e-books as examples. In this way, any item that was viewed or down-loaded two times or

more would be true usages by users. Each month, the vendor sends the Libraries an invoice which lists the titles being viewed and down-loaded for purchases. Because the Libraries have deposited collection funds to cover the expenditures on e-books, the vendor automatically deducted the funds according to the amount listed on each invoice.

The library staff at the Department of Cataloging have accepted most of down-loaded MARC records with little enhancement for purchase e-book titles. They only overlay a handful of brief records with a full record from OCLC if the vendor-provided MARC records deem incomplete. The full MARC record displayed on OPAC also informs users on the format of e-books as it shows in Chart 2.

Title:	Evaluation and testing in nursing education [electronic resource] / Marilyn H. Oermann, Kathleen B. Gaberson.			
Personal Author:	<u>Oermann, Marilyn H.</u>			
Holdings:	Call Number	Status	Location	Format
	EBOOK	World Wide Web Access		Online
INTERNET Link:	Available online. e-book			
Publisher:	New York, NY: Springer Publishing Company, c2009.			
Edition:	3rd ed.			

Chart 2. An e-book record on OPAC display

A special code was added to the 910 field of the MARC records to indicate where the records come from and the dates of down-loading. This process helps cataloging staff to generate reports when it is time to delete the MARC records for non-purchased e-book titles. Once a title is purchased, the wording in the 910 field is changed by cataloging staff to indicate that the Libraries own the title. This special code enables library staff in the Department of Acquisitions to collect data on e-book expenditures at the end of the fiscal year.

The Libraries have decided to delete MARC records from the cataloging system for non-purchased e-book titles after they are down-loaded for two years. In this way, the Libraries are able to ensure that the most current e-books are being viewed and purchased by users.

4. Funding models of PDA projects

Libraries have applied a variety of funding models to facilitate purchasing requested items from users. For instance, Texas A & M University Libraries in U.S. allocated six percent of its monographic budget to be used for materials requested by “*a university student, staff, or faculty member*” through a “*Suggest a Purchase*” project (Reynolds, et al, 2010). With that model, the Libraries purchased all requested items by users which cost less than \$150 per item and which were not owned by the Libraries. From 2007 to 2009, the Libraries purchased 8,665 items through the special funds. Among these items, 63 percent are printed books, 33 percent are DVDs, and four percent are other type of materials. This purchase model is valued by users at all levels of the university community, according to the authors’ survey results (2010).

The Greater Western Library Alliance (GWLA), a library consortium which includes 33 research libraries in Midwestern and Western states in the U.S., on the other hand, required all participants to allocate a minimum amount of funds as a deposit to be used for the user-initiated purchases on e-books when the consortium used Mylibrary as its e-book platform. To meet the required funding mandate, Southern Illinois University (SIU) Libraries, one of the GWLA members, used the end-of-year funds from collection budgets of this project. When SIU Libraries' fund ran low, the Libraries would temporarily suppress the available e-book MACR records until new funds were added to the deposit account. The Libraries have purchased 470 e-book titles through this project between November 2008 and April 2010 (Nabe and Imre, 2011).

University of Florida Libraries in U.S. set up a deposit account of initial \$20,000 with Coutts Information Services in 2009 when the Libraries began a PDA project for e-books. During the Libraries' first six-month pilot period from May to October 2009, 193 e-books were purchased with expenditures of \$20,624.26 (Carrico and Leonard, 2011).

The University of Newcastle Library in Australia modified its policy for purchasing e-books through a PDA model after more than \$67,000 was spent within the first five weeks when the library implemented a PDA project (Tenopir, 2010). *“Now the library restricts purchases to one per day, per person, and starts with an on-screen reading version rather than an immediate download when a patron clicks on a title. The library also pays for a loan before acquisition and has increased the number of loans to five before a book is purchased outright”*, Tenopir reports (2011).

At the UNCG Libraries, a separate pre-payment account was set up with the vendor (Coutts Information Service) who provides an e-book platform (Mylibrary) as designated funding source for user-initiated selection and purchases on e-books. The UNCG Libraries maintain a separate account with the vendor on purchasing other types of materials such as print monographs and continuation titles.

Though expenditures on PDA projects at the libraries in above-discussed come from different funding sources, it is obvious that for PDA projects, these libraries have set up designated accounts with the committed amount of funds to help facilitate the purchasing process for items selected by users. In comparison with their annual monographic funds at these libraries, the designated funds for the PDA projects are still relatively a small percentage. Nonetheless, the expenditures will continue increasing when more monographs are published in an electronic version (i.e., born-digital) and more items are available for users to select.

5. Expenditures on the UNCG Libraries' PDA Project

The UNCG Libraries started the PDA project as a pilot model from July 2008 to December 2009 on the subject of Computer Science. During that period, the total expenditure on e-books with the PDA model was over \$7,000, with 70 titles being viewed or downloaded two times or more by users. The expenditures for these titles were subsequently charged to the UNCG Libraries' pre-payment account designated to purchase PDA e-books, as it is shown in Chart 3.

Based on the data of the pilot project, in January 2010, the UNCG Libraries expanded the PDA e-book project to four additional departments in nursing, business, chemistry, and foreign languages. The expansion of the project achieved the similar positive outcomes. Between January and December 2010, a total expenditure on PDA e-books was \$17,817, with 172 e-book titles purchased.

In January 2011, the Libraries started using this model for all disciplines to select and purchase electronic books. Due to expansion of subject areas, more MARC records were down-loaded into the online cataloging system each month. Therefore, users have more options to choose e-books in their interest subject areas. The expenditures on PDA e-books were \$37,562, with 450 e-books purchased in 2011, a significant increase in comparison with those of the previous year. This trend has continued in 2012. Between January and June 2012, the first six months of the year, the Libraries spent \$23,577 and purchased 281 e-books. Chart 4 shows the summary of expenditures and the number of e-books purchased through the patron-driven acquisition project.

Dates	Invoice Amount	Number of titles purchased
Jul-08	\$125.40	1
Aug - 08	\$0.00	0
Sep-08	\$119.93	2
Oct – Dec- 08	\$0.00	0
Jan-09	\$607.06	6
Feb-09	\$2,496.87	20
Mar-09	\$784.57	10
Apr-09	\$289.11	4
May-09	\$530.58	9
Jun-09	\$0.00	0
Jul-09	\$287.90	5
Aug-09	\$1,456.72	6
Sep-09	\$503.94	7
Oct- Dec-09	\$0.00	0
Total	\$7,202.08	70

Chart 3. Expenditures from July 2008 – December 2009 (for Department of Computer Science)

Description	Invoice Amount	Number of titles
July 2008 - September 2009 with Computer Science Dept. only	\$7,202.08	70
Jan. - Dec. 2010, with depts. of Business, Chemistry, Computer Science, Literatures and Languages, and Nursing	\$17,817	172
Jan. – Dec. 2011, with all 42 depts.	\$37,562	450
Jan. - June 2012, with all 42 depts.	\$23,577.00	281
Total	\$86,158.08	973

Chart 4. Summary on expenditures and the number of e-books, 2008-2012

6. Content distribution on the selected e-books

Due to the expansion of the PDA project for e-books in the UNCG Libraries, users are able to access and select from a broad subject disciplines on needed e-books. The contents of the purchased e-books through a PDA program in many ways reflect the users' needs and their comfort levels with which they select and use e-books. Carrico and Leonard (2011) conducted a six-month pilot project from May to October 2009 at the University of Florida (UF) Libraries. Among the 193 e-book titles selected by users and purchased by the UF Libraries, fourteen percent are the economics/management (H-HJ) titles; science (Q) titles are 17 percent; medicine/nursing/health(R) titles are 11 percent, and the technology (T) titles are 18 percent, the highest percentage among the titles in all subject areas (2011).

LC classes schemes	LC classification schemes	Percentage	Number of Pages viewed
Philosophy, Religion, Psychology	B	10%	3463
History	D-E	6%	2429
Economics, management	H-HJ	19%	9366
Social Sciences	HM-HX	6%	2279
Political sciences	J	5%	2220
Education	L	4%	2500
Music-Fine Arts	M-N	3%	705
Literature/languages	P	5%	2272
Science	Q	5%	4735
Medicine/Nursing/health	R	15%	7016
Technologies	T	14%	6828
Other		7%	816
Total		100%	

Chart 5. Content distribution on e-books purchased through a PDA project

At the UNCG Libraries, the content distribution on the purchased e-books through a PDA project focuses on economics/management (19 percent), medicine/nursing/professional health (15 percent), and technologies (14 percent). The detailed content distribution is shown in Chart 5.

It is obvious that the more items were selected by users, the more pages are viewed in these categories or subject areas. For instance, there are 9,366 pages being viewed on the subjects of economics/management which represents 19 percent of e-book titles being selected and purchased.

When the UNCG Libraries set up the profiles for the PDA project, only university presses and scholarly publishers were chosen. This protocol may have to some extent limited useful e-book titles published by other trade publishers. Nonetheless, among the chosen publishers, about 15 percent of the selected titles are published by Wiley, which produces more titles on management, economics, nursing, and technologies, as it shows in Chart 6.

Publishers	Percent of total purchased
Wiley	15%
Cambridge University Press	6%
Palgrave Macmillan	6%
Oxford University Press	5%

Chart 6. E-books purchased from top publishers

7. The PDA E-book Projects' Impact on Collection Development

In general, library literature reports positive outcomes and impact of various PDA projects on their collection development and on meeting the needs of their users. Nonetheless, in an extensive literature review and analysis, Walters (2012) presents a series of problems coming with PDA models. Specifically, the author points out four problems which are related to PDA e-book projects: limited availability of academic titles as e-books; digital embargoes; high prices of e-books, and licensing issues (Walters, 2012). Some of the problems identified by the author may have also been the problems with other purchase models such as big or package deals for e-journals. Because the concept and practices of PDA e-books are relatively new, more research data are needed to further explore the pros and cons of this model. Several characteristics of the PDA e-book projects in relations to collection development are worthy of notice:

- PDA e-book projects increase users' access: In the UNCG Libraries, the increased number of MARC records from the PDA e-book project has resulted in the increased number of access to these items since the inception of the project at the UNCG Libraries. In Chart 7, it shows a substantially increased number of

access to the available e-books through the Libraries' online cataloging system, from 4,492 in 2008-2009 when the pilot project started with one subject area to 61,322 in 2011-2012 when the Libraries implemented the PDA e-book project on a full scale, with all subject areas related to UNCG's curricular and research priorities.

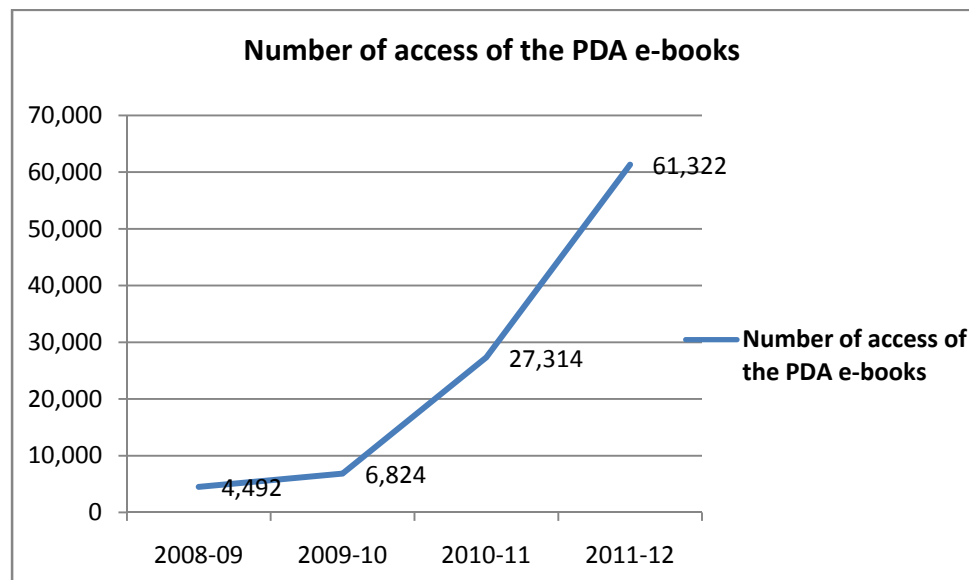


Chart 7. Usage numbers on the PDA e-books

- More students participate in selection of PDA e-books: Unlike the selection process for print books which are conducted in most cases by librarians and faculty, PDA e-book models have made selections, purchases, and access to full text of e-books a seamless process. Therefore, the selectors may have included undergraduate and graduate students, in addition to faculty members. That is, students, especially undergraduate students, may have selected e-book titles which meet their immediate needs on their classes or research projects. The profiles of the UNCG Libraries' PDA e-book project almost mirror these of print approval plans, excluding trade publishers. This conservative approach has helped ensure that all selected PDA e-books are for academic uses.
- Budget planning is more critical than ever: As it displays in Chart 4, with the expansion to cover all subject areas of the UNCG Libraries, the expenditures for the PDA e-books have continued increasing. How do libraries make an informed decision on funding allocations each year to ensure users' access to needed e-book titles through PDA models? How much should be enough to cover the selected titles throughout the fiscal year? The change or increases on the number of published e-books will influence or affect the number of available titles which will ultimately affect the amount of expenditures. Exploring a predicting funding allocation model will be helpful to ensure that the allocated funds will be sufficient to cover the selected e-books at an annual basis.
- Decisions are needed for handling duplicates formats: At the UNCG Libraries, there have been discussions on making adjustments to print approval plans and removing the publishers who also produce e-books from the print approval profiles. The goal is to reduce duplicated titles to be purchased through PDA e-book project and through regular print approval plans. This issue is quite complicated. Some publishers release their e-books at the same time when print versions are published. Some have set up certain embargo periods (from six months and up) for e-books in order to push more sales of print books. Faculty and students in certain disciplines have much embraced e-books (i.e., Compute Science, Nursing, Business, etc.) while others (e.g., in Arts, Architectures, etc.) may still want to keep print books as a major medium of reading.

How to balance the needs of users and at the same time efficiently use limited funds for more materials? These topics are worthy of further exploration and discussion.

8. Conclusions

The UNCG Libraries in U.S. started a pilot PDA e-book project in 2008, with one subject area in computer science. The pilot project was a successful one, with needed data to expand the project to four additional academic departments (in nursing, business, chemistry, and foreign languages) in 2010. Built upon the positive experience with the expanded disciplines, the Libraries implemented the PDA e-book project with all academic departments in January 2011 which has resulted more e-books being selected, purchased, and viewed. The content of the purchased e-books through the PDA project focus on economics/management (19 percent), medicine/nursing/professional health (15 percent), and technologies (14 percent). Among all purchased e-books, 15 percent of the titles are published by Wiley. The impact of the PDA e-book projects on collection development includes increased user access to PDA e-book; more students' participation in selection of PDA e-books; critical budget planning process, and decisions on avoiding duplicated formats. Because the concept and practices of PDA e-book projects are relatively new, more research data are needed to further explore pros and cons of this model.

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