

# Library Catalog as a Tool for E-Book Discovery and Use in Patron-Driven Acquisition (PDA): A Case Study

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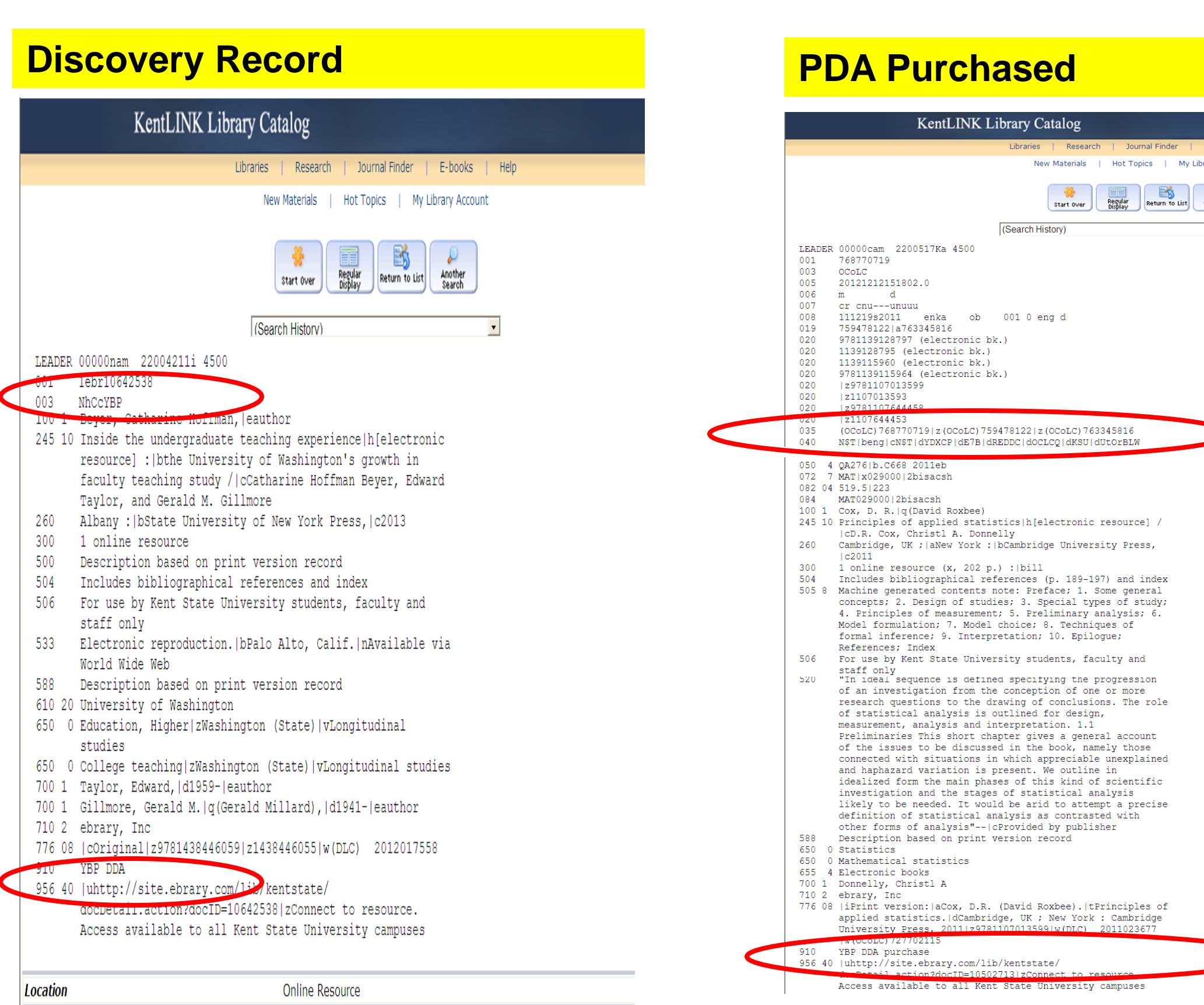


## Background

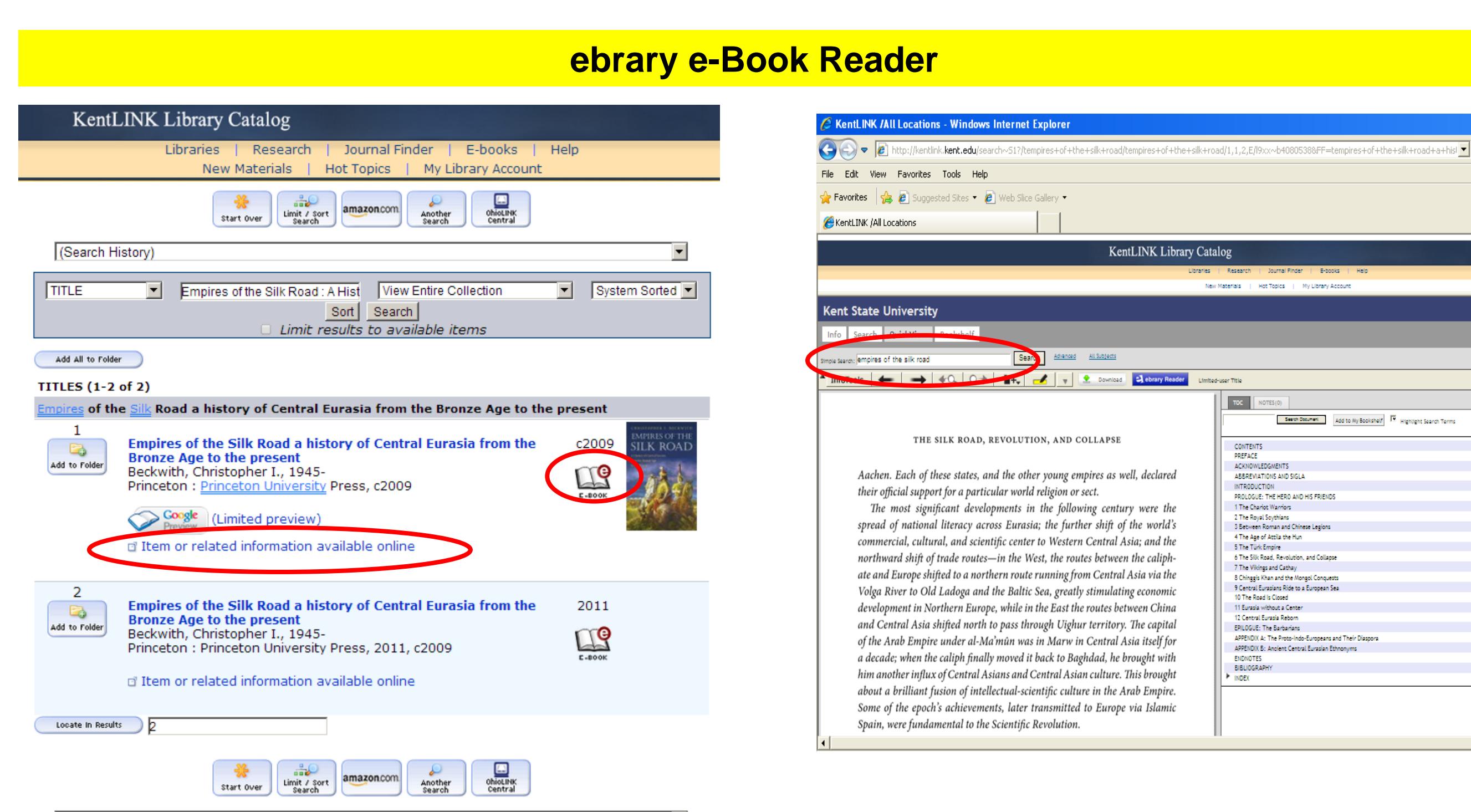
- In January 2012, Kent State University (KSU) library implemented a pilot initiative for a [Patron Driven Acquisitions \(PDA\)](#) e-book purchasing model.
- PDA refers to the automated purchasing of e-books based on patron use.
- Through this model, the library provides access to a predetermined set of e-books to authorized KSU Library (KSUL) users by making these books' catalog records available in the library catalog, KentLINK.
- Patrons discover e-books via the library catalog. Once cumulative patron usage of an e-book exceeds a certain threshold level, the library automatically buys it.
- The discovery pool of PDA e-book records in a library catalog is a key element in this new acquisition model for e-books to be discovered, used, and purchased. So far, few empirical studies have examined how users interact with the library catalog before they reach the e-books.
- The study seeks to examine two aspects of catalog use:
  - as a discovery tool for the e-books purchased after the triggering action by a user, and
  - as a way to assess the overall use of the pool of PDA e-books (purchased or not) via the catalog.

## Methodology

- Analysis of catalog transaction logs of 20,062 e-book discovery records for specific user interactions with the catalog.
- 518 patron-triggered e-books purchased through PDA during the pilot period
- Ebrary Title Report was the source for tracking uses of e-books



The screenshot shows two panels of the KentLINK Library Catalog. The left panel, titled 'Discovery Record', displays a search history with several entries circled in red. The right panel, titled 'PDA Purchased', shows a list of purchased e-books with some entries circled in red.



The screenshot shows the Ebrary e-Book Reader interface. It displays a search history and a detailed view of a book's page, with specific sections circled in red.

- For the 20,062 PDA discovery records, there were 3,254 "full-orthodox" clicks from the catalog's full description record to the ebrary content.
- These 3,254 clicks represent 2,369 different unique searches - searches performed for each different Record ID, with a different IP, within a time-out window of 30 minutes and with a different search query.
- Performed from a KSU IP were 1,822 searches, and 547 were from a non-KSU IP that does not grant access to ebrary content.

## Results

### 1. Search Types

Types of searches performed before a click to the e-book from a full bibliographic record.

Type of search	Sample Pool set (any IP)	%	Sample Pool set (KSU IP)	%	Triggered e-books set (KSU IP)	%
Author	59	2.49%	42	2.31%	24	2.19%
Record ID	88	3.71%	74	4.06%	54	4.92%
Boolean	33	1.39%	26	1.43%	8	0.73%
Subject	111	4.69%	79	4.34%	20	1.82%*
ISBN	56	2.36%	46	2.52%	43	3.92%
Other standard numbers	4	0.17%	3	0.16%	1	0.09%
Title	345	14.56%	269	14.76%	172	15.66%
General keyword	1,664	70.24%	1,277	70.09%	774	70.49%
Keyword in subject	1	0.04%	0	0.00%	0	0.00%
Keyword in title	8	0.34%	6	0.33%	2	0.18%
TOTAL	2,369	100.00%	1,822	100.00%	1,098	100.00%
<i>Other factors and features</i>						
Filter by e-resource/e-book	184	7.77%	105	5.76%	51	4.64%*
Mobile devices (tablets & phones)	31	1.31%	17	0.93%	11	1.00%
Authenticated users [port 443 (https)]	120	5.07%	84	4.61%	45	4.10%
Searches that return >50 records	976	41.20%	763	41.88%	420	38.25%

Notes:  
\* = significant difference of proportions at 95% of confidence level.

Selection of full bibliographic records from keyword and Boolean searches that return more than 50 records.

Selection of records in Keyword and Boolean search sets > 50	Sample Pool set (any IP)	%	Sample Pool set (KSU IP)	%	Triggered e-books set (KSU IP)	%
Total searches that return >50 records	976	100.00%	763	100.00%	420	100.00%
Selection 1 <sup>st</sup> record of the set	327	33.50%	255	33.42%	188	44.76%*
Selection records 2 to 5 of the set	270	27.66%	211	27.65%	105	25.00%
Selection records 6 to 50 of the set	361	36.99%	282	36.96%	126	30.00%*
Selection records beyond 50 <sup>th</sup>	18	1.84%	15	1.97%	1	0.24%*

Notes:  
\* = significant difference of proportions at 95% of confidence level

### 2. Triggering and use of e-books in catalog logs

Books used at least once and presence in catalog logs from KSU IP.

	Total	Used	% used	Used but not traced in catalog	%
Sample pool	20,062	1,131	5.64%	139	12.29%
Triggered e-books	518	518	100.00%	114	22.01%

Triggering action linked to catalog search and e-book use.

	titles	% of titles	average user sessions	average page views	average page views per use
Total Triggered	518	100.00%	5.46	90.00	14.43
Match with a search at the trigger date ("full-orthodox" triggering)	373	72.01%	5.76	93.97	14.56
No match with a search at the trigger date ("not full-not orthodox" triggering)	145	27.99%	4.69	79.77	14.08
> No search at all from KSU IP	114	22.01%	3.80	53.52	14.00
> Any search from KSU IP but not matching with trigger date	31	5.98%	7.97	176.32	14.38

### 3. E-book use by clicks from catalog up to triggering

Average number of clicks from catalog full bibliographic records before triggering.

Clicks until triggering	titles	average user sessions	average page views	average pages per use
0	132	4.34	66.30	14.06
1	283	4.25	65.30	13.44
2	62	8.03	156.00	17.09
3	27	7.44	138.59	19.99
4 to 10	14	25.21	426.57	15.37
Total/Overall	518	5.46	90.00	14.43

### 4. E-book use by type of searches at triggering

Average use by type of search for titles retrieved by only one search type at the trigger date.

Type of searches	titles	average user sessions	average page views	average page per user
author search	10	5.50	78.00	14.40
Bib ID	14	4.21	48.29	11.55
Boolean*	4	4.00	47.25	11.13
Subject	9	5.22	93.56	14.36
ISBN*	2	59.00	631.50	6.64
Title	60	5.32	95.52	13.88
Keyword	262	5.41	88.58	14.84

Notes:  
\* = not enough data to be meaningful.

## Highlights

- The only way to put e-books in the context of the library collection for Patron Driven Acquisitions (PDA) is the local catalog.
- PDA cataloging workflow is complex and requires intense work from technical services in bulk record uploading and maintenance.
- This effort is worth it if users do not bypass the catalog and use the full bibliographic record information as the main path to trigger the acquisition.
- Full catalog interaction matters in PDA with more than 70% of the e-books being purchased after a trigger action linked with a catalog search and a full bibliographic record display.
- This study also shows e-book usage is higher when catalog search and full bibliographic record display occurs before purchase triggering.

## Challenges

- This study shows 28% of users triggering a PDA purchase bypassed the catalog or the full bibliographic record information. There is no benchmark to assess if the bypass of full catalog searches is a fair share of PDA purchases.
- PDA purchasing of two or more books by the same user interaction in a short period of time and without the catalog context is a real challenge that needs further study.
- OPAC interface configuration and usability appears as a key issue: whether PDA e-books can be accessed or not from a brief intermediate results display matters to drive the user to a more conscious choice.
- The number of searches filtered by document type "e-resource/e-book" is very low (4.64% for the triggered set).
- Unclear about user reading behavior after they locate an e-book in the catalog. The e-book platforms like ebrary do not have a check-out system of lending to reserve the book.

## Conclusion and Future Research

- This case study shows that e-book use linked to full catalog searches tends to be both more intense and less accidental.
- This study illustrates that the full catalog referrer matters in PDA acquisition performance, because it is the only way to give users the context of library collection.
- There is no strong evidence to support the assumption that triggered books after a catalog search return better usage. Future research with a large sample would help to clarify the connection.
- There is an important share of almost 30% of PDA purchased books triggered without full catalog involvement. This result challenges the rationale and ideal performance of the PDA model.
- A PDA e-book triggered directly in a publisher or aggregator portal, without prior interaction with the local catalog, may not necessarily be a justified purchase when there are other similar books in the catalog that could fit the user needs better or just as well.

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