E-Book Longevity--Dynamics of E-Books Over Time

Christopher Palazzolo, Emory University

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Trends in eBook vs Print Collection Usage

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Methods and Preliminary Findings—Does Format Matter?

Charleston Conference
Chris Palazzolo, Head of Collection Management
Woodruff Library
Emory University
cpalazz@emory.edu
A substantial number of bibliometric studies have focused upon analyzing the circulation dynamics of print titles in academic library collections. A significant focus of this data collection and investigation is on the use of new, or approval titles or firm orders over certain time increments, as a means to assess the efficacy of such approval plans and/or of librarian anticipatory selection.

A few studies have begun to approach such collection assessment on e-books to determine if their circulation (use) parallels print book circulation and use over time. For example, do e-titles chosen by selectors have a higher use than those in broad subject or publisher packages? Does the proportion of use of a package over time mirror that of a “package” of approval titles over the same amount of time?
For many years, we have performed analyses on Approval titles (YBP) to determine usage over time, as well as to fine-tune the approval profile. Are there certain subject areas, publishers, etc. that receive greater usage and over what time frame?
General Trends Approval Plan Circulation

Circulation of Approval Titles

- 2009
- 2010
- 2011
- 2012

- 0.00%
- 5.00%
- 10.00%
- 15.00%
- 20.00%
- 25.00%
- 30.00%
- 35.00%
- 40.00%
- 45.00%

- 2 Years
- 3 Years
- 4 Years
- 5 Years
- 6 Years
Approval Discipline Breakdown

2009 Approval Plan Use Over Time, Print, by Discipline Area

<table>
<thead>
<tr>
<th></th>
<th>2 Years</th>
<th>3 Years</th>
<th>4 Years</th>
<th>5 Years</th>
<th>6 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sciences</td>
<td>5.20%</td>
<td>16.10%</td>
<td>27.60%</td>
<td>27.70%</td>
<td>33.00%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>7.83%</td>
<td>22.40%</td>
<td>28.10%</td>
<td>35.10%</td>
<td>39.40%</td>
</tr>
<tr>
<td>Humanities</td>
<td>7.40%</td>
<td>20.70%</td>
<td>29.20%</td>
<td>34.60%</td>
<td>38.10%</td>
</tr>
</tbody>
</table>
Approval Discipline Breakdown

2010 Approval Plan Use Over Time, Print, by Discipline Area

<table>
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<th>4 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sciences</td>
<td>16.90%</td>
<td>24%</td>
<td>28.60%</td>
<td>37.90%</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>26.40%</td>
<td>35.70%</td>
<td>40.70%</td>
<td>49.40%</td>
</tr>
<tr>
<td>Humanities</td>
<td>24.50%</td>
<td>33.70%</td>
<td>39.40%</td>
<td>48.40%</td>
</tr>
</tbody>
</table>
Initial findings from Approval analyses

- Certain areas in the Humanities have a longer tail than other titles, Humanities and Social Sciences title use tend to mirror each other.
- General tendency is for title usage to plateau at around 30-35% by Year 5 of usage.
- Early findings for DRM-Approval e-titles are usage of all titles by about 25% by Year 3.
- Significant variation dependent on year of approval, although 2012 and 2013 dates tend to show similar results.
As we have fine-tuned the approval plan, we also have increased our ebook holdings quite significantly, through various means and models:

- (Direct) Publisher packages
- Demand-Driven Plans (DRM & non-DRM)
- Approval plans
- Consortial packages (e.g., GALILEO)

Note that some of these titles are owned by the library, others are access-only (and can be triggered by a number of uses), and others owned by consortia (ARCHE/GALILEO). Tradition of non-duplication with print, but not always maintained.

Note that there have been over 1,200,000 uses (defined as BR2 COUNTER statistics), but use differs highly among packages.

What do we know about use over time of these collections? Are they good for long term acquisitions, or should they be weeded from the catalog?
## Pilot Study with EBL

<table>
<thead>
<tr>
<th>Ebook Approvals (Use after two years)</th>
<th>Number</th>
<th>2 Years</th>
<th>3 Years</th>
<th>4 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBL 2012</td>
<td>160</td>
<td>21.88%</td>
<td>23.13%</td>
<td>26.25%</td>
</tr>
<tr>
<td>EBL 2013</td>
<td>123</td>
<td>24.39%</td>
<td>26.83%</td>
<td></td>
</tr>
<tr>
<td>EBL 2014</td>
<td>184</td>
<td>27.72%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Questions/Inquiries

- Do e-books follow the same trajectory of use as print titles?
- Does DRM make a difference in accounting for these use patterns?
- For those areas with print duplication, does format matter for period of use?
Basic Methodology

- Sample: Springer e-Packages Data
- Use BR2 data for comparability
- Use imprint date as base data of accession (although could use date added to catalog as alternative—see “vagaries of data”)
- Measure use at 2, 3, and 4 year mark (aggregated) & compare with print approval in relevant subject areas
Vagaries of Data

- COUNTER use data is only by month, not date, so not as precise as circulation data (used for approval data)—i.e., not as exact in terms of an actual or exact year of usage.
- Inconsistent Loading of MARC records (e.g., most Springer records loaded at the same time, but there may be some staggered loads). What is date of discoverability?
- Inconsistences in fields available in COUNTER records, MARC records, and title lists from aggregators and publishers.
- Availability of BR2 data over time on vendor sites (especially pre-2014 with change in COUNTER); preservation of usage data.
## BR2 Data for Selected Springer Collections (Chemistry, Biomedical, Physics, Computer Science)

<table>
<thead>
<tr>
<th>Publication Date</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017 (through September)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>469 (33.7%)</td>
<td>540 (38.8%)</td>
<td>564 (40.6%)</td>
<td>576 (41.4%)</td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td>617 (37.8%)</td>
<td>617 (37.8%)</td>
<td>660 (40.4%)</td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td></td>
<td>526 (32.3%)</td>
<td>545 (33.5%)</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
<td>389 (23.6%)</td>
</tr>
</tbody>
</table>
Some Tentative Conclusions

2012 Springer E-Content Use Over Time, by Subject Area

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>2 Years</th>
<th>3 Years</th>
<th>4 Years</th>
<th>5 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry &amp; Materials Science</td>
<td>31.20%</td>
<td>39.40%</td>
<td>40.30%</td>
<td>41.60%</td>
</tr>
<tr>
<td>Physics &amp; Astronomy</td>
<td>16.40%</td>
<td>20.10%</td>
<td>22.00%</td>
<td>22.00%</td>
</tr>
<tr>
<td>Computer Science</td>
<td>16.80%</td>
<td>20.40%</td>
<td>22.30%</td>
<td>23.40%</td>
</tr>
<tr>
<td>Biomedical Sciences</td>
<td>58.40%</td>
<td>63.50%</td>
<td>66%</td>
<td>67%</td>
</tr>
</tbody>
</table>
Approval Plan for Physics

2009-2010 Print Approval Plan for Physics (QC), Use Over Time

<table>
<thead>
<tr>
<th>Time</th>
<th>2009 Physics Print Collection</th>
<th>2010 Physics Print Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Years</td>
<td>8.80%</td>
<td>13.90%</td>
</tr>
<tr>
<td>3 Years</td>
<td>17.80%</td>
<td>22.30%</td>
</tr>
<tr>
<td>4 Years</td>
<td>22%</td>
<td>26.60%</td>
</tr>
<tr>
<td>5 years</td>
<td>24.50%</td>
<td>31.40%</td>
</tr>
<tr>
<td>6 Years</td>
<td>37.80%</td>
<td></td>
</tr>
</tbody>
</table>
Some Findings

- Most e-Books in the Sciences tend to circulate within the first 2-3 years and then decline sharply after, whereas print approval science titles tend to have more of a gradual uptick in use.
  - There are some variations in specific STM areas, such as the high initial use of Biomedical titles.
- A specific example of Physics exhibits the same pattern.
- This research focuses on simply the use/no use of a title in a collection/plan, not the number of times a particular title circulated and whether or not this increased or decreased over time. This could be a secondary analysis.
- The next step will be to see if the same patterns manifest in the use of Humanities and Social Sciences titles.
Future Data in Process

- Project Muse UPCC Collections, 2010-2013
- ACLS E-Book Collection (around 3,000 titles)