Mashing up data to demystify user behavior: a collaborative exploration

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- Highly selective liberal arts college located in south central Pennsylvania
- 2,650 full time student enrollment
- Musselman Library
  - 14 librarians
  - 22 staff (archivist, intern(s), and support staff)
- Some stats
  - Periodical subscriptions
    - 333 print
    - 60,802 electronic
  - 300 online databases
A Progression of Article Delivery Services

Recession

Discovery

Strategic Plan
Article Delivery Services

Mediated

ILLiad

Unmediated

Rapid
Elsevier
Nature Publishing Group (NPG)
GetItNow
Article Delivery Services

Subscription
- ILLiad
- Rapid

Block Article Purchase
- Elsevier

Tokens
- Nature Publishing Group (NPG)

Per Article
- GetItNow
Evaluation of Article Delivery Services

- Illiad
- Rapid
- GetItNow
- Elsevier
- NPG

Librarian meetings

Working group

Assessment Committee
Get It Now measures/article FY13-FY15

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<th>Year</th>
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<td>FY15</td>
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Get It Now Expenditures
FY13-FY15

<table>
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<td>FY13</td>
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Acquisitions Questions

- What is the value-add of commercial article delivery?
- Are there cost effective alternatives?
- Can ‘value’ be quantified by the available data?

Themes

- Commercial Article Delivery
- Outcomes
- Data

User Services Questions

- What are the relative strengths of commercial and traditional document delivery methods?
- Are the services respectively meeting the information needs/expectations of our users?
- Can ‘service’ be quantified by available data?
Questions, Distilled and Prioritized

• What are the relative strengths of commercial and traditional document delivery services?
• Are the services respectively meeting the information needs/expectations of our users?
Mashing Data

• Relative Strengths
  – Mash data from article delivery service reports

• Meeting User Needs
  – Mash turnaway report data with article delivery service reports
Efficiency, GIN vs. Rapid

• Most apples to apples comparison
  – Unmediated

• Efficiency was measured by turnaround time, the difference between order and fulfillment
  – Also measured by time segments to determine time variability and user behavior:
    – 12am-8am
    – 8am-4pm
    – 4pm-12am
Volume of Article Fulfillment by Service
Spring 2015

- Illiad
- Rapid
- GetItNow
- Elsevier
- NPG
Number of Requests by Time of Day
April 2015

- 8 am - 4 pm:
  - GetItNow: 300
  - Rapid: 500

- 4 pm - midnight:
  - GetItNow: 400
  - Rapid: 200

- Midnight - 8 am:
  - GetItNow: 100
Number of Requests by Time of Day
April 2015

And Average Turnaround Time
Number of Requests by Time of Day
April 2015

And Average Turnaround Time
Monetizing Efficiency
January – May 2015

Cost per article

GetItNow: $32.83
Rapid: $19

Legend:
- GetItNow
- Rapid
Monetizing Efficiency
January – May 2015

Cost per article per hour of turnaround

- GetItNow: $8.25
- Rapid: $2
Qualifying Turnaways

• Working definition: A turnaway measures demand for unsubscribed content, generally from the publisher platform

• The COUNTER Journal Report 2 (CJR2) provides “access denied to full-text articles by month, journal and category”
  – Publishers present CJR2s to sell subscriptions and/or journal back-files
    • The pitch: “users are not getting what they need”
  – Libraries *should* examine CJR2s to determine whether demand is unmet by available library article delivery services
Quantifying Turnaways

• The Experiment
  • Compare Elsevier CJR2s to GIN, ILLiad, and Rapid transaction reports.

• Challenge
  – Only two data points
    • Publication
    • Publication month

• Is there a correlation?
Elsevier
February through April 2015

Graph showing the relationship between Retrieval and Turnaway.
Conclusions

• Suspended GIN due to the relative efficiency of Rapid and the higher cost per hour per article cost of GIN. We are exploring GIN’s mediated options.
• The correlation between turnaways and retrievals challenges the publishers’ refrain that turnaways reflect unmet demand. Furthermore, the inability to mash up data at a more granular level, e.g., the article level, minimizes the value of turnaway reports.
Questions to Ponder

• Is a 4 hour turnaround time equivalent to a 13 hour turnaround time in a student’s opinion?
• What percentage of our spending should be on consumable articles rather than subscriptions?