Improving user engagement in a data repository with web analytics

LITA Forum
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Data Services @ IUPUI

Existing services to meet researcher needs:

- Data management plans (DMP) & planning: create, review, refine, and implement DMP
- Preservation repository (IUPUIDataWorks): store, preserve, and share research data
- Create and manage persistent identifiers (DOI)
- Training lab: provide training in information/data management best practices using available infrastructure
Why start a data repository?
IR Value Proposition

• Increase the impact of research products
  • Administration
  • Faculty
  • P&T Committees
• Promote data sharing and re-use
  • Funding agencies
  • Research communities/Communities of Practice
  • Research labs/teams
  • Student training
IR Value Proposition

- Preserve the scholarly record
  - Funding Agencies
  - Libraries
  - Research communities/Communities of Practice
  - Commercial entities
- Demonstrate library commitment to preservation and curation of institutional content
- Comply with funding agency requirements
- Support increased transparency and accountability in research
dSpace

**Pros**
- We have it
- We know it
- It’s free, sort of
- Widely used
- Support community

**Downsides**
- No ability to try before you buy
- Community & collection silos
- Interface is library-centric
Welcome to IUPUIDataWorks, a repository for preserving and sharing IUPUI digital research data. For our repository of publications, including journal articles, presentations, and other scholarly products, visit [http://scholarworks.iupui.edu](http://scholarworks.iupui.edu). For our cultural heritage materials, visit [http://ulib.iupui.edu/digitalscholarship](http://ulib.iupui.edu/digitalscholarship).

IUPUIDataWorks may be unavailable during our periodic systems [maintenance window](http://ulib.iupui.edu/digitalscholarship).

Search DataWorks

Enter some text in the box below to search DataWorks.

[Go]
Questions

• What is the role for institutional repositories in complementing subject- or community-based repositories?

• How are institutional data repositories
  • Discovered?
  • Accessed?
  • Searched vs. browsed?

• What do we (IUPUI University Library) really care about?
IMPLEMENTATION
Basic Configuration

Created a new profile to customize how data appears in reports:

Profile Settings
- exclude extraneous URL query parameters
- enable site search tracking
  - categories to distinguish between keywords and subjects terms

Filters
- exclude admin traffic
- exclude new item submissions
- exclude item submission workflow

Goals
- file downloads (datasets or documentation)
Advanced Configuration

Track clicks on outbound links and file downloads

**Google Tag Manager**
- auto-event tracking feature
  - outbound links and file downloads are recorded as events
  - downloads are disaggregated by file type (pdf, csv, xslx, etc.)

[http://www.google.com/tagmanager](http://www.google.com/tagmanager)
FOUR QUESTIONS
Acquisition

Q: How do users find our data repository?
## Channels Report

**Primary Dimension:** Default Channel Grouping

<table>
<thead>
<tr>
<th>Default Channel Grouping</th>
<th>Acquisition</th>
<th>Behavior</th>
<th>Conversions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Visits</td>
<td>% New Visits</td>
<td>New Visits</td>
</tr>
<tr>
<td></td>
<td>43</td>
<td>41.86%</td>
<td>18</td>
</tr>
<tr>
<td>Referral</td>
<td>20</td>
<td>30.00%</td>
<td>6</td>
</tr>
<tr>
<td>Direct</td>
<td>10</td>
<td>50.00%</td>
<td>5</td>
</tr>
<tr>
<td>Organic Search</td>
<td>9</td>
<td>55.56%</td>
<td>5</td>
</tr>
<tr>
<td>Social</td>
<td>4</td>
<td>50.00%</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: IUPUI DataWorks 10/23/13-11/6/13
Referral Traffic

Source: IUPUI DataWorks 10/23/13-11/6/13

<table>
<thead>
<tr>
<th>Source</th>
<th>Visits</th>
<th>% New Visits</th>
<th>New Visits</th>
<th>Bounce Rate</th>
<th>Pages / Visit</th>
<th>Avg. Visit Duration</th>
<th>Goal Conversion Rate</th>
<th>Goal Completions</th>
<th>Goal Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>news.iupui.edu</td>
<td>9</td>
<td>55.56%</td>
<td>5</td>
<td>33.33%</td>
<td>3.11</td>
<td>00:03:47</td>
<td>11.11%</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>google.com</td>
<td>6</td>
<td>0.00%</td>
<td>0</td>
<td>50.00%</td>
<td>3.33</td>
<td>00:02:04</td>
<td>16.67%</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>iupui.edu</td>
<td>4</td>
<td>25.00%</td>
<td>1</td>
<td>25.00%</td>
<td>4.00</td>
<td>00:05:29</td>
<td>25.00%</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>facebook.com</td>
<td>2</td>
<td>50.00%</td>
<td>1</td>
<td>50.00%</td>
<td>3.00</td>
<td>00:00:07</td>
<td>50.00%</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>people.virginia.edu</td>
<td>1</td>
<td>0.00%</td>
<td>0</td>
<td>0.00%</td>
<td>6.00</td>
<td>00:00:13</td>
<td>0.00%</td>
<td>0</td>
<td>$0.00</td>
</tr>
<tr>
<td>pinboard.in</td>
<td>1</td>
<td>0.00%</td>
<td>0</td>
<td>100.00%</td>
<td>1.00</td>
<td>00:00:00</td>
<td>0.00%</td>
<td>0</td>
<td>$0.00</td>
</tr>
<tr>
<td>.tco</td>
<td>1</td>
<td>100.00%</td>
<td>1</td>
<td>0.00%</td>
<td>10.00</td>
<td>00:25:30</td>
<td>0.00%</td>
<td>0</td>
<td>$0.00</td>
</tr>
</tbody>
</table>
Social Overview

Social Value

- 6 ($0.00) Conversions
- 2 ($0.00) Contributed Social Conversions
- 0 ($0.00) Last Interaction Social Conversions

- Visits: 43
- Visits via Social Referral: 4
- Conversions: 6
- Contributed Social Conversions: 2
- Last Interaction Social Conversions: 0

Social Sources

- Social Network
- Pages
- Shared URL
- Social Plugins

Social Network

<table>
<thead>
<tr>
<th>Social Network</th>
<th>Visits</th>
<th>% Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Facebook</td>
<td>2</td>
<td>50.00%</td>
</tr>
<tr>
<td>2. Pinboard</td>
<td>1</td>
<td>25.00%</td>
</tr>
<tr>
<td>3. Twitter</td>
<td>1</td>
<td>25.00%</td>
</tr>
</tbody>
</table>

Source: IUPUI DataWorks 10/23/13-11/6/13
Audience

Q: What are some general characteristics of our users?
Location Report

Visits by U.S. State

Conversion Rates for Metropolitan Areas

<table>
<thead>
<tr>
<th>Metro</th>
<th>Visits</th>
<th>Goal Conversion Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington DC (Hagerstown MD)</td>
<td>5</td>
<td>40.00%</td>
</tr>
<tr>
<td>Lafayette IN</td>
<td>5</td>
<td>20.00%</td>
</tr>
<tr>
<td>Charlottesville VA</td>
<td>16</td>
<td>18.75%</td>
</tr>
<tr>
<td>Cleveland-Akron (Canton) OH</td>
<td>1</td>
<td>0.00%</td>
</tr>
<tr>
<td>Cincinnati OH</td>
<td>1</td>
<td>0.00%</td>
</tr>
<tr>
<td>Indianapolis IN</td>
<td>8</td>
<td>0.00%</td>
</tr>
<tr>
<td>Louisville KY</td>
<td>1</td>
<td>0.00%</td>
</tr>
<tr>
<td>Springfield-Holyoke MA</td>
<td>1</td>
<td>0.00%</td>
</tr>
<tr>
<td>Chicago IL</td>
<td>1</td>
<td>0.00%</td>
</tr>
<tr>
<td>Oklahoma City OK</td>
<td>2</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Source: IUPUI DataWorks 10/23/13-11/6/13
Network Service Providers

Source: IUPUI DataWorks 10/23/13-11/6/13
Behavior

Q: How is the data repository being used (or not)?
Site Search Overview

31.82% of your visits used site search

- Visits with Search: 14
- Total Unique Searches: 15
- Results Pageviews / Search: 1.00
- % Search Exits: 26.67%
- % Search Refinements: 6.67%
- Time after Search: 00:03:21
- Search Depth: 1.67

Source: IUPUI DataWorks 10/23/13-11/6/13
Search and Browse Categories

Top Search/Browse Terms

(Not set) means the user performed a keyword search. Author and subject are categories of faceted browsing.
Events Overview

Total Events: 12
Unique Events: 8
Event Value: 0
Avg. Value: 0.00
Visits with Event: 8
Events / Visit: 1.50

Top Events
1. Downloads: 7 (58.33%)
2. Outbound Links: 5 (41.67%)

Source: IUPUI DataWorks 10/23/13-11/6/13
File Downloads

Downloads by File Type

Downloads by Study-Level Record

Individual File Downloads

Source: IUPUI DataWorks 10/23/13-11/6/13
Conversions

Q: How effective is the data repository in expanding access to research data created at the university?
Conversions Overview

- **Goal Completions**: 6
- **Goal Value**: $0.00
- **Goal Conversion Rate**: 13.64%
- **Total Abandonment Rate**: 0.00%
- **Downloads (Goal 1 Completions)**: 6

### Goal Completion Location

<table>
<thead>
<tr>
<th>Location</th>
<th>Goal Completions</th>
<th>% Goal Completions</th>
</tr>
</thead>
<tbody>
<tr>
<td>/handle/11243/6</td>
<td>4</td>
<td>66.67%</td>
</tr>
<tr>
<td>/handle/11243/7</td>
<td>1</td>
<td>16.67%</td>
</tr>
<tr>
<td>/handle/11243/8</td>
<td>1</td>
<td>16.67%</td>
</tr>
</tbody>
</table>

Source: IUPUI DataWorks 10/23/13-11/6/13
Multi-Channel Funnels

There were 6 total conversions

Conversions: 6
Assisted Conversions: 5

Multi-Channel Conversion Visualizer

See the percentage of conversion paths that included combinations of the channels below. Select up to four channels.

<table>
<thead>
<tr>
<th>Channel</th>
<th>% of total conversions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>83.33%</td>
</tr>
<tr>
<td>Referral</td>
<td>50.00%</td>
</tr>
<tr>
<td>Social Network</td>
<td>33.33%</td>
</tr>
<tr>
<td>Organic Search</td>
<td>33.33%</td>
</tr>
</tbody>
</table>

Direct & Referral & Social Network: 16.67% (1)
Top Conversion Paths

![Graph showing conversion paths over time]

Conversions:
- Oct 25: 1 conversion
- Oct 27: 1 conversion
- Oct 29: 1 conversion
- Oct 31: 2 conversions
- Nov 2: 1 conversion
- Nov 4: 1 conversion

Conversion Value: $0.00

<table>
<thead>
<tr>
<th>MCF Channel Grouping Path</th>
<th>Conversions</th>
<th>Conversion Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct x 2</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>Direct Referral</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>Direct Referral Direct x 2 Organic Search Referral</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>Social Network Direct</td>
<td>1</td>
<td>$0.00</td>
</tr>
<tr>
<td>Social Network Direct Referral x 2 Direct x 2</td>
<td>1</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

Source: IUPUI DataWorks 10/23/13-11/6/13
NEXT STEPS
Making use of GA data

• Provide author-level reports for inclusion in faculty P&T dossiers
• Provide department-level reports
• Inform outreach and social media promotion of datasets
• Inform deposit and curation practices, specifically metadata creation
• Advocate for data sharing, preservation, curation using local evidence demonstrating the benefits
QUESTIONS?
Acknowledgment

A big thanks to Andy Smith, on the University Library Operations Team, for his technical wizardry!
Contact Us

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Images

- Figshare: [http://figshare.com/](http://figshare.com/)
- Reproducibility Initiative: [https://www.scienceexchange.com/reproducibility](https://www.scienceexchange.com/reproducibility)