Visualizing Library Metrics
HELLO!

I am Elizabeth Kelly

I am here because I love data visualizations and proving the value of library services

You can find me at @ElizabethJelly
OUTLINE

Overview of needs

Best practices and considerations

Visualize!

Other visualization tools

Questions?
WHY DATA VISUALIZATION?
WHAT KIND OF DATA DO YOU COLLECT?
WHO DO YOU NEED TO SHARE YOUR DATA WITH?
WHAT COULD YOU VISUALIZE?
Reading room visits by time and day of week

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday

2016 Reading Room Users

Tool: Google Drive
What was the top downloaded astronomy work?

Tool: Tableau
Tool: Tableau
"Furniture utilization of Level 3 in UConn's Homer Babbidge Library, November 8 - November 14, 2012."
Mapping Alternative and Extremist Political Literature

Serial publications mapped here are part of a larger collection of materials (files, clippings, organizational literature, pamphlets, etc.) from the Southern Poverty Law Center Intelligence Project Collection, 1940-2010. David M. Rubenstein Rare Book & Manuscript Library. A collection guide can be found here: http://library.duke.edu/rubenstein/findaguides/splc/

Publication Titles and Type of Literature

<table>
<thead>
<tr>
<th>Title</th>
<th>City</th>
<th>Genre</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/11 (Huntington Beach, Calif.)</td>
<td>Huntington Beach</td>
<td>Anti-immigrant literature</td>
<td>1</td>
</tr>
<tr>
<td>50 States Constitutions List Newspaper</td>
<td>Del City</td>
<td>Alternative publications</td>
<td></td>
</tr>
<tr>
<td>A.N.R. Newsletter</td>
<td>Chicago</td>
<td>White supremacist literature</td>
<td></td>
</tr>
<tr>
<td>Absolving Truth (Anaheim, Calif.)</td>
<td>Anaheim</td>
<td>Anti-homosexual literature</td>
<td></td>
</tr>
<tr>
<td>Act &amp; Albert Newsletter</td>
<td>Phoenix</td>
<td>Alternative publications</td>
<td></td>
</tr>
<tr>
<td>Alabama Defender (Seminole, Ala.)</td>
<td>Seminole</td>
<td>Alternative publications</td>
<td></td>
</tr>
<tr>
<td>Alabamian (Jasper, Ala.)</td>
<td>Jasper</td>
<td>White supremacist literature</td>
<td></td>
</tr>
</tbody>
</table>

Distribution of Literature Type

<table>
<thead>
<tr>
<th>Genre</th>
<th>%</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>White supremacist literature</td>
<td>47.8%</td>
<td>316</td>
</tr>
<tr>
<td>Alternative publications</td>
<td>31.9%</td>
<td>176</td>
</tr>
<tr>
<td>Anti-Semitic literature</td>
<td>10.5%</td>
<td>48</td>
</tr>
<tr>
<td>Anti-homosexual literature</td>
<td>3.9%</td>
<td>11</td>
</tr>
<tr>
<td>Survival literature</td>
<td>1.4%</td>
<td>9</td>
</tr>
<tr>
<td>Literature of prejudice</td>
<td>1.5%</td>
<td>8</td>
</tr>
<tr>
<td>Xenophobic literature</td>
<td>1.3%</td>
<td>6</td>
</tr>
<tr>
<td>Anti-Catholic literature</td>
<td>0.9%</td>
<td>3</td>
</tr>
<tr>
<td>Anti-immigrant literature</td>
<td>0.9%</td>
<td>6</td>
</tr>
<tr>
<td>Doomsday literature</td>
<td>0.5%</td>
<td>3</td>
</tr>
</tbody>
</table>
Connecticut State Library CTDA Content Use Metrics

Sessions per month (see Terms and Definitions tab above for more information on Google Analytic measures)

Sept. 2014 to date:

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Pageviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,783</td>
<td>66,811</td>
</tr>
</tbody>
</table>

Visits and single-page visits (Bounces)

<table>
<thead>
<tr>
<th>Year</th>
<th>Visits</th>
<th>Bounces</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>86.0</td>
<td>24.0</td>
</tr>
<tr>
<td>2016</td>
<td>316.0</td>
<td>93.0</td>
</tr>
</tbody>
</table>

Average Visit duration

<table>
<thead>
<tr>
<th>Month of Data</th>
<th>Avg. Visit Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16.65 minutes</td>
</tr>
</tbody>
</table>

Pages with highest number pageviews (click bar to see page in browser below)

<table>
<thead>
<tr>
<th>Page</th>
<th>Pageviews</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Most popular landing pages in CTDA (click bar to see page in browser below)

<table>
<thead>
<tr>
<th>Landing Page</th>
<th>Pageviews</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Visits & Study Room Usage

Nearly 3 million people visit the library and its website annually; students heavily use the online study room reservation tool.

Website & Walk-in Visits

Study Rooms: Checkouts Overall

Over one million people visited the library last year, and nearly 1.5 million visited the PSU Library website.

Detailed View of Walk-in and Website Visits

Study Rooms: Checkouts Overall

Students check out study rooms more than 3,000 times per month.

Detailed View of Study Room Usage

Use of Electronic Resources: eBooks, Streaming Media, Articles & PDXScholar

Users access eBooks, streaming media and other online content 2.4 million times in an average year.

Reference & Instruction

Help is available via chat, email, phone and in person, and many students attend librarian-led classes to improve their research methodologies.

Reference: Questions by Type

In one month, more than 2,000 people stop by the reference desk.

Detailed View of Reference Data

Instruction: Session Attendees

Over 3,000 students attend instruction sessions in the busiest month.

Detailed View of Instruction Data

University Library Collections

Books, Journals, and More 1,430,929

eBooks 1,051,676

journals 85,772

Streaming Media 134,774

Microforms 2,592,288

Government Documents 406,093

Audios/Video 134,715

Special Collections 23,410

Repository (PDXscholar) 11,954

Total 5,832,371

Fiscal Year Services Snapshot

2016 2015

Website Visitors 1,836,267 1,445,130

Walk-in Visitors 1,054,689 932,791

Study Rooms Usage 26,569 26,466

Articles Downloads 98,492 95,232

eBook Downloads 811,037 547,867

Streaming Media Views 377,913 470,072

PDXScholar Downloads 456,003 457,225

Materials Circulated 225,244 243,575

Borrowed from Other Libraries 49,959 47,749

Reference Questions 25,327 18,715

Instruction Session Attendees 9,870 10,164

Faculty & Staff (FTE)

- 30 Librarians/Professionals
- 31 Classified Staff
- 14 Student Workers

The dashboard below provides an overview. Generate detailed charts to Library Dashboard - Detailed View.
WHAT ARE YOU TRYING TO VISUALIZE?

23%

A SINGLE NUMBER

COMPARISONS

PARTS OF A WHOLE

CORELATIONS

CHANGES OVER TIME
DON’T DISTORT YOUR DATA

ACTIVITY GUIDE

https://tinyurl.com/lucviz17
OTHER tools
TABLEAU

Includes both free and subscription products. The free Tableau Desktop Public uses desktop software but publishes your visualizations online.

See some of our reading room data visualized in Tableau [here](#).
GOOGLE FUSION TABLES
Free, includes map tools

See some user data visualized in Google Fusion tables here.
VOYANT

Also free, analyzes text, can read OCRd PDFs. See example here.
Recommended Sources

**Data Distortion No-No’s**

13 Graphs That Are Clearly Lying
Misleading Graphs: Real Life Examples

**Choosing the Right Graph**

The Data Visualization Catalog
Effective Data Visualization: The Right Chart for the Right Data
Chart Suggestions
Data Visualization Checklist
Visualization: Choosing a Chart
Which Chart or Graph is Right for You?

**Tools**

**Charts and Graphs:** Gephi, Google Fusion
Tables, Google Sheets, Excel, LibreOffice Calc,
Open Office Calc, Tableau Public
**Text Analysis:** ViewShare, Voyant
**Maps:** Google Fusion Tables, Storymap JS
Storymaps, Tableau Public, ViewShare
**Timelines:** Neatline, TimeMapper, Timeline JS,
ViewShare
**Social Media:** Sentiment Viz, SocioViz, TAGS

**Training**

UWM Data Visualization Camp Instructional Materials
NCSU Data Visualization Workshops
NCSU Data Science and Visualization Institute for Librarians
THANKS!

Any questions?
You can find me at @ElizabethJelly & ejkelly@loyno.edu

Special thanks to all the people who made and released these awesome resources for free:
- Presentation template by SlidesCarnival
- Photographs by Unsplash