Beyond the Annual Report

Web Analytics for Evidence-Based User Experience Decisions

- Introduce self & Jonathan
- Today’s presentation
  - wrangle Google Analytics so we can understand them and use them to make decisions
  - Limited time - will only briefly touch on a lot of GA concepts
  - Hope to have a discussion with you about what we want to see in our numbers
  - Casual & conversational - Ask questions - time at end & feel free to interrupt
Both new to the job last year - inherited Google Analytics
No screenshot of what it looked like before, but this is what it felt like
From the outside, it’s a black box.
When you get in, you have no idea what you’re looking at -
What's in these boxes?
Does this TV even still work?
Whose chair is this and can we get rid of it?
But we knew that GA is an important source of information about what users are doing on our website, and that it was important to roll up our sleeves, dive in, figure out what we had and organize it so that we could actually make use of the good stuff in there.
We also needed to make sure our analytics were giving us accurate information because we are currently undertaking a pretty major website redesign, and we need to make sure that we’re making decisions based on good data.
Basic terminology: Tracking

Definitions:

- Hit
- Pageview
- Session
- Event

Definitions taken from Google Analytics Help pages

- Hit: An interaction that results in data being sent to Analytics.
- Pageview: An instance of a page being loaded (or reloaded) in a browser. Pageviews is a metric defined as the total number of pages viewed.
- Session: The period of time a user is active on your site or app. By default, if a user is inactive for 30 minutes or more, any future activity is attributed to a new session. Sometimes referred to as a Visit.
- Event: A type of hit used to track user interactions with content
  - e.g. a download or closing a tab.
**Property**: A sub-component of an Analytics account that determines which data is organized and stored together.
**View**: A subset of an Analytics account property that can have its own unique configuration settings.
Filter: A configuration setting that allows you to add, remove or modify your data during processing before it is displayed in your reports.
### Cleanup work - Views

<table>
<thead>
<tr>
<th>View Description</th>
<th>Value</th>
<th>Date</th>
<th>Duration</th>
<th>Percent</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Photo Microsites</td>
<td>471</td>
<td>00:04:06</td>
<td>50.63%</td>
<td>0.00%</td>
<td>471</td>
</tr>
<tr>
<td>All Web Site Data (<a href="http://www.vpl.ca">www.vpl.ca</a>)</td>
<td>298,230</td>
<td>00:04:48</td>
<td>71.77%</td>
<td>0.00%</td>
<td>298,230</td>
</tr>
<tr>
<td>ARCHIVES - Exclude Internal VPL</td>
<td>207,167</td>
<td>00:04:46</td>
<td>71.86%</td>
<td>0.00%</td>
<td>207,167</td>
</tr>
<tr>
<td>Query Parameters</td>
<td>208,250</td>
<td>00:04:48</td>
<td>71.77%</td>
<td>0.00%</td>
<td>208,250</td>
</tr>
<tr>
<td>Exclude IPh</td>
<td>280,225</td>
<td>00:04:31</td>
<td>74.85%</td>
<td>0.00%</td>
<td>280,225</td>
</tr>
<tr>
<td>Exclude Staff Usage</td>
<td>280,000</td>
<td>00:04:38</td>
<td>72.47%</td>
<td>10.51%</td>
<td>280,000</td>
</tr>
<tr>
<td>External DB Launch</td>
<td>11,277</td>
<td>00:04:16</td>
<td>99.17%</td>
<td>0.00%</td>
<td>11,277</td>
</tr>
<tr>
<td>External Usage</td>
<td>237,999</td>
<td>00:04:36</td>
<td>79.78%</td>
<td>0.00%</td>
<td>237,999</td>
</tr>
<tr>
<td>Internal Public Usage</td>
<td>47,158</td>
<td>00:04:35</td>
<td>93.18%</td>
<td>0.00%</td>
<td>47,158</td>
</tr>
<tr>
<td>Internal Staff Usage</td>
<td>13,467</td>
<td>00:06:11</td>
<td>49.79%</td>
<td>0.00%</td>
<td>13,467</td>
</tr>
<tr>
<td>iPac Only</td>
<td>7,002</td>
<td>00:00:00</td>
<td>14.66%</td>
<td>0.00%</td>
<td>7,002</td>
</tr>
<tr>
<td>Public Branch Usage</td>
<td>26,670</td>
<td>00:01:44</td>
<td>84.33%</td>
<td>0.00%</td>
<td>26,670</td>
</tr>
<tr>
<td>Public CEN Usage</td>
<td>22,379</td>
<td>00:02:03</td>
<td>78.96%</td>
<td>0.00%</td>
<td>22,379</td>
</tr>
<tr>
<td>Public Terminal Usage</td>
<td>38,519</td>
<td>00:06:22</td>
<td>89.50%</td>
<td>0.00%</td>
<td>38,519</td>
</tr>
<tr>
<td>Public Wiressis Usage</td>
<td>3,084</td>
<td>00:03:54</td>
<td>73.76%</td>
<td>0.00%</td>
<td>3,084</td>
</tr>
<tr>
<td>TEST - Run nothing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Required Views

- **All Web Site Data**: Your precious! Keep it safe!
- **Exclude Staff Usage**: Your workhorse
TEST, DELETE, ARCHIVE
When we inherited GA, it was hard to know which views were critical for reporting, and which ones were one-off experiments.
Made a change?
Messed something up?
Aside: you’re going to have issues! Occasionally things will get messed up. Accurate data is worth the effort.
Discovered why the data looks weird?
Label it!
Parameter exclusions

The “All Pages” report can be very handy, but it often looks like a mess! That’s because of all the unnecessary URL query parameters Buried in the View Settings is a little box entitled “Exclude URL Query Parameters”.

(Behavior -> Site Content -> All Pages)
Filters:

Staff vs. Non-Staff
Inside the building vs. Outside
Weird bots

IP range filters are tricky to create, as they require knowledge of regular expressions. If you don’t know what a regular expression is, you probably don’t want to know! There are tools online to help you build them, though. When in doubt, ask your closest nerd!

Timms’ ghost! Discovered that all of the traffic was coming from a particular Network Domain. Filtered that out and we’re good!
Libraries use lots of 3rd-party vendors, e.g. BiblioCommons and LibGuides. How do we treat someone jumping between these sites as a single session?

- Old way: subtracting referrals from session counts for 3rd-party sites (i.e. only count direct visits)
- Option 1: Referral Exclusion List
- Option 2: Getting your hands dirty with some more advanced JavaScript coding
After an initial first pass-through at cleanup, we were able to start making better use of the GA, which means that we actually look at them more frequently than once a quarter when we get asked for board report numbers.
How the cleanup helped

- Removed fear
- Gave us license to experiment
- Felt ready to invite collaboration

Even the first pass-through yielded a lot of benefits.

- Remove fear - of deleting things, also of making meaning
- Allowed us to experiment - after we lost that week of analytics (that you saw in the annotations) and no one yelled at us, we felt more comfortable trying things
- We were able to be more of a resource for other staff - we felt more confident in inviting questions and feeling like we weren't giving made-up answers
Allows you to combine results from multiple properties and views to create more advanced reports
If you’re handy with spreadsheets, you can do pretty much whatever you want!
Sharing info:

Analytics as reference librarianship

quarterly reports vs. answering questions on the fly when decision points come up
- readers' advisory: how are people getting to the page?
- subject guide use: which are most popular?
- Browser & resolution support for redesign
Should we keep this page?

Here are some examples of questions & then where we’d go to look

● Should we keep this page? Are people using it?
● We’d set the date range for the past year (or over numerous years if that makes more sense)
● Content drilldown report on the left sidebar
● Gives you concrete numbers for stakeholders - 562 pageviews per year
● Leads to more questions:
  ○ Is 562 views per year worth the effort to maintain this page?
  ○ Are people not interested in this content, or can they just not find it?
What are the trends? In which platforms, browsers, browser versions, screen sizes do we need to support our users?
What caused that spike?

We can also learn things by working backwards - looking at the analytics and seeing weird things and investigating where they came from

- In this example, we noticed a spike in our Inspiration Lab room booking pages with the majority of the traffic coming from Facebook & we then discovered that a Victoria radio station had posted about it (and got 172 shares)

So what this data gives us is some ideas for content marketing strategy - Inspiration Lab spike from the Facebook post in August was actually larger than the traffic we got when we first opened
Beyond basics

There are limitations to the basic Google Analytics setup, so we’ll briefly discuss a couple of ways we’ve tried to extend our data-gathering reach.
Extending Google Analytics

GA tells you which pages people are going to, but it’s not great at telling you where they’re clicking to get there. So, for example, on our home page, there are a couple of links that take you to the Contact Us page. GA will tell you how often people go to that page, but it doesn’t tell you which link people use.
A clickmap tool like Crazy Egg will give you that information, which is immensely helpful when making design decisions. In this case, we discovered that while the contact us link in the nav got the most clicks, the contact box got more clicks in total when you added up the sub-links, and that the link in the footer actually got a healthy number of clicks, indicating that there’s an argument to be made for this redundancy.
Why, as well as what

One small change, one big leap forward: a *big*, bright, obvious "Login" button. I’m always hunting for it, and would love to have you make it easy to see.

Again, the GA tells you what people are doing, but it’s not telling you what people can’t do, what they wish they could do, and why. So for our redesign, we conducted interviews with users to uncover their frustrations and motivations with using our site. If there’s something I want to emphasize with this, is that big data isn’t the be-all end-all when it comes to making decisions about your users. Numbers alone don’t tell the story, it’s critically important to go out and talk to library users.
Advanced Analytics:

- Events
- Goals
- Dashboards
- Automation

Extending Google Analytics

Events
Goals
Dashboards
Automated reports & scheduled emails
Discussion
Discussion

- What are the metrics that tell us if a library website is successful?

Extending Google Analytics

Which pages on your site are key destinations? Databases? Subject Guides? Programs?
- Do users actually use our intended pathways to get there?
- How long does it take?
- Counting clicks is not always useful on its own.

Clicking “Submit” on a form is a well-defined event

Increased time spent in “browse friendly” portions of the site, i.e. the Wikipedia Effect

How often are “Related Content” links clicked?
Discussion

- Where do we want users to linger & where do they need quick answers?

One measure that analytics people will pay a lot of attention to is bounce rate, which is basically a one-page session - a user lands on a page and leaves without going anywhere else. This is bad in e-commerce, it means that the user isn’t browsing products or adding things to their shopping cart.

But what does a high bounce rate mean on an FAQ page, or an hours & location page?

Another measure is dwell time. Does long time on page mean that users are interestedly reading, or does it mean that they can’t find what they’re looking for?
Questions?

@801

@daftkifty
Online Resources

- Library Technology Review, Number 4 / June 2013
  http://journals.ala.org/ltr/issue/view/125

- Massachusetts Library System Guide
  http://guides.masslibsystem.org/webanalytics

- Google Analytics Academy
  http://analyticsacademy.withgoogle.com

- Google Analytics Spreadsheet Add-on
  http://developers.google.com/analytics/solutions/google-analytics-spreadsheet-add-on