UNDERSTANDING & USING ALTMETRICS FOR COLLECTION MANAGEMENT:
AN INTERACTIVE OVERVIEW
ER&L 2016
WHERE WE’RE HEADED

INTRODUCTION TO ALTMETRICS

ALTMETRICS TOOLS

HOW LIBRARIANS ARE USING ALTMETRICS

ENHANCING COLLECTION MANAGEMENT

HANDS ON ACTIVITIES

USING ALTMETRICS IN YOUR LIBRARY

Q & A
WHAT QUESTIONS ARE YOU STARTING WITH?

I'M HERE FOR THE BEER!

WHY ARE WE HERE?
Introduction to altmetrics
How do researchers communicate?

1600’s

• Letters
• Journals
• Conferences
• Online platforms

Today
Primacy of the journal article
Impact metrics: the big three

Citations

Journal impact factor

h-index

(For Librarians: Replace h-index with Usage statistics)
Citations: Common Sources

- Google Scholar
- Scopus
- Web of Knowledge

(not to scale)
Usage statistics: Sources

COUNTER

Services:

- Journal Usage Statistics Portal
- ProQuest’s 360 COUNTER
- …and many others
Tradition isn’t reflective of reality

Non-article outputs
Web-native research
Increased speed
Value of scicomm
Non-article outputs

By Romainhk – GFDL or CC BY-SA 3.0, via Wikimedia Commons

By MarkJaysonAranda - CC BY-SA 3.0, via Wikimedia Commons
Web-native research
### Increased speed of discourse

<table>
<thead>
<tr>
<th>Research output</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article</td>
<td>article</td>
</tr>
<tr>
<td>Article</td>
<td>letter to the editor</td>
</tr>
<tr>
<td>Article</td>
<td>blog post</td>
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<tr>
<td>Article</td>
<td>Twitter exchange</td>
</tr>
<tr>
<td>Article</td>
<td>open peer review via comment</td>
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<tr>
<td>Article</td>
<td>PubPeer/Publons</td>
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<tr>
<td>Blogpost</td>
<td>article</td>
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<tr>
<td>Blogpost / preprint</td>
<td>article</td>
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<tr>
<td>Blogpost / preprint</td>
<td>blogpost / preprint</td>
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</tbody>
</table>

(years)

(instant)
Altmetrics: their purpose and the existing landscape
What are altmetrics?

- An alternative, more immediate measure of attention
- Not a replacement but a complement
- From non-traditional sources
- To provide a larger context
- Policy documents, blogs, mainstream news, social media

Providing a multi-faceted picture of engagement
Altmetrics are a *complement to*, not *replacement for*:

<table>
<thead>
<tr>
<th>Altmetrics</th>
<th>Citations</th>
<th>Usage statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Web</td>
<td>Citation databases</td>
<td>Publisher sites/dbs</td>
</tr>
<tr>
<td>Instant</td>
<td>Months to years</td>
<td>Instant</td>
</tr>
<tr>
<td>Diverse meanings</td>
<td>Diverse meanings</td>
<td>Few meanings</td>
</tr>
<tr>
<td>Diverse stakeholders</td>
<td>Scholarly</td>
<td>Diverse stakeholders</td>
</tr>
</tbody>
</table>
Altmetrics: Purpose
New perspectives of impact

ACADEMIC IMPACT
Journal Impact Factor
Citation counts

Traditional metrics

SOCIETAL IMPACT

Mentions in news reports
Mentions in social media
Mentions in blogs
Reference manager readers
... etc.

Alternative metrics “altmetrics”

More article-centric, as opposed to journal-centric.
What do altmetrics tell us?

- Attention (always)
- Quality (sometimes)
- Impacts (sometimes)
“My research receives a lot of attention.”
“My research is of high quality.”
“My research has an impact upon the world.”
Metrics only tell a small part of the story.

You need qualitative data, too!
Altmetrics: Existing Landscape

Platform-dependent metrics
Altmetrics aggregators
Altmetrics: Existing Landscape

Platform-dependent metrics
Platform-dependent metrics
Platform-dependent metrics: Mendeley
Altmetrics aggregators
Altmetrics as feedback loop: use cases
Altmetrics as Feedback loop for self-promotion

“I realized that when I put these blog posts up pointing to my research the downloads of them increased dramatically, from a factor of 100 in some places... Of course, you can’t know who is actually reading an article from downloads alone. But, the really interesting thing happened about 2 years later when citations started to appear. It became clear that the articles that I had posted quite a lot online were the ones that other people had found and were citing.”

Dr. Melissa Terras
Evidence for Tenure & promotion

Showcased engagement using social media metrics

Showcased attention using web analytics, usage statistics, and contextualized altmetrics

Evidence for Grant applications & reporting

**Quality:** “Three evaluations received from Faculty of 1000 (F1000) members, which have rated it as a ‘Must read’/ ‘Recommended’ article”

**Attention:** “This article has attracted lots of attention from scientists since its publication...and has been viewed more than 6300 times since its publication two months ago”
Altmetrics tools
Impactstory: overview

Co-founded in 2011 by Heather Piwowar & Jason Priem

A non-profit devoted to incentivizing open science using altmetrics

Many diverse attention sources (including Scopus citations), emphasizing diverse scholarly outputs
Sources Impactstory tracks

Citations
- Scopus
- PubMed

Post-publication peer review
- Publons

Software & Data
- GitHub
- Dryad
- Figshare

Reference managers
- Mendeley
- CiteULike

Other sources
- Wikipedia
- Youtube & Vimeo
- F1000
- PLOS
- Publons
- Slideshare

Social media and blogs
- Twitter, Facebook, Google+, 8,000+ Blogs
The Imperative for Open Altmetrics

Konkel, Piwowar, Priem.
2014 The Journal of Electronic Publishing

Summary

49 Mendeley readers
79 Impactstory views
2 Scopus citations
5 Twitter tweets
3 science blogs blog posts

99th percentile on Impactstory
99th percentile on Impactstory
97th percentile on Impactstory
73rd percentile on Impactstory
99th percentile on Impactstory

Metrics (5)
Platform & service for raising the profile and impact of publications.

Free for researchers

Create lay explanations, link to contextual content, share via social networks

Track metrics

Institutional product launched in 2016
Plum Analytics: overview

Co-founded in 2011 by Andrea Michalek & Mike Buschman

PlumX is a research metrics company that focuses on both organizations and individuals.

Many diverse attention sources (including Scopus citations)

Focus on numbers, some underlying data
Sources PlumX currently tracks

**Citations**
- Scopus
- PubMed
- RePEc
- SSRN
- USPTO

**Library sources**
- EBSCO
- WorldCat
- Institutional repositories

**Software & Data**
- GitHub
- SourceForge
- Dryad
- Figshare

**Reference managers**
- Mendeley
- CiteULike

**Other sources**
- GoodReads & Amazon
- PLOS
- Slideshare
- StackExchange

**Social media and blogs**
- Twitter
- Facebook
- Google+
- Blogs
- Wikipedia
Altmetric: overview

Founded in 2011 by Euan Adie

A boutique data science company that tracks online attention to research

Emphasize “who’s saying what” about research, but are best known for our donut

Take note!
Altmetric =/= altmetrics
What we do

Measure online attention around journal articles

Collect/deliver article-level metrics

You

Maintain a carefully curated list of sources
Altmetric: overview

44K online mentions of scholarly articles every day.

1 mention every 2 seconds!

50K+ unique articles are shared each week.

~5M articles with tracked attention data.
Sources we currently track

News outlets
1,300+ sites
Text mining
Global coverage

Post-publication peer review
Publons
Pubpeer
Faculty of 1000 Prime

Policy documents
World Health Organization
UNESCO
Gov.UK
And many more...

Reference managers
Mendeley
CiteULike

Social media and blogs
Wikipedia, Twitter,
Facebook, Google+,
Sina Weibo, Youtube,
Reddit, StackExchange
8,000+ Blogs
Dramatic Shifts in Benthic Microbial Eukaryote Communities following the Deepwater Horizon Oil Spill

Overview of attention for article published in PLoS ONE, June 2012

So far, Altmetric has seen 1 Wikipedia article.

Environmental impact of the Deepwater Horizon oil spill
Cited by user Beagel on 09 Feb 2013
The 2010 Deepwater Horizon oil spill in the Gulf of Mexico has been described as the worst environmental disaster in the United States, releasing about of crude oil...

About this score
In the top 5% of all research outputs scored by Altmetric

http://altmetric.com/bookmarklet.php
DATABASE & JOURNAL INTEGRATION

Side-by-side traditional metrics
Seamless pushing of content to social media

Content platforms, such as:
- Scopus
- CINAHL

Research Intelligence Platforms
How librarians are using altmetrics: a study
When teaching workshops or classes, how often do you address the following indicators of research impact?

LEARN MORE: 9:45 am tomorrow, Room 203
HOW CAN ALTMETRICS ENHANCE OUR DECISION MAKING?
SIGH...
ANOTHER
DATA JUMBLE
OUR GOALS AND QUESTIONS UNTANGLE THE MESS
ENSURE ACCESS TO THE BEST & MOST RELEVANT CONTENT
QUALITY
USEFULNESS
CURRENCY
COST
DEMAND
THE DATA WE RELY ON
SOME USE CASES
“TO PREPARE A PUBLIC HEALTH WORKFORCE, CREATE NEW KNOWLEDGE, ADDRESS SOCIAL DETERMINANTS & LEAD IN THE IMPLEMENTATION OF NEW APPROACHES AND POLICIES TO IMPROVE THE HEALTH OF POPULATIONS.”
Evidence On The Chronic Care Model in The New Millennium
Health Affairs

Patient retention in antiretroviral therapy programs up to three years on treatment in sub-Saharan Africa, 2007–2009: systematic review
Tropical Medicine & International Health

Marijuana use and mortality.
American Journal of Public Health

The Triple Aim: Care, Health, And Cost
Health Affairs

Effects of soft drink consumption on nutrition and health: a systematic review and meta-analysis.
American Journal of Public Health

Hygiene and health: systematic review of handwashing practices worldwide and update of health effects.
Tropical Medicine & International Health

Developing Drugs For Developing Countries
Health Affairs

Prevention of upper respiratory tract infections by gargling: a randomized trial.
American Journal of Preventive Medicine

The Perils of Ignoring History: Big Tobacco Played Dirty and Millions Died. How Similar Is Big Food?
Milbank Quarterly

Green space, urbanity, and health: how strong is the relation?
Journal of Epidemiology and Community Health (1978)

Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates
Health Affairs

Workplace Wellness Programs Can Generate Savings
Health Affairs
PERCENTAGE OF ARTICLES WITH ACTIVITY & SUM OF CHANNEL ACTIVITIES
Activity #1:
Journal Selection using Altmetric Explorer for Institutions

altmetric.com
erl@altmetric.com
erl16
ACTIVITY #2:
WRANGLING & VISUALIZING YOUR DATA
http://bit.ly/1RCzZz6
USING ALTMETRICS IN YOUR LIBRARY
WRAP UP
Q&A

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