Article-Level Metrics

Martin Fenner

http://www.flickr.com/photos/58109753@N00/9652963003
Article-Level Metrics (ALM) allow the comprehensive analysis of the post-publication activity around a paper, employing usage stats, citations and altmetrics.

http://article-level-metrics.plos.org/alm-info/
Basic Concepts of Article-Level Metrics and Altmetrics

• Metrics for the individual article, not the journal the article is published in
• More comprehensive metrics than citation count
• More comprehensive target audience than other researchers in the same field
• research outputs other than journal article
THE DOS AND DON’TS IN INDIVIDUAL-LEVEL
BIBLIOMETRICS

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http://www.slideshare.net/paulwouters1/issi2013-wg-pw
Citation Counts for 2010 PLOS ONE Papers

Scopus citation counts for all 6,730 PLOS ONE papers published in 2010. Data collected May 20, 2013. Median 5, mean 9.7 citations, 10% of papers have at least 16 citations.

Probability

Scopus Citations
Article-Level Metrics for all 80,602 PLOS papers published until May 20, 2013.

http://dx.doi.org/10.3789/isqv25no2.2013.04
Article-level metrics add granularity and more dimensions

Viewed
- PLOS Journals (HTML, PDF, XML)
- PubMed Central (HTML, PDF)
- Figshare (HTML, Downloads, Likes)

Saved
- Mendeley
- CiteULike

Discussed
- Twitter
- Facebook
- Wikipedia
- Reddit
- PLOS Comments
- ResearchBlogging
- ScienceSeeker
- Nature Blogs
- Wordpress.com
- OpenEdition

Recommended
- F1000Prime

Cited
- CrossRef
- Scopus
- Web of Science
- PubMed Central
- PMC Europe
- PMC Europe Database Links

http://dx.doi.org/10.3789/isqv25no2.2013.04
New ALM Sources August - October 2013

F1000Prime
Post-publication peer review of the biomedical literature

Citations and Database Links
Europe PubMed Central (Europe PMC) is an archive of life sciences journal literature

Reddit
User-generated news links

OpenEdition
OpenEdition is an umbrella portal dedicated to electronic resources in the humanities and social sciences.
PLOS Biology articles: sites of recommendation and discussion

Number of PLOS Biology research articles published until May 20, 2013 that have been recommended by F1000Prime (red) and/or mentioned in Wikipedia (blue).
## PLOS Article–Level Metrics by Source

Proportion of all 90,141 PLOS articles published until August 27, 2013 mentioned by particular article–level metrics source. Colors indicate categories (Viewed, Cited, Saved, Discussed, Recommended), as used on the PLOS website.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLOS HTML Views</td>
<td>100%</td>
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<tr>
<td>PMC HTML Views</td>
<td>96%</td>
</tr>
<tr>
<td>Figshare</td>
<td>15%</td>
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<tr>
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<tr>
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<td>22%</td>
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<tr>
<td>PLOS Comments</td>
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<tr>
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<td>4%</td>
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<tr>
<td>F1000Prime</td>
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</tbody>
</table>
Distinct Clones of Yersinia pestis Caused the Black Death

http://dx.doi.org/10.1371/journal.ppat.1001134
PLOS ALM Software is Open Source

https://github.com/articlemetrics/alm
**Article-Level Metrics and Open Access**

- Business model can be similar to OA in that ALM are paid by producer and then made openly available: strategy used by PLOS
- both part of larger open science movement (open data, open source, etc.)
- can show Open Access advantage in reuse that goes beyond citations

SPARC Article-Level Metrics Primer April 2013
Standards and Best Practices

• In June 2013 NISO received a grant from the Sloan Foundation to work on standards and best practices for alternative metrics
• First in-person workshop October 9 in San Francisco

http://www.niso.org/topics/tl/altmetrics_initiative/