Disciplinary Differences in Applying E-journal Usage Metrics

Mary Schoenborn
Jim Stemper
Katherine Chew
Caroline Lilyard
Inspirations

Deborah Helman, UW-Madison: Cancellation Criteria for Eng. Faculty

Anderson, Wilson, Li, CA Digital Library: Journal Value Metrics Assessment
Correlating Rankings of Journal Hit Lists

SFX Top 10

1. SCIENCE
2. NATURE
3. NEW ENGLAND JOURNAL OF MEDICINE
4. JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
5. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES
6. PEDIATRICS
7. HARVARD BUSINESS REVIEW
8. LANCET
9. HEALTH AFFAIRS
10. JOURNAL OF BIOLOGICAL CHEMISTRY

COUNTER Top 10

1. ECONOMIST
2. NEW ENGLAND JOURNAL OF MEDICINE
3. AMERICAN JOURNAL OF PUBLIC HEALTH
4. PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES
5. JOURNAL OF BIOLOGICAL CHEMISTRY
6. TIME
7. NEWSWEEK
8. LIBRARY JOURNAL
9. HARVARD BUSINESS REVIEW
10. JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION
## Model for Interpreting Correlations

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Negative</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>-0.09 to 0.00</td>
<td>0.0 to 0.09</td>
</tr>
<tr>
<td>Low</td>
<td>-0.3 to -0.1</td>
<td>0.1 to 0.3</td>
</tr>
<tr>
<td>Moderate</td>
<td>-0.5 to -0.3</td>
<td>0.3 to 0.5</td>
</tr>
<tr>
<td>Strong</td>
<td>-1.0 to -0.5</td>
<td>0.5 to 1.0</td>
</tr>
</tbody>
</table>
Conclusions from 2012

• SFX click-throughs, combined with Affinity String data, provide a “good enough” picture of usage
• SFX click-throughs are more predictive of citation behavior than COUNTER downloads
• Eigenfactor Scores are more predictive of citation behavior than Impact Factors
• There is marked variation among disciplines
Newer Ranking Options

Eigenfactor

http://www.eigenfactor.org/whyeigenfactor.php
Newer Ranking Options

Source Normalized Impact per Paper (SNIP)

Legend to Figure 3. Figure 3 illustrates that the papers citing a particular (target) journal cite in their reference lists publications in other sources as well. The complete reference lists are used to calculate the citation potential in the journal’s subject field.

1. Authorship choices by U-MN faculty

2. Citing choices by their peers

3. Indexing choices by publishers
Authorship: Downloads v. WoK/Scopus

- History
- Public Affairs
- Finance
- Accounting
- Marketing
- Management
- Forestry
- Chemistry
- Pharmacy
- Pediatrics
- Nursing
- Hematology

Legend:
- SFX / Scopus authoring R2
- SFX / LJUR authoring R2
- COUNTER/ Scopus authoring R2
- COUNTER / LJUR authoring R2
<table>
<thead>
<tr>
<th>Rank</th>
<th>Institution</th>
<th>Last 12 Months</th>
<th>All Time</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total New Downloads</td>
<td># of New Papers</td>
<td>New Downloads per paper</td>
</tr>
<tr>
<td>28</td>
<td>University of Minnesota - Twin Cities - Carlson School of Management</td>
<td>26,581 (28)</td>
<td>44 (40)</td>
<td>48 (28)</td>
</tr>
<tr>
<td>195</td>
<td>University of St. Thomas (Minnesota) - Opus College of Business</td>
<td>1,082 (195)</td>
<td>1 (308)</td>
<td>17 (198)</td>
</tr>
<tr>
<td>283</td>
<td>University of Minnesota - Duluth - Labovitz School of Business and Economics (LSBE)</td>
<td>396 (283)</td>
<td>2 (257)</td>
<td>25 (*)</td>
</tr>
<tr>
<td>426</td>
<td>University of St. Thomas (Minnesota) - Opus College of Business</td>
<td>53 (426)</td>
<td>2 (257)</td>
<td>13 (*)</td>
</tr>
<tr>
<td>445</td>
<td>Minnesota State University, Mankato - College of Business</td>
<td>40 (445)</td>
<td>0 (407)</td>
<td>13 (*)</td>
</tr>
</tbody>
</table>

Authorship: Impacts v. WoK/Scopus - Medicine, Life & Physical Sciences
Impact rankings are weak predictors half the time, but the strongest predictors are in Humanities & Social Sciences.

Eigenfactor correlated strongly in all disciplines except Medicine and Public Affairs, where SNIP is “good enough”.
Citing by Peers: Downloads v. WoK/Scopus

[Charts showing citations by field]

- History
- Public Affairs
- Finance
- Accounting
- Marketing
- Management
- Forestry
- Chemistry
- Pharmacy
- Pediatrics
- Nursing
- Hematology

Legend:
- SFX / Scopus citing R2
- SFX / LJUR Citing R2
- COUNTER / Scopus Citing R2
- COUNTER / LJUR citing R2
Citing by Peers: Impacts v. WoK/Scopus - Medicine, Life & Physical Sciences
Impact rankings are moderate/strong predictors > half the time, but the strongest predictors are in Humanities & Social Sciences.

Eigenfactor and SNIP are free, decent alternatives to Impact Factor – but the appropriate tool depends on the discipline.
Cost-per-use Rankings - Marketing

Old formula
Cost ÷ SFX

New formula
((Cost ÷ SFX) + (Cost ÷ Cites)) ÷ 2

1. JOURNAL OF MARKETING
2. JOURNAL OF MARKETING RESEARCH
3. JOURNAL OF ACADEMY OF MARKETING SCIENCE
4. JOURNAL OF RETAILING
5. JOURNAL OF CONSUMER BEHAVIOUR
6. JOURNAL OF MARKETING EDUCATION
7. JOURNAL OF PUBLIC POLICY & MARKETING
8. INTERNATIONAL JOURNAL OF ADVERTISING
9. JOURNAL OF THE ACADEMY OF MARKETING SCIENCE
10. INTERNATIONAL JOURNAL OF RESEARCH IN MARKETING
11. MARKETING - ENGLAND
12. JOURNAL OF MACROMARKETING
13. BRITISH JOURNAL OF MANAGEMENT
14. JOURNAL OF INTERACTIVE MARKETING
15. QUANTITATIVE MARKETING AND ECONOMICS
16. JOURNAL OF MARKETING RESEARCH
Summary of Findings

1. Authorship choices by our faculty
   ◇ Downloads aligned with faculty’s choice of journal 81% of the time (56% strongly, 25% moderately). Strong predictions were evenly split between hard and soft sciences, with the strongest in Chemistry and Finance, weakest in Nursing and Public Affairs.
   ◇ Impact rankings were weak predictors half the time, but the strongest predictors were in the Humanities and Social Sciences.

2. Citing choices by their peers
   ◇ Downloads aligned with peers’ choice of journal to cite 83% of the time (62% strongly, 21% moderately). 3/5 strong predictions were in the hard sciences, 2/5 in the soft sciences.
   ◇ Impact rankings were moderate or strong predictors over half the time, again with stronger predictors in the Humanities and Social Sciences.

3. Indexing choices by our publishers
   ◇ WoK tracked U-MN better than Scopus except in the Health Sciences, though effect more pronounced for downloads than impact rankings.
Practical application

Inform selection decisions

• Use LJUR and Scopus: LJUR reports more subscribed titles whose local faculty articles get cited by peers, but Scopus reports more subscribed journals that local faculty author in

• Obtain liaison/subject coordinator input: Hard to centralize collection if the “best fit” metrics vary by discipline

Understand patterns of use

• Capture demographics of logins and interdisciplinary use

Show value to the academy

• Defend library tax on departments
• Offer services to help faculty demonstrate impact e.g. for tenure portfolios
Let Us Help You Measure Your Impact

Individual Consultation

Interested in who is citing your work? Wondering what your h-index is?

We can show you how to track citations to your work, how to measure your personal research impact, and how to set up unique researcher IDs.

Individual or Departmental Reports

Preparing your tenure or promotion packet? Needing to assess your department's research performance?

We can run publication and citation reports for individual researchers or entire departments. Possible measures include: number of publications, number of citations, h-index, and ranked lists of publications or faculty members. Research impact of particular subject areas at Emory can also be compared with other institutions.

Please note that running thorough and careful reports is a time-intensive process. For departmental reports, 2-4 weeks may be required for production of the initial report, review by the requesting department, and completion of the final report.

See below for sample reports.

Sample Individual Report
Sample Departmental Report
Sample Institutional Report

Comments (0)
Questions?

Mary Schoenborn  hawki003@umn.edu
Jim Stemper  stemp003@umn.edu
z.umn.edu/jmetrics