Measuring Impact Across the Disciplines
Tools and Strategies for Supporting Faculty

ACRL EBSS Current Topics
December 6, 2012
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Understanding Impact

Scholarly Impact

• The value of faculty research for purposes of retention, promotion, tenure decisions.

• “Research visibility that enhances institutional stature among peers.” (Alpert, 1985)
Understanding Impact

Bibliometrics

• A set of methods used to study or measure texts and information, often toward to goal of assessing scholarly impact.

• “Impact Factor is not a perfect tool to measure the quality of articles but there is nothing better... and is, therefore, a good technique for scientific evaluation.” (Garfield, 2007)
Common Impact Measures

• **Cited references** to an author’s work
  – Who is citing that author as an authority
  – How much or how often an author is cited

• **Journal rankings**
  – Quantitative data about journals, including impact factors

• **Reviews** of an author’s work
  – Qualitative information on the quality of more extensive works, such as books and portfolios.
Topics Overview

• **EBSS Challenges & Opportunities**
  – Traditional Bibliometric Tools
  – Alternative Bibliometric Tools
  – Emerging Altmetric Tools

• **Future of Scholarly Impact**
  – Impact across the disciplines
  – Continuing questions
Traditional Bibliometric Tools

• **Web of Science**, aka Web of Knowledge
  – A combination of resources and resource types
  – A database that does more than just “find” articles
  – Tracking the articles that cite other articles...
  – Links to articles contained in these bibliographies (some are outside the ISI “universe”)

• **Journal Citation Reports (JCR)**
Traditional Bibliometric Tools

Journal Citation Reports

• Presents quantifiable, statistical data that provides a systematic way to evaluate the world’s leading journals.
• Covers more than 10,000 from more than 25 million cited references indexed every year
• No Arts and Humanities edition

Journal Impact Factor

• Computed by calculating the average number of citations to articles in the journal during the preceding two years from all articles published that given year
• See http://www.mathunion.org/fileadmin/IMU/Report/CitationStatistics.pdf
Traditional Bibliometric Tools

Here's a sample from an ISI-based data set for citations of Canadian-authored articles published between 1981 and 2000. The number for each discipline is the average number of citations per published article (both article and citations in ISI-listed journals).

- **Philosophy**: 1.11
- **Literature**: 0.33
- **Oncology**: 26.73
- **Economics**: 6.74
- **Biochemistry**: 23.54
- **Art and Architecture**: 0.35
- **Neuroscience**: 21.41

Posted by: Tom Hurka, [December 06, 2007](#) from the Leiter Report
Traditional Bibliometric Tools

• **Scopus**
  – A database known as an alternative to Web of Knowledge
  – Offers similar metrics, but uses slightly different algorithms
    • SCImago Journal Rankings (SJR)
    • Source Normalized Impact per Paper (SNIP)
  – Offers a much wider range of journals, but still fairly limited for humanities scholars

• **New Web of Knowledge Products**
  – Book Citation Index
  – Data Citation Index
Traditional Bibliometric Tools

Figure 3: Importance of monographs

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Figure 5: Importance of conference presentations/posters

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From Research Information Network, “Communicating Knowledge” (2009)
Traditional Bibliometric Tools

Scopus Author Evaluator

Citation overview

Citations received since 1996

Author: Nabel, Matthew C.
Self citations of selected author are excluded.

Overview options

Exclude from citation overview: 
- Self citations of selected author
- Self citations of all authors

Sort documents: Citations descending

Date range: 2008 to 2012

Update Overview

32 Cited Documents

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Author h index

- View h-Graph
- View h-Graph

Note: The h index considers Scopus documents published after 1995. About h-Graph

h Index = 19

Of the 32 documents considered for the h index, 19 have been cited at least 19 times.
Traditional Bibliometric Tools

Book Citation Index, within Web of Knowledge
Alternative Bibliometric Tools

• **Books & Book Chapters**
  – Google Books
  – Google Scholar Citations
  – WorldCat Identities
  – Anne Harzing’s *Publish or Perish*
Alternative Bibliometric Tools

Sherman Dorn
Professor of Education, University of South Florida
History - education
Verified email at usf.edu

Citation indices

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Citations to my articles

Google Scholar Profiles
## Alternative Bibliometric Tools

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Harzing’s *Publish or Perish*
Alternative Bibliometric Tools

• **Other Tools for Non-Ranked Journals**
  – Cabell’s or Ulrich’s Journal Profiles
    • Journal acceptance rates
    • Publication type (e.g. scholarly, trade)
    • Abstracting & indexing
    • Readership information
  – WorldCat
    • Journal holdings
Emerging Altmetrics Tools

Altmetrics

• The creation and study of new metrics based on the Social Web for analyzing, and informing scholarship

• “We rely on filters to make sense of the scholarly literature, but the narrow, traditional filters are being swamped. However, the growth of new, online scholarly tools allows us to make new filters; these altmetrics reflect the broad, rapid impact of scholarship in this burgeoning ecosystem.” (Altmetrics.org)
Emerging Altmetric Tools

• **Article-Level Metrics**
  – PLoS Article-Level Metrics (Views & Downloads)
  – SSRN (Views & Downloads)
  – Altmetric It Bookmarklet

• **Social Media Metrics**
  – Twitter API
  – Impact Story (aka Total Impact)

• **Readership Metrics**
  – Mendeley API
  – ReaderMeter
Emerging Altmetric Tools

Impact Story Collection Example
Emerging Altmetric Tools

Altmetric It Bookmarklet
Measuring Impact Across the Disciplines

• **Traditional bibliometric tools** remain essential for faculty, despite flaws and disciplinary variance.

• **Alternative bibliometric** tools become a widely acceptable means of capturing impact, particularly in the social sciences and humanities.

• **Altmetrics** are a fast-emerging area with high potential for digitally savvy faculty, but are still imperfect and untested in most tenure cases.
Measuring Impact Across the Disciplines

• What **questions** do you have about impact measurement and scholarly metrics?
  – *Traditional bibliographic tools*
  – *Alternative bibliographic tools*
  – *Emerging altmetric tools*

• What **experiences** or **challenges** have you had with regard to helping faculty in specific EBSS disciplines measure impact?


Additional Resources

• Altmetrics: a manifesto. Altmetrics.
  – http://altmetrics.org/manifesto/
• Ariew, S. Library & information resources related to promotion & tenure. USF.
  – http://guides.lib.usf.edu/promotion-tenure
• Ariew, S. Sample spreadsheet for evaluating journal significance.
  – http://guides.lib.usf.edu/loader.php?type=d&id=615329
  – http://crln.acrl.org/content/73/10/596.full
• Cited reference search example. ISI Web of Knowledge.
  – http://images.webofknowledge.com/WOK46/help/WOS/hcr_search.html#hcr_search
• JCR Tutorials. Thompson Reuters.
  – http://scientific.thomson.com/tutorials/jcr4/
  – http://crln.acrl.org/content/72/8/470.full.pdf+html
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  – http://www.scimagojr.com/