Research Impact, Visibility, and ORCID Author Identifiers

Relationships

Foster/Chemistry Colloquium
March 10, 2017

A. Ben Wagner, Chemistry Librarian
abwagner@buffalo.edu University at Buffalo
Why impact matters

- Used to be *Publish or Perish*.
- Increasingly it’s *Show Impact or Perish*.
  - Departments & schools track citation counts for individuals/subgroups.
  - Funding agencies asking scholars to provide metrics on who, where, and how their research is being used.
  - Academia being asked to justify tuition, student loans, and federal funding, no longer a given.
Research Impact: How to Measure?
> Classic Approaches

- **Publication Counts** - least publishable unit
- **Citations**
  - **Journal Impact Factors** (Clarivate, formerly Thomson Reuters)
  - **Scimago** & **Scopus** ‘Compare Sources’
  - **h-index** (individuals, departments)
- **Grant Peer Reviewers** – potential bias
Research Impact: How to Measure?
> Non-Traditional - A

- **AltMetrics**
  - **Usage** – clicks, downloads, views…
  - **Captures** – bookmarks, favorites, readers…
  - **Mentions** – blogs, comments, Wikipedia
  - **Social media** – likes, shares, tweets…

- [http://www.nature.com/nature/journal/v517/n7535/full/nature14098.html](http://www.nature.com/nature/journal/v517/n7535/full/nature14098.html)
Research Impact: How to Measure?

- Non-Traditional B

- **Network analysis** of citing papers, collaborators, journals, etc.
- Careful to clean & normalize data to permit valid disciplinary comparisons.
- Leiden Univ. is leading research center.
The Common Factors

Showing impact requires two things:

1. **Visibility**, not just getting published.
2. Facile, automatic means to **uniquely identify** your publications.

Demo: Essential Science Indicators

[http://research.lib.buffalo.edu/essential-science-indicators](http://research.lib.buffalo.edu/essential-science-indicators)
How Visibility Became Important

- A brief walk through the changing landscape of scholarly publishing.
- 1665: 1st scientific journals: French *Journal des sçavans* & English *Philosophical Transactions of the Royal Society*.
2011 Impact Factor = \[
\frac{3,283 \text{ 2011 cites}}{547 \text{ 2009-10 articles}} = 6.002
\]
JIF Cons

- Metric of extreme currency – narrow citing (1 yr.) & cited (2 yr.) window.
- GROSS average (mean)
  - Average article in J. of Catalysis is cited 6.002 times, but the times cited range from zero to 112 times.
- Can not be readily compared across disciplines or even sub-disciplines.
2005 - h-index

Invented by Jorge E. Hirsch, UCSD physicist

- An h-Index of 11: A person has 11 articles cited at least 11 times.
- Easily calculated from Web of Science or Scopus.

http://research.lib.buffalo.edu/web-of-science-core-collection

http://research.lib.buffalo.edu/scopus
2008 – NIH Open Access Mandate

- Requires all NIH-funded research available open access within 12 months.
2010 - NRC Report (Rev. 2011)

A Data-Based Assessment of Research-Doctorate Programs in the United States.

- Dept. by Dept. Ranking partially based on faculty publication metrics 2000-2006 (Web of Science citation data).

- [http://www.nap.edu/rdp/](http://www.nap.edu/rdp/)
2013 – Executive Order - Open Access Mandate

- Extends NIH Mandate to virtually all federally funded research.
- Over 25 agencies including NSF, DOE, EPA, FDA, NOAA.
What does this mean to you?

- **Bibliometrics** – statistical analysis of various characteristics of scholarly publications.

- Most STEM funding agencies, academic institutions, and research centers use bibliometrics as PART of their **evaluation of scholars** including tenure and promotion considerations.
Becoming more visible: Publish with care

- Do good research.
- Maximize your readership.
  - Publish where you will reach your target audience.
  - Publish open access (OA) or reserve the right to post your manuscript to an OA repository.
Becoming more visible: Claim your work

- ORCID
- Google Scholar Profile
- Correct bad Web of Science & Scopus data
- Other profiles (your preference)
  - ResearcherID
  - ResearchGate
  - Mendeley
ORCID Author Identifiers

- Publishers increasingly requiring ORCID ID for manuscript submission incl. ACS & RSC
- Posed to become the standard identifier to disambiguate authors.
- Can import publications from Scopus, PubMed Central, Google Scholar, EndNote, and ResearcherID profiles.
- MUST-HAVE!
Google Scholar Profile – My Citations

- Track your publications.
- Automatic notifications when someone cites you.
- Citation counts automatically updated; often higher than Web of Science.
- FAQ/Help setting up personal profile
Google Scholar Profile – My Citations

- The neatest thing: Your profile is at top of Google Scholar rankings when you search your name.

- http://scholar.google.com
Review WOS & Scopus records

- Citation databases can’t count citations if the computer can’t match a citing paper to your work.
- Correct errors such as incorrect initials, misspelled names, incorrect pagination.
- Check results against your resume for missing items.
  - May not be covered by database.
  - May have an error.
- Review Scopus Author Clusters – Do Author Search.
- [http://www.scopus.com](http://www.scopus.com)
Advantages
- Citations to WOS records auto-update
- Easy to import references from WOS or EndNote
- Can be linked to ORCID profile

Disadvantages
- No citations for non-WOS covered articles
- Many conference papers and most book sections will need to be imported from other sources
- Unified logon for WOS, EndNote Online, ResearcherID
Becoming more visible: Other Profiles

- Your preference
  - ResearchGate – Some UB researchers see noticeable increase in readership.
  - Mendeley
  - Others?
Open Access Citation Advantage

- We publish for prestige, but we also publish to be read & cited.

- **Open access (OA)** articles are cited 10%-100% more than equivalent toll access (TA) articles?

- Open Access Citation Advantage: An Annotated Bibliography

  - [http://www.buffalo.edu/~abwagner/OA-CiteImpact-Bib-Rev201108.doc](http://www.buffalo.edu/~abwagner/OA-CiteImpact-Bib-Rev201108.doc)
LOCMUF

- Old Saying: LOCKSS – Lots Of Copies Keeps Stuff Safe.
- Deposit your manuscript in as many good OA repositories as you legally can.
- UB Institutional Repository
- [https://ubir.buffalo.edu/xmlui/](https://ubir.buffalo.edu/xmlui/)
2012 Intel Science Fair winner – Jack Andraka

HS Sophomore developed a sensor - detects pancreatic cancer for 3 cents in 5 minutes.

- 168 times faster; 26,000 times less expensive
- 400 times more sensitive
- than the current method of detection!

Credits availability of open access articles to his success

Resources

- Measuring Research Impact Library Guides
  - Cornell Univ. - http://guides.library.cornell.edu/impact
  - Univ. of Minnesota - https://www.lib.umn.edu/researchsupport/impact

- ME!