Making an impact
Topics

• Research data management
• Open access
• Bibliometrics
• Researcher profiles
• Where to publish
Bibliometrics

- https://coreybradshaw.files.wordpress.com/2013/11/pecking-order.jpg
How is impact measured – the art of bibliometrics

Bibliometrics is a statistical analysis of books, articles, or other publications. Bibliometric analysis use data on numbers and authors of scientific publications and on articles and the citations therein (and in patents) to measure the “output” of individuals/research teams, institutions, and countries …
Citations to an individual paper
Citations to a researcher
Citations to a research group/department
Citations to a journal
Many ways to measure

- ISI
- JCR
- Eigenfactor
- H-index
- Journal analyser
- Altmetrics
- Google Scholar
ISI – Web of Science

Indicates impact of individual article – how many times has my article been cited?

Links to Journal Citation Reports for information on impact of the journal
H-index

• Attempts to quantify an individual’s research output
• Can be calculated manually or automatically in Scopus or Web of Science

http://www.harzing.com/pop_hindex.htm
Google Scholar

• Designed to “help authors consider where to publish”
• Based on h-index
• Can browse publications in broad areas such as engineering and computer science, development economics

Journal citation reports (JCR)

- Thomson Reuters – data from WoS
- 5000 journals in science & technology
- 1500 journals in social sciences
  Indicates -
- Highest impact journals
- Most frequently used journals
- Largest journals
Journal analyser

- Scopus (Elsevier)
- SJR – weighted by prestige of journal
- SNIP - measures conceptual impact by weighting citations based on total # of citations in a subject field
- Freely available
Eigenfactor

Takes into account the “prestige” of a journal
Attempts to analyse the influence of a journal
Journals with higher impact factor in a field have higher Eigenfactor
Data from Thomson Reuters JCR

http://www.eigenfactor.org/
Impact factor

JIF – average # times article from journal has been cited in last two years

Uses ISI Web of Knowledge data
Problems

That sounds great BUT…
Remember results are influenced by –
* Size
* Time/frequency of publication
* Non-English language journals
* Journals not indexed by Scopus/WoS
Figure I.1: The primary and secondary impacts of academic research

<table>
<thead>
<tr>
<th>Primary impacts</th>
<th>Secondary impacts</th>
<th>Evaluations of outcome changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic impacts e.g. citations</td>
<td>Changes in organizational activities or outputs</td>
<td>Academic/university outcomes</td>
</tr>
<tr>
<td>External impacts e.g. influence counts</td>
<td>Changes in societal outcomes</td>
<td>Academic/university outcomes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluations of outcome changes</td>
</tr>
</tbody>
</table>

Dynamic knowledge inventory
Multiple other factors

Academic/public policy outputs
Economic/public policy outputs

+ ? -
Altmetrics

Reflect impact of article, not container

*Altmetric [www.altmetric.com](http://www.altmetric.com)

*Impact Story [https://impactstory.org/](https://impactstory.org/)

*PlumX [www.plumanalytics.com](http://www.plumanalytics.com)

*Google + [https://plus.google.com](https://plus.google.com)

*Wikipedia

Wikipedia article traffic statistics

Main Page has been viewed 365432380 times in the last 30 days. This article ranked 2 in traffic on en.wikipedia.org
Record in ANU repository showing Altmetric score
In your spare time...
Increasing your research impact

What is bibliometrics?
The branch of library science concerned with the application of mathematical and statistical analysis to bibliography, the statistical analysis of books, articles, or other publications. (Oxford English Dictionary Online)

In other words: data about publications, or citation frequency.

Scientometrics is the branch of information science concerned with the application of bibliometrics to the study of the spread of scientific ideas; the bibliometric analysis of science. (Oxford English Dictionary Online)

Why is bibliometrics important?
A student asks you “What are the best journals in my field?”
A professor asks you “How do I check who is citing my articles? How many times have I been cited?”
A student asks you “How do I know this article is important?”
A professor asks you “How can I compare the research impact between journals so I know which journal should I publish in?”

Bibliometrics affects:
- People
- Journal collections
- Research Funding
- Tenure
- Expertise status in the field
- Finding others in the field/subject area (using citation searching)

Acknowledgements
This guide includes content adapted with permission from Bodleian Libraries, University of Oxford and Robin Kear, Lillian Librarian, University of Pittsburgh.
ORCiD

- Persistent digital identifier
- Distinguishes individuals – name disambiguation
- Automated linkages between author and professional activities – manuscript submission; grant applications, etc
- Endorsed by ARC/NHMRC
DISTINGUISH YOURSELF IN THREE EASY STEPS

ORCID provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized. Find out more.

1 REGISTER Get your unique ORCID identifier Register now! Registration takes 30 seconds.

2 ADD YOUR INFO Enhance your ORCID record with your professional information and link to your other identifiers (such as Scopus or ResearcherID or LinkedIn).

3 USE YOUR ORCID ID Include your ORCID identifier on your Webpage, when you submit publications, apply for grants, and in any research workflow to ensure you get credit for your work.

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http://orcid.org/
Google Scholar

Open Access

- Researchers in developing countries can see your work
- More exposure for your work
- Practitioners can apply your findings
- Taxpayers get value for money
- Compliant with grant rules
- Higher citation rates
- The public can access your findings
- Your research can influence policy
Open access citation advantage

<table>
<thead>
<tr>
<th>Measure</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studies finding a positive Open Access citation advantage</td>
<td>27</td>
</tr>
<tr>
<td>Studies finding no Open Access citation advantage (or an OA citation disadvantage)</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Size of OA citation advantage when found (and where explicitly stated by discipline)</th>
<th>% increase in citations with Open Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics/astronomy</td>
<td>170 to 580</td>
</tr>
<tr>
<td>Mathematics</td>
<td>35 to 91</td>
</tr>
<tr>
<td>Biology</td>
<td>-5 to 36</td>
</tr>
<tr>
<td>Electrical engineering</td>
<td>51</td>
</tr>
<tr>
<td>Computer science</td>
<td>157</td>
</tr>
<tr>
<td>Political science</td>
<td>86</td>
</tr>
<tr>
<td>Philosophy</td>
<td>45</td>
</tr>
<tr>
<td>Medicine</td>
<td>300 to 450</td>
</tr>
<tr>
<td>Communications studies (IT)</td>
<td>200</td>
</tr>
<tr>
<td>Agricultural sciences</td>
<td>200 to 600</td>
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[http://eprints.soton.ac.uk/id/eprint/268516](http://eprints.soton.ac.uk/id/eprint/268516)
Why does all this matter?

- Reputation
- High impact journals = increase in your citation counts
- Making your research visible
How?

OpenResearch@ANU
- ANU open access publications repository
- Facilitates ANU Open Access Policy
- Disseminate your research more broadly
- Meet funder obligations
- *Increase your impact!*
Publish with the best – an overview

• How to get published — SAGE Publishing
Presenter: Rosalia da Garcia, SAGE Publishing

Video presentation (MP4, 88MB)
Slide presentation (PDF 17.4MB)
How to get published — CSIRO
Presenter: Andrew Stammer, Executive Manager Communications & Publishing and Director of CSIRO PUBLISHING

Audio presentation (MP4, 58.5MB)
Slide presentation (PDF 2.49MB)
Predatory publishing

Publishing open access

By publishing open access or making a version of your published work available open access, you are providing free, unrestricted online access to scholarly materials that a number of people — including professional practitioners, industry workers and people in institutions and countries that are unable to afford subscriptions — would not otherwise have.

There are many avenues for publishing open access, and a good resource is the Directory of Open Access Journals (DOAJ), which lists the journals and publishers that facilitate open access publishing. The Guide to OA monograph publishing is a useful resource for those looking for information about open access monograph publishing.

Open access journals—gold open access

Publishing in an open access journal often means an article is assigned a creative commons licence permitting it to be distributed openly across a number of networks. You may be required to pay the publisher an upfront fee, or author processing charge (APC), to make the work openly available on the web. Publishing in this way is typically referred to as Gold Open Access.

Subscription-based journals—green open access

Publishing in a traditional subscription-based journal means your published work is immediately available to journal subscribers.

Articles published in these journals can still be made open access by making a pre or post print version of your article available in an open access repository such as the University’s Digital Collections. This form of publishing is known as Green Open Access, or self-archiving.

Alternatively, an author payment charge (APC) can be paid for an article in a subscription journal to be made open access. In that journal — this is known as hybrid publishing, and is not supported at ANU.

Paying for publication

At this time, ANU does not have a centrally administered fund for paying for publication. Check with your College research staff for available funds, and make sure you know your funder’s policy in regard to using grant money for paying for publication.

Predatory publishing

While the benefits of open access publishing are undeniable, its evolution has seen the emergence of enterprises that run conferences and journals with low or no peer review or other quality mechanisms. These predatory publishers solicit contributions to reputable sounding journals and conferences promising publication, however they do not provide a quality contribution to careers.

The ANU University Librarian recently provided some practical advice to researchers on how to prevent exploitation by predatory or vanity publishers, referring three major tips:

- If you haven’t heard of the journal or conference check Beall’s list or ask your local librarian
- Don’t believe the website — ask your colleagues and look at indicators of journal impact. A library’s guide to increasing your research impact with information on journal measures and tools can help you
- Don’t respond to unsolicited emails — choose the journals you wish to submit to
How innovative are you in publishing?

https://101innovations.wordpress.com/
Research Data Management

Research data management

Planning your research
Finding and analysing data, training and support

Managing your data
Collecting, organising and storing data

Research publication
Sharing your research

Policies and procedures
Responsible conduct, intellectual property
Data Management

Why Do You Need to Manage Your Data?

The carrot:
- Improvements to efficiency - managing data at the last minute and using the first method that comes to mind is usually time-consuming and error-prone.
- Protection - loss of data can be a disaster.
- Quality - data that is carefully managed has a much greater likelihood of being quality data.
- Exposure - data is now recognised as a scholarly output and good data management maximises the impact of your work, increasing the visibility of your research and extending its relevance. Data citation standards are at a critical stage with general acceptance of the use of DOIs (Digital Object Identifiers) and a major database specific to data citation is soon to be released.

The stick:
- Basic data management is required by the Australian Code for the Responsible Conduct of Research and compliance with the Code is already a requirement for ARC and NHMRC funding and is likely to be mandated by other funding bodies, government and institutions in the near future.
- Inadequate data management can also lead to catastrophes like the loss of data or the violation of people’s privacy.

ANU in RDA

The Australian National University (ANU) is a place of intensive research, and this is reflected in the variety and quality of ANU dataset descriptions in the Research Data Australia (RDA) database.

View ANU Records in RDA

A Data Management Horror Story

This is a mini series of YouTubes by NYU Health Sciences Libraries showing what shouldn’t happen when a researcher makes a data sharing request.

Data Shari...
What else?

What do you want to hear more about?

Anne.Lahey@anu.edu.au

Thanks to Bodleian Libraries