

University Library: Skills for Researchers

Raising Your Research Impact

Bibliometric Indicators

Bibliometric indicators offer statistical analysis of the output of researchers and research publications, and track publication impacts through citations and social media mentions. This can help you understand how much impact your research is having.

What can indicators help you do?

Understanding citation trends can help to:

- Track which papers, researchers and publishing trends are popular in your field of study
- Understand who is interacting with your research and may be potential collaborators
- Decide where to publish your paper

Using indicators

The University of Wolverhampton does not use indicators as a proxy for assessing quality of research. Most indicators are quantitative measures, so it is important to use indicators alongside qualitative analysis to form a broader perspective on publication impact. Assess any indicator for reliability by exploring the methodology and resources used to create it. See also the University of Wolverhampton Responsible use of indicators (metrics) policy.

There are various bibliometric indicators; this guide covers citation counts, journal impact factors, the H-index and altmetrics.

Citation Count

The number of times an article is cited by other articles. A number of databases include the citation count of an article such as Web of Science, Scopus, Medline, PsycInfo, and Google Scholar. Citation counts are the basis of a number of different indicators.

Issues to consider

- The citation count of an article presented in a database is based on a limited set of references.
- A citation does not indicate how the citing paper engages with a paper.
- Editorial policies of self-citation can skew counts to favour articles from a particular journal.
- Different disciplines have different citation behaviour, so cannot be compared like for like.

Journal Impact Factors

The average citation counts of papers published in an individual journal during a two year time frame. Originally created to help librarians decide what to subscribe to. Available in Web of Science.

How are journal impact factors calculated?

For each journal the total number of times all its articles, reviews, proceedings or notes from the previous two years were cited during the current year is counted. The number is divided by the total number of 'citable' items published in the journal over the same period. 'Non-citable' items include editorials and letters.

Where can I find journal impact factors?

The Web of Science platform provides journal impact factors for all journals featured in its database.

Other journal ranking indicators

SCImago Journal Rank (SJR) - The SJR takes into account the differences in citation behaviour between subject fields and is weighted by the prestige of the journal, meaning that a citation from a journal with a high SJR is worth more than one with a low SJR.

Source Normalised Impact per Paper (SNP) - The SNP measures citation impact by weighting citations based on the total number of citations (recorded in the Scopus database) in a subject field.

Where Can I find the SNP and SJR? You can find both the SNP and SJR in the Scopus database.

Limitations

- A journal ranking does not reflect the quality of individual papers or of the researchers who publish in them
- Journal editorial policy – journals that publish more review articles are likely to get a higher number of citations than those that publish more research papers.
- The majority of articles in a journal will be below the average citation count.

H-Index

Cross-references publication and citation counts in an attempt to compare researchers in a specific field. For example a H-index of 7 means that the researcher has published 7 papers which have all been cited at least 7 times by other papers.

Where can I find a researcher's H-index? You can find it within Web of Science, Scopus and Google Scholar.

Limitations

- The H-index favours established researchers over early career researchers.
- The H-index does not distinguish between different types of research papers.

Alternative indicators

Citation-based metrics often only offer information about how your research is being interacted within the academy. Social media offer an opportunity to see the impact research has more generally, including what has been picked up by news outlets or used in policy.

Several services have started providing indicators sometimes called altmetrics because they are an alternative to bibliometrics. These indicators are at article level and usually only available for publications with DOIs. Altmetric.org, PlumX metrics and ImpactStory are examples of these services.

Accessing resources

Access Web of Science and Scopus database through our A-Z list of databases from our subject resources pages: www.wlv.ac.uk/lib/resources

Help and Advice: For help and advice on any aspect of measuring publication impact please see www.wlv.ac.uk/lib/research



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