

Research metrics quick reference

Metrics illuminate the impact of your research outputs. Promotion and tenure committees, funders, advisors, research team leaders and potential collaborators are all interested in information about impact.

But where to start?

Your library can advise you on metrics that can help you to:

Decide where to publish - CiteScore - SJR: SCImago Journal Rank - SNIP: Source Normalized Impact per Paper - Journal Impact Factor	Update your online profile - h-index - Percentile benchmark - Usage - Captures - Mentions - Social media	Enrich promotion & tenure portfolio - h-index - Percentile benchmark - Usage - Captures - Mentions - Social media - Citations	Apply/report to funders¹ - Percentile benchmark - Journal metrics (e.g., CiteScore) - Usage - Captures - Mentions - Social media - Citations	Benchmark a collection of research outputs <i>(for team leaders)</i> - Percentile benchmark - Field-Weighted Citation Impact - h-index (if in the same field) - Field-Weighted Download Impact²
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Document* Author Journal PlumX metrics

Citation count <i># of citations accrued since publication</i> A simple measure of attention for an article, journal or researcher. As with all citation-based measures, it is important to be aware of citation practices. Citation counts can include measures of societal impact, such as patent, policy and clinical citations. “Effective Strategies for Increasing Citation Frequency”³ lists 33 different ways to increase citations.	Document count <i># of items published by an individual or group of individuals</i> A researcher using document count should also provide a list of document titles with links. If authors use an ORCID iD—a persistent scholarly identifier—they can draw on numerous sources for document count including Scopus, ResearcherID, CrossRef and PubMed. Register for an ORCID iD at orcid.org	Field-Weighted Citation Impact (FWCI) <i># of citations received by a document</i> <i>expected # of citations for similar documents</i> Similar documents are ones in the same discipline, of the same type (e.g., article, letter, review) and of the same age. An FWCI of 1 means that the output performs just as expected against the global average. More than 1 means that the output is more cited than expected according to the global average; for example, 1.48 means 48% more cited than expected.
h-index <i># of articles in the collection (h) that have received at least (h) citations over the whole period</i> For example, an h-index of 8 means that 8 of the collection's articles have each received at least 8 citations. h-index is not skewed by a single highly cited paper, nor by a large number of poorly cited documents. This flexible measure can be applied to any collection of citable documents. Related h-type indices emphasize other factors, such as newness or citing outputs' own citation counts.⁴	Citescore <i>citations to documents published in 4-year period</i> <i># of documents in same 4-year period</i> This comprehensive, current and open metric for journal citation impact is available in a free layer of Scopus.com. It includes a yearly release and monthly CiteScore Tracker updates. CiteScore calculations include citations from articles, reviews, conference papers, book chapters and data papers. See www.scopus.com/sources	SCImago Journal Rank (SJR) <i>average # of weighted citations received in a year</i> <i># of documents published in previous 3 years</i> Citations are weighted—worth more or less—depending on the source they come from. The subject field, quality and reputation of the journal have a direct effect on the value of a citation. Can be applied to journals, book series and conference proceedings. Calculated by SCImago Lab (www.scimagojr.com) based on Scopus data.
Source Normalized Impact Per Paper (SNIP) <i>journal's citation count per paper</i> <i>citation potential in its subject field</i> The impact of a single citation will have a higher value in subject areas where citations are less likely, and vice versa. Stability intervals indicate the reliability of the score. Smaller journals tend to have wider stability intervals than larger journals. Calculated by CWTS (www.journalindicators.com) based on Scopus data.	Journal Impact Factor <i>citations in a year to documents published in previous 2 years</i> <i># of citable items in previous 2 years</i> Based on Web of Science data, this metric is updated once a year and traditionally released in June following the year of coverage as part of the Journal Citation Reports®. JCR also includes a Five-year Impact Factor.	Percentile benchmark (articles) <i>compares items of same age, subject area & document type over an 18-month window</i> The higher the percentile benchmark, the better. This is available in Scopus for citations, and also for Mendeley readership and tweets. Particularly useful for authors as a way to contextualize citation counts for journal articles as an indicator of academic impact.
Outputs in top percentiles <i>extent to which a research entity's documents are present in the most-cited percentiles of a data universe</i> Found within SciVal, outputs in top percentiles can be field weighted. It indicates how many articles are in the top 1%, 5%, 10% or 25% of the most cited documents. Quick way to benchmark groups of researchers.	Usage <i># of downloads, clicks, views, library holdings, video plays</i> Signals if anyone is reading the documents or otherwise using the research. See plumanalytics.com/learn/about-metrics/usage-metrics/	Captures <i># of bookmarks, code forks, favorites, readers, watchers</i> Indicates that someone wants to come back to the work. Captures can be a leading indicator of future citations. See plumanalytics.com/learn/about-metrics/capture-metrics/
Mentions <i># of blog posts, comments, reviews, Wikipedia references, news media</i> Show how people are interacting with the research, and whether the research is gaining attention both within academic networks and in broader forums. See plumanalytics.com/learn/about-metrics/capture-metrics/	Social media <i># of shares, likes, comments, tweets, ratings</i> Social media can help measure “buzz” and attention. Social media can also be a good measure of how well a particular piece of research has been promoted. See plumanalytics.com/learn/about-metrics/capture-metrics/	**“Document” in the definitions refers to primary document types such as journal articles, books and conference papers. - Metrics selected will depend on the funders’ interests and project strengths. - Plume, A. & Kamalski, J. (March 2014). “Article downloads: An alternative indicator of national research impact and cross-sector knowledge exchange,” <i>Research Trends</i>, www.researchtrends.com/issue-36-march-2014/article-downloads/ papers.ssrn.com/sol3/papers.cfm?abstract_id=2344585 - See a good explanation at www.harzing.com/pop_hindex.htm

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