

Web of Science vs. Google Scholar

Many users are unaware of the distinct advantages to using the Web of Science over Google Scholar in discovering and evaluating scholarly research. This issue of the Web of Knowledge User Tips highlights the advantages.

1. The coverage of the Web of Science is authoritative and well documented. The journals, conference proceedings and books that comprise the Web of Science are selected according to our published selection criteria:

- [Journal Selection Process](#),
- [Conference Proceeding Selection Process](#)
- [Book Selection Process](#)

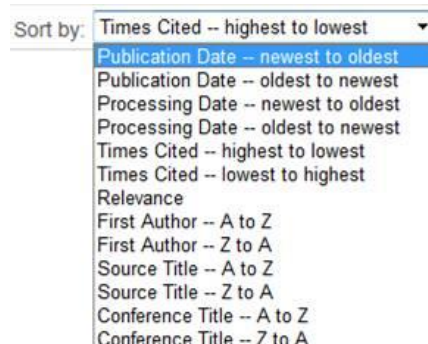
Once selected, Thomson Reuters provides cover-to-cover inclusion of those items in the Web of Science. Our [Master Journal List](#) is available electronically to verify the titles and time period of coverage.

Why does this matter? This ensures that vital research information can be retrieved regardless of the format, whether it appears as a letter, editorial, journal article, review, abstract, etc. You can easily browse other items in a journal issue that may be related to a certain topic or theme. There is no ambiguity as to whether a specific title is covered and if it is complete.

* Google Scholar does not provide specific coverage details and because a single article appears from a title may not mean all items are included. The gaps in Google Scholar coverage may not be readily apparent and may be masked to the unassuming eye by the large number of retrieved results.

2. The Web of Knowledge platform includes tools to analyse and manipulate your search results.

Why does this matter? By default, your search results appear in publication order with the newest presented at the top and this is clearly indicated at the top right of your results page. From here, you can change the sort order from a drop down list of options that can help you organize the results in the most advantageous way to review them.



With the Web of Science the sort options include the Times Cited count to bring highly cited items to the top. Relevance sorting allows you to sort records based on a ranking system that considers how many of the search terms are found in each record that scores the Title and Keywords fields higher than the Abstract and Keywords Plus® fields. The Refine Results panel

gives you an immediate analysis of the results based on the subject categorisation, publication year, document type, language, etc. This allows you to get a faster understanding of the breadth of the results and a way to triage them for review or to exclude irrelevant items.

* Google Scholar ranks documents by weighing the full text of each document, where it was published, who it was written by, as well as how often and how recently it has been cited in other scholarly literature. It is unclear as to the contribution of these elements to the ranking process and there is no way to alter the sorting. Restricting certain items from the results is not an option but you can limit your search to selected broad subject areas at the start.

3. The Web of Knowledge search engine is designed to enhance retrieval and also provides you with a flexible system to build comprehensive searches.

Why is this important? Balancing search retrieval with results relevancy is an issue with any search system. Authors may not always use the same terms and phrases in their publications as you may use. Things like British/American English spelling differences can affect results if not taken into consideration. Certain terminology may not have gained widespread acceptance. Our search engine automatically includes spelling variations as well as select word forms like plurals and verb tenses. Our search engine includes options that provide you with ways to build a search that will maximise the retrieval of relevant results, like

- [keyword synonyms](#),
- [boolean connectors](#),
- [wildcard symbols](#).

You can learn about the available search tools [here](#).

* The Google Scholar interface is not designed for searches of any complexity. Even the Advanced search options do not provide a clear way to construct searches beyond a few simple keywords. While the additional search boxes appear to provide more options, it is difficult to see how searches can be combined. Google Scholar appears to reach for maximum retrieval but its overly simplified interface does not really work to maximize relevancy of those results.

4. The information presented in the Web of Science is processed and curated. Thomson Reuters works with our publishing partners to ensure timely, consistent and accurate data acquisition. All authors and their affiliations are captured from the original publication. Data such as document type and subject area are added to the original publication information.

Why is this important? Search results are important, whether for discovery, planning or evaluation. You need to feel confident in those results when making decisions. Our processing provides additional means to find, analyse and understand the publications within our database. Errors that are identified are corrected in a timely manner.

* Google Scholar obtains its data through crawling various websites and repositories. This method means that the same publications are captured over and over leading to the version information displayed with the results. This also means that incomplete, inaccurate and even erroneous data gets captured. Some sites are crawled infrequently and according to Google Scholar's help file "updates to existing records take 3-6 months to a year or longer".

5. In the Web of Science, records of corrections and retractions are augmented with additional information pointing to the original publication.

Why is this important? These steps are taken to ensure you are aware when published research is no longer valid, needs further explanation or some error has come to light.

Title: Vascular Endothelial Growth Factor in Cerebral Ischemia (Retraction of vol 89, pg 969, 2011)
Author(s): Ma Y.; Qu Y.; Fei Z.
Source: JOURNAL OF NEUROSCIENCE RESEARCH Volume: 90 Issue: 6 Pages: 1296-1296 DOI: 10.1002/jnr.23043 Published: JUN 2012
Times Cited: 0 (from Web of Science)

* Google Scholar does not routinely capture corrections, additions or retractions. The risk of unwittingly finding and using publications of erroneous or discredited research is greater with Google Scholar.

6. Web of Science automatically provides access to hundreds of Open Access journals. It also links to electronic journals when your institution subscribes to those titles.

* One important clarification of Google Scholar is that it is also not a full text database. Similar linking that is available from the Web of Science is done through Google Scholar.

7. The process for capturing bibliographic references and citations has been honed over decades, producing accurate citation metrics.

Citation counts are an important measure of a scholarly publication's impact in the research area and citations are an inherent part of the Web of Science. Our process for capturing bibliographic references and counting citations has been honed over decades of producing our various citation indices, first in print and now in electronic format. A description of some key details of the process are presented in the [Help document](#).

* Many users gravitate to Google Scholar because in many cases the publication cite counts are higher than captured in the Web of Science. However, several studies have documented citation counts displayed in Google Scholar that are populated with erroneous attributions and phantom publications. While not all records contain errors in their cite counts, users should be aware of the potential, especially when using these numbers for research evaluation.