Thesis:
Electronic databases and searching

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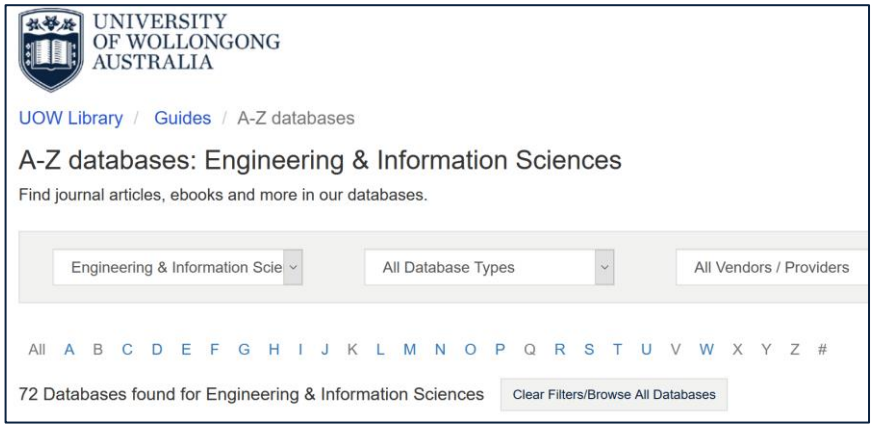
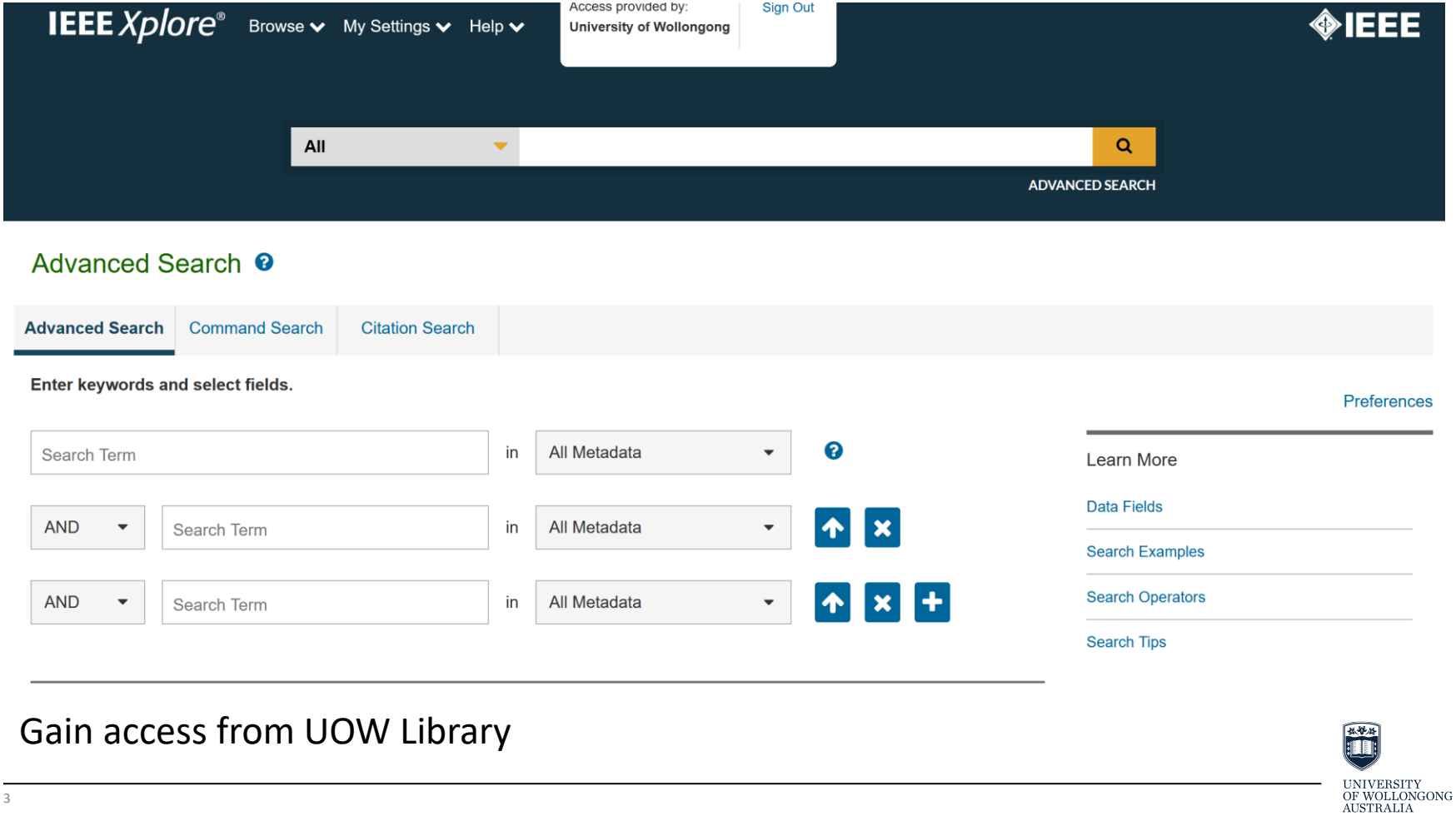
Electronic Databases

- While you will look at textbooks, magazines, company websites and so forth for information, academic sources play a very important role in putting your thesis together.

- There are many databases and search engines to use including:
  - Google Scholar
  - Scopus
  - IEEE Xplore
  - Web of Science

  - **Access** from UOW Library





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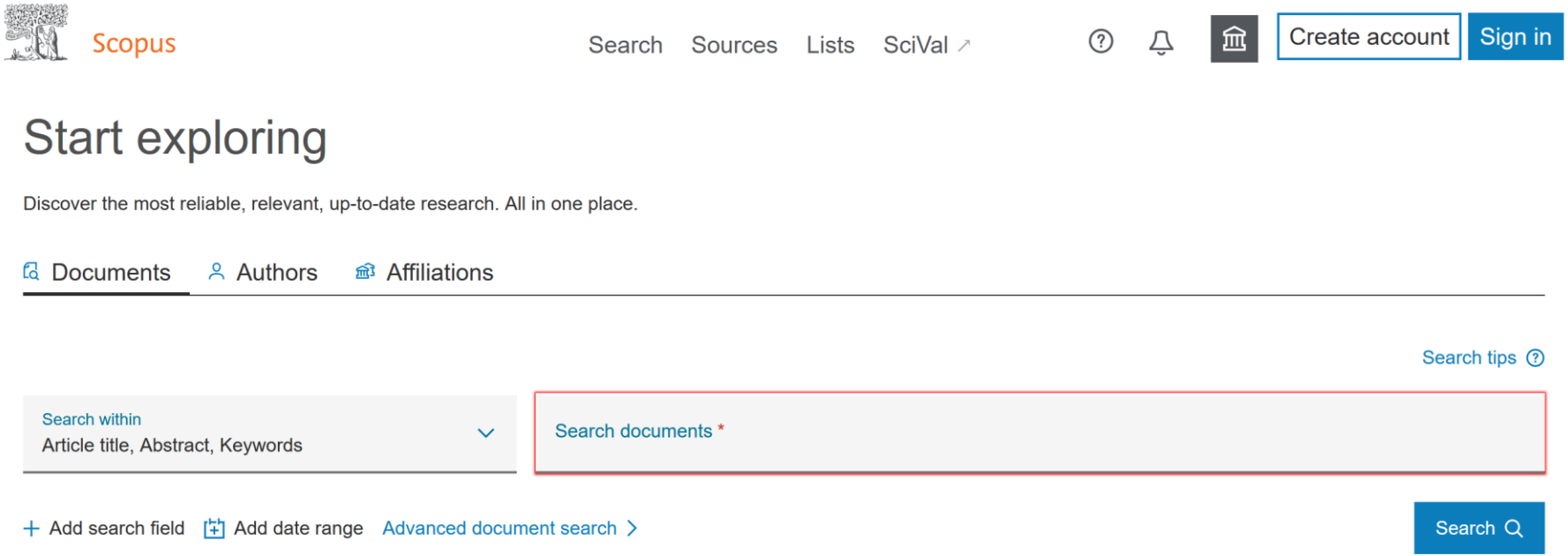

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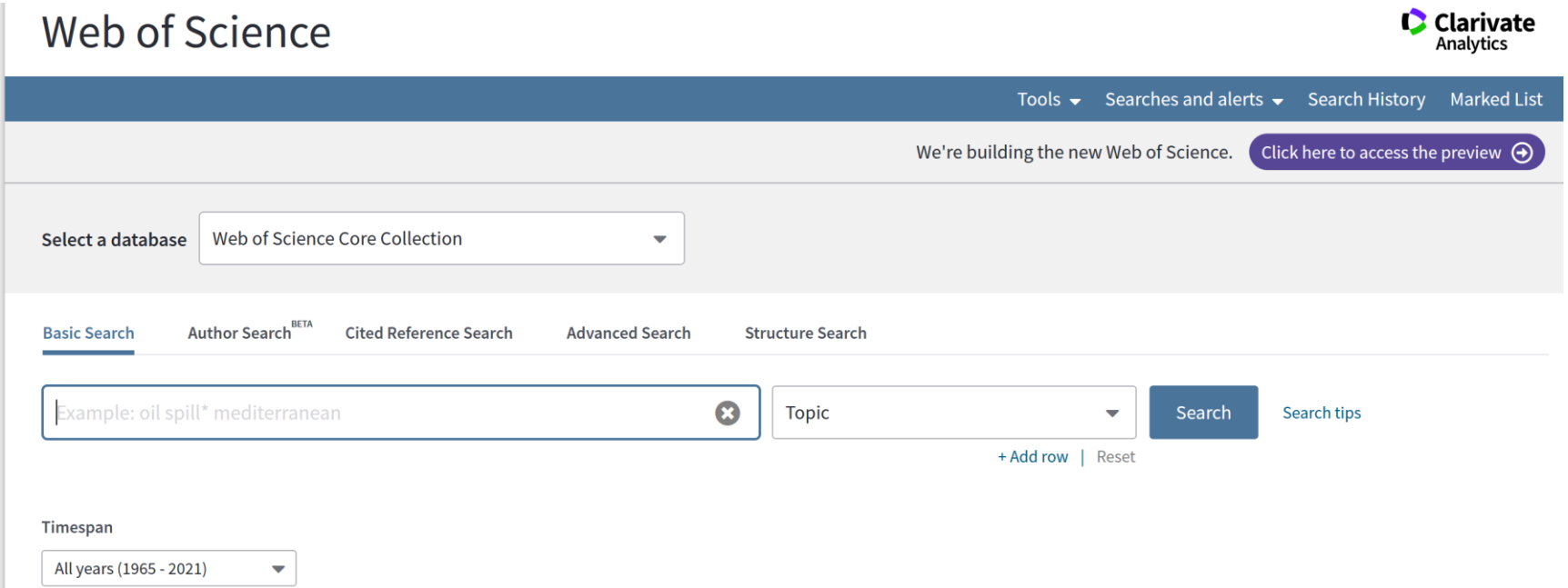

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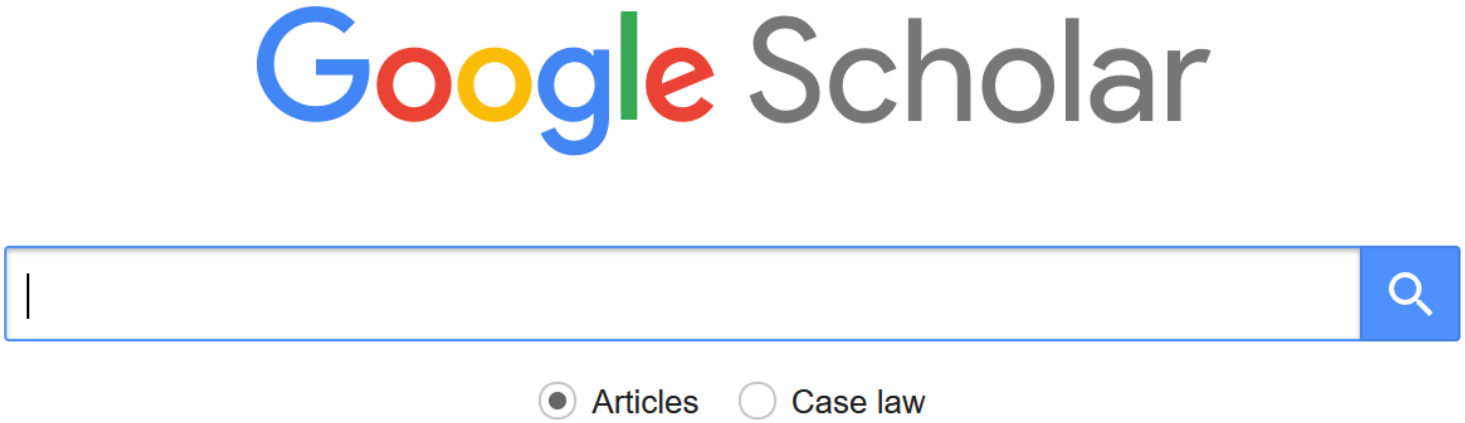
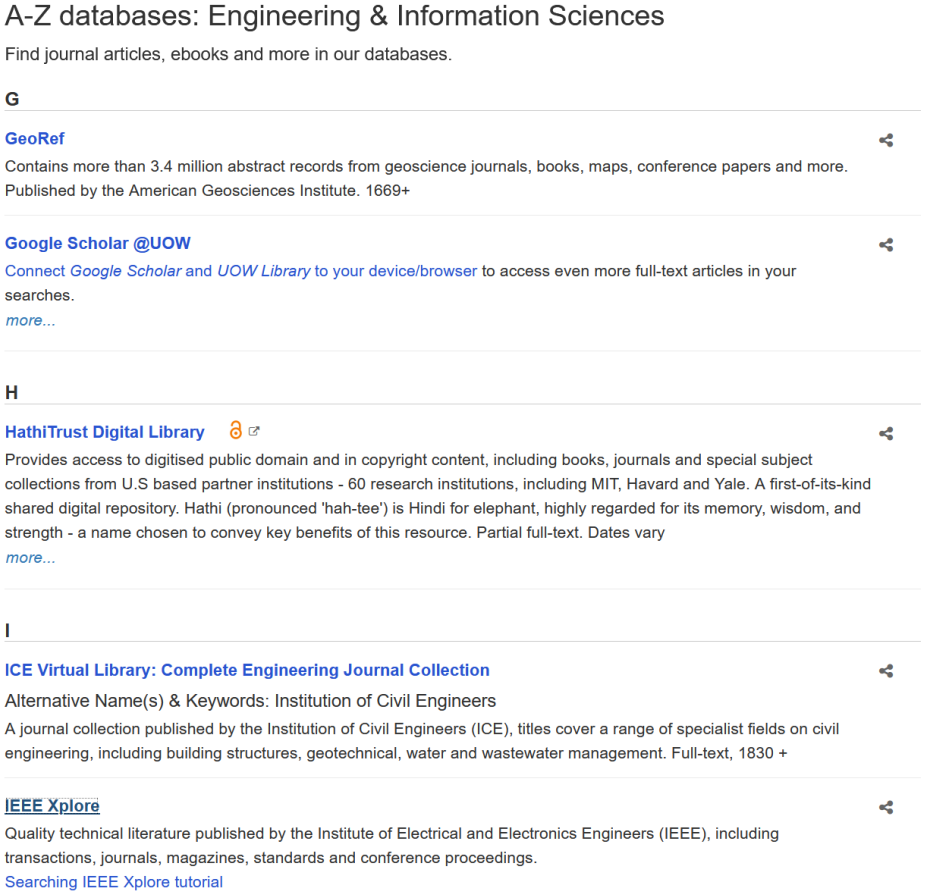


Gain access directly from https://scholar.google.com.au

Learn about all the databases and gain access from **UOW Library**



A-Z databases: Engineering & Information Sciences

Find journal articles, ebooks and more in our databases.

G

GeoRef

Contains more than 3.4 million abstract records from geoscience journals, books, maps, conference papers and more. Published by the American Geosciences Institute. 1669+

Google Scholar @UOW

Connect *Google Scholar* and *UOW Library* to your device/browser to access even more full-text articles in your searches.

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H

HathiTrust Digital Library

Provides access to digitised public domain and in copyright content, including books, journals and special subject collections from U.S based partner institutions - 60 research institutions, including MIT, Havard and Yale. A first-of-its-kind shared digital repository. Hathi (pronounced 'hah-tee') is Hindi for elephant, highly regarded for its memory, wisdom, and strength - a name chosen to convey key benefits of this resource. Partial full-text. Dates vary

more...

I

ICE Virtual Library: Complete Engineering Journal Collection

Alternative Name(s) & Keywords: Institution of Civil Engineers

A journal collection published by the Institution of Civil Engineers (ICE), titles cover a range of specialist fields on civil engineering, including building structures, geotechnical, water and wastewater management. Full-text, 1830 +

IEEE Xplore

Quality technical literature published by the Institute of Electrical and Electronics Engineers (IEEE), including transactions, journals, magazines, standards and conference proceedings.

Searching IEEE Xplore tutorial

Tips

- Best search engine is Google Scholar, but beware lots of hidden traps. For example, no filter for quality

- Databases like Scopus and Web of Science have access to less publications, but this is because the filter on quality. Journal publications need to meet strict criteria to be included

- Don’t forget to use filters such as ‘time period’ and ‘publication type’

Understanding Journal Quality / Rankings

- Generally speaking, the higher a journal publisher is ranked the higher the quality of the journal article within. Stronger peer review, greater readership etc.

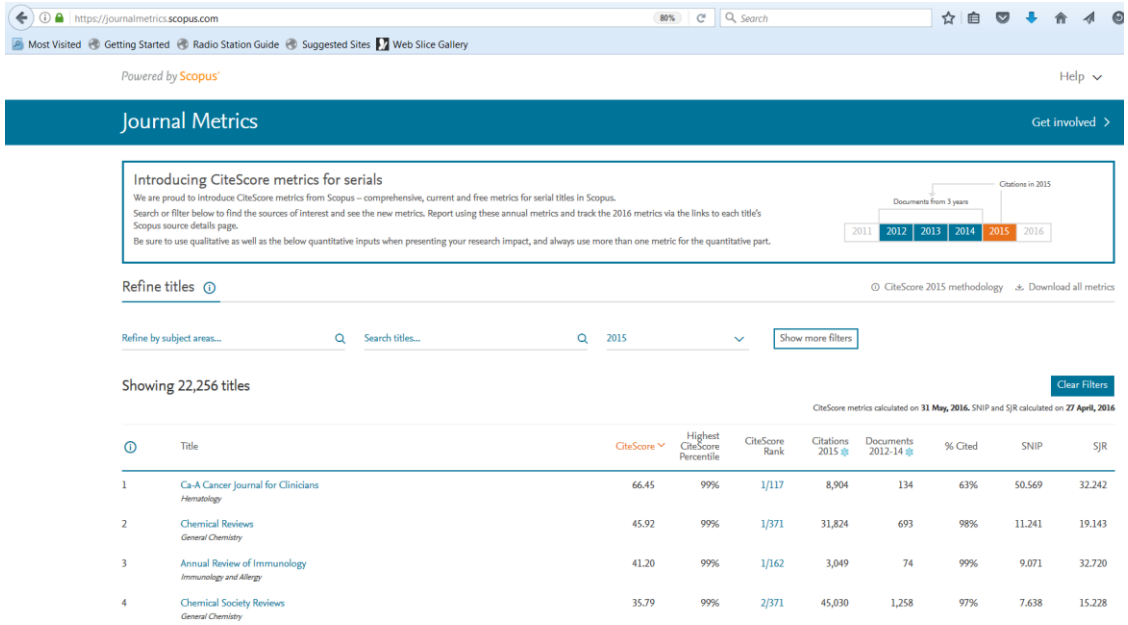
- Articles found in high quality journal publications tend to be more precise, more in-depth and have a greater discussion of the limitations surrounding the work

- Be sure to understand the difference between a journal article and journal publisher. A journal article is an individual article regarding specific research. The publisher is the organization that publishes the individual articles. Rankings are in terms of the publisher and not the article!

So how do you know what you can use?

Look at data available to you such as:

- Journal Rankings
- Citations (consider timeframe)
- Publisher



https://www.scopus.com/sources

Sources

Remember your are searching for the **journal publication** and **NOT** the name of the journal article you are reading

Title

Enter title

IEEE Transa

Find sources

- IEEE Transactions on Signal and Information Processing over Networks
- IEEE transactions on components, packaging, and manufacturing technology. Part B, Advanced packaging
- IEEE/ACM Transactions on Networking
- IEEE Transactions on Computational Imaging
- IEEE Transactions on Dependable and Secure Computing
- IEEE Transactions on Transportation Electrification
- IEEE Transactions on Power Apparatus and Systems
- IEEE Transactions on Energy Conversion

Improved Citescore

We have updated the CiteScc
indication of research impact
retroactively for all previous C
are no longer available. View

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Vie

Display options

Display only Open Access journals

Counts for 4-year timeframe

	Source title	CiteScore	Highest percentile	Citations 2016-19
1	Ca-A Cancer Journal for Clinicians	435.4	99% 1/331	47,455

Compare journals - About calculations

SJR	SJR (SCImago Journal Rank) is weighted by the prestige of a journal. Subject field, quality, and reputation of the journal have a direct effect on the value of a citation. Also, SJR normalizes for differences in citation behavior between subject fields. Four years of data are needed to calculate a SJR.For example, if Scopus has complete citation data for a journal starting from 1996, the first SJR value available is for 1999. Learn more
IPP	Compare the ratio of citations per article published in a journal. The Impact per Publication metric is using a citation window of three years which is considered to be the optimal time period to accurately measure citations in most subject fields. Learn more
SNIP	SNIP measures a source's contextual citation impact by weighting citations based on the total number of citations in a subject field. Learn more
Citations	Total number of citations received by a journal in the year, considering all documents.
Documents	Total number of documents published in a journal in the year.
% Not cited	Percentage of documents published in the year that have never been cited to date.
% Reviews	Percentage of documents published in the year that are review articles.

Starting to search

- Enter key terms into the database or search engine

- In the early stages you should be concentrating on developing a growing list of key terms and topics with a focus on reading abstracts. At this stage your key goal is to explore

Topic – word1 word2 word3 word4

Type words into search engine using different combinations

Searching Strategies

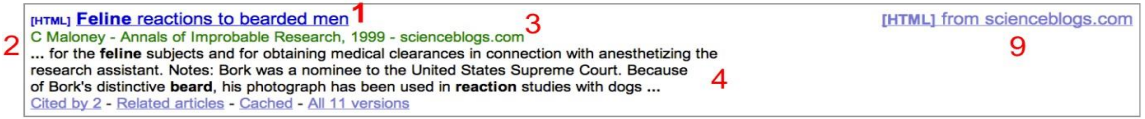
Strategy:	What you do:
Alternative phrasing	Explore related terms or synonyms to describe an idea.
Plan-to-learn	Search to gain background knowledge and clarify search terms using such tactics as reading search results for new search terms, and using stepping stone resources to get background knowledge and inspire inquiry.
Comparing multiple sources	Use tactics including looking at changes in tone among different sources, contrasting "facts" to assess accuracy, and considering purpose and audience of different sources.
Chaining	Determine that a question can only be answered by gaining different pieces of information through a multi-step process, and planning the order in which to carry out each step to arrive at a successful outcome.
Specialization	Use a small piece of knowledge—only part of the whole—to discover the whole.
Generation	Employ a broad topic when a specific topic is not findable. Then apply the broad source to solve the specific problem.
Scoping	Recognize what kind of source will answer a question, and searching specifically within that category of source.
Validate assumptions	Check that something you believe is actually true by researching it.

Google (2015)

Scholarly Searching

Information in a Scholar Result

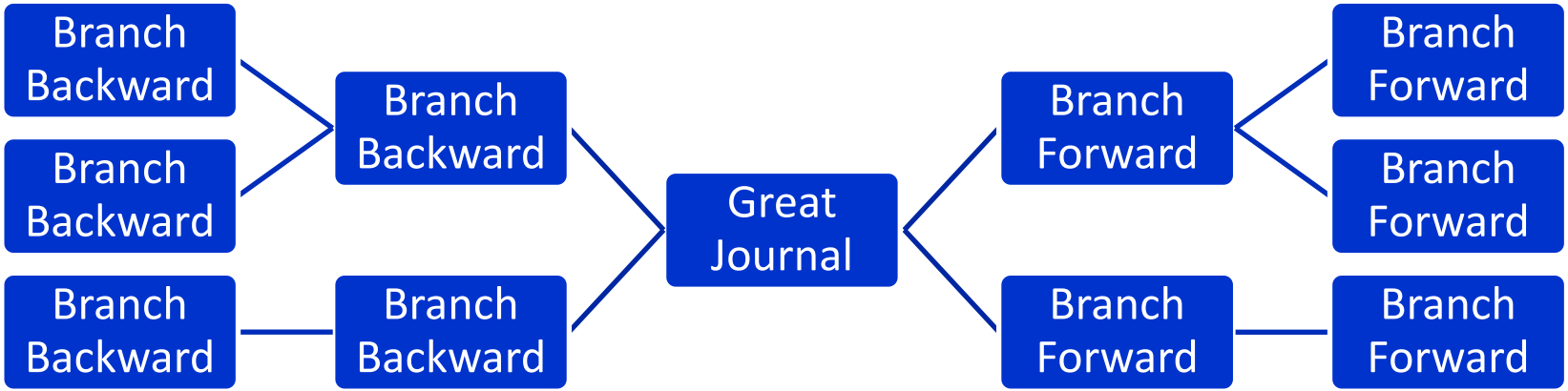
Google



Can you find where it tells you:

1) The title
2) The authors' names?
3) When and where it was published?
4) Information from the text of the article (snippet)?
5) Which other articles cite this one?
6) What other articles exist on similar topics?
7) What pay-for-access sources offer it?
8) A list of all the places Google has found it online?
9) A free source (when available)?

All it takes is '**ONE**' journal to hit the jackpot!!!!



Branch Backwards

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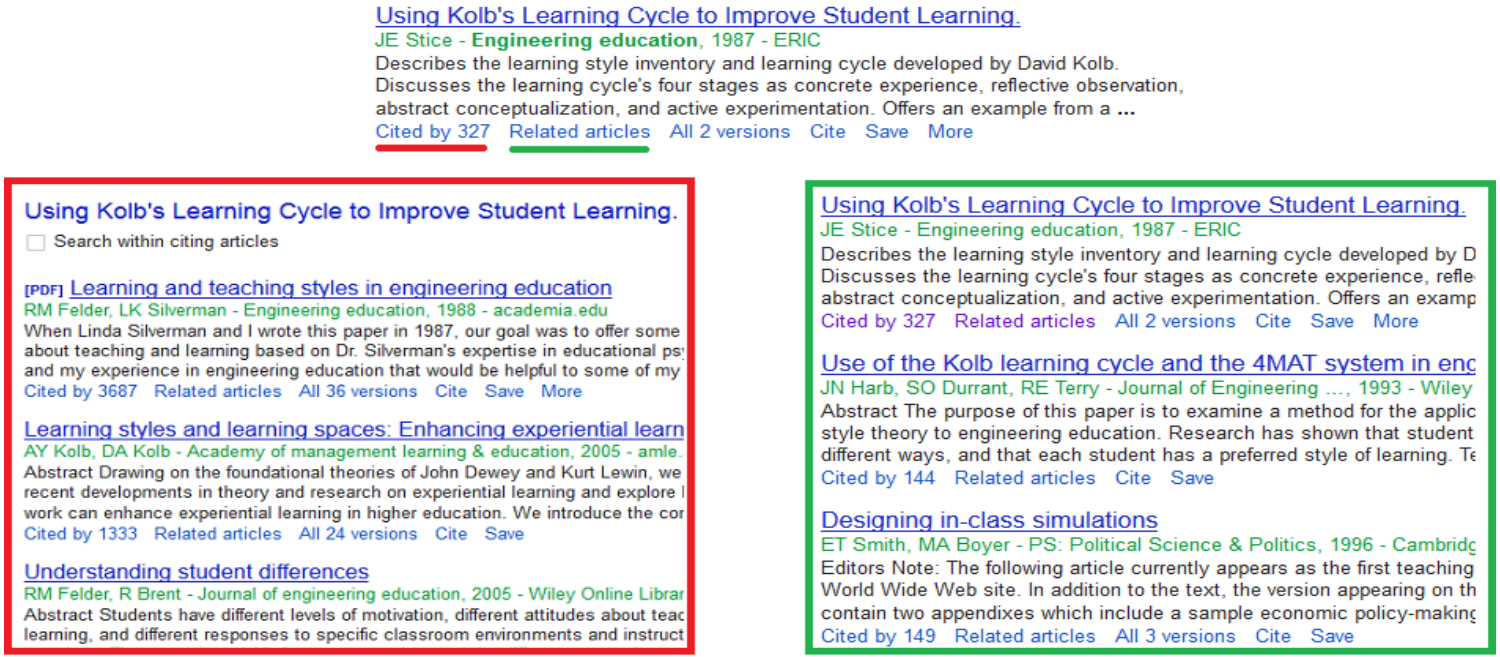

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After lots of discovery

- Start trying to extract from your reading
  - What has been done before?
  - What are gaps in knowledge?
  - What can be done better?

Searching – Some guides to help

- Scopus Effective Searching
  - This is an advanced hands on tutorial covering search strategy and how to select additional search words by looking at the full record. It will also show you how to refine and manage your results.
  - http://gots.uow.edu.au/gots/tutorial/scopus-advanced-search

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Need help – the library can help!!!!