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Google Scholar: a review of literature examining its effectiveness as a search tool

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By **Dr Helena Korjonen** on **08-Nov-2021 12:15:10**

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Google Scholar (GS) is the top search engine used by those who are looking for scholarly content[1]. There are many reasons for this, not least that it feels *familiar* [2], [3]. However, a review of the literature reveals that there are significant limitations to its effectiveness.

Lack of curation

The internet is full of 'scholarly' content, information, and data in various formats and of various quality. As John Naisbitt said, "We are drowning in information, but starved for knowledge"

When Google Scholar trawls the internet to seek out scholarly content, it does not assess it. It does not try to make sense of it for researchers in a logical indexed structure. And, unlike many trusted curated tools[4], Google Scholar does not have transparent indexing guidelines that define what they collect, and why they collect it and make it available.

to several FAIR principles (Findable, Accessible, Interoperable and Reusable) and cannot be classed as a professional searching tool[6].

Google Scholar is not a curated controlled database. Content is harvested automatically.

Whilst there are some advantages to this, for example in the retrieval of grey literature[7], there are also significant disadvantages.
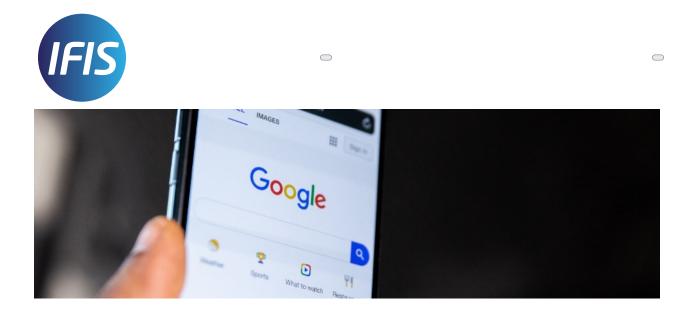
Search results rankings

Research has shown that Google Scholar results can be dated. This presents an issue when most people don't go beyond the first page of results when searching for papers.

The citation count of an article is a major factor in the Google Scholar results ranking[8], [9]. This benefits publications from high Impact Factor sources, which are cited or linked to extensively around the Internet.

Unfortunately, new papers have what's called a citation lag, and older papers are cited more often[10]. Newly published papers may be retrieved by GS, but they will be further down the results list and you may not see them.

Papers can also be manipulated into a higher rank than it 'deserves' by placing words in titles or abstracts to increase recall or manipulate citing data[3].

Should you need to include multi-lingual items in your search, there is a definite bias in Google Scholar towards English-language content. Documents published

Replicating your search

It is nearly impossible to replicate a search in GS, to retrieve the same references again. For this reason, it's recommended to carefully document a search done in Google Scholar for full transparency[6]. That can be extremely time consuming.

References are often dropped unknowingly from GS[5, 11, 12] and you won't even know the ones that might be missing[1].

Using your results

In Google Scholar, once you have the results, it does not allow you to see beyond 1,000 records or to download more than 20 references to your bibliographic tool at a time. Most curated databases allow you to run your search, save it, download the results to your tool and revisit it.

How to search more effectively

IFIS has published a guide called *Best Practice for Literature Searching*. This

Do you know which search tool to use and when?

It is a common mistake to use search tools that are designed for information access for the task of information discovery.

But doing this means that you are doing your searching backwards!

Find out more in our Guide for Effective Literature Searching →
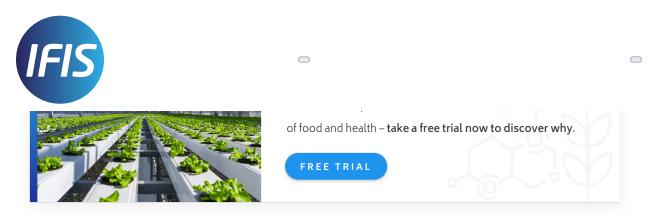

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