

# Transcript: Google for academic research

## – Getting to know Google

Can you treat Google as you would a library literature database?

To some extent, yes, developing your search strategy will draw on the techniques and ways of thinking you have already developed for successful library searches. However, you really need to understand what Google is actually up to before you can get what you need from it.

For a start, Google does not use Boolean (the standard search logic used by databases and search engines) in the strictest sense, but you will see that there are commands you can use in Google allowing you to, sort of, get similar results.

So (somewhat differently from the advice we give when discussing search strategies for library literature databases) with Google you start with a simple search string then, rather than add in further search strings to create an advanced search, instead, with Google, you stick with a simple search string, but add in some of the tricks & techniques we will be covering today.

Because Google will not use a complex search string of clever Boolean and nested terms etc. you cannot cover all your bases with one clever search- you will probably have to do a few different searches within Google to make sure you've covered everything.

Indeed, you probably don't even want to limit your searches just to Google. Different search engines work in different ways and therefore although one is not necessarily better than the other they can bring you different sets of results.. more on this later...

BUT, give up on any hope of fully understanding what your Google searches are doing

And also give up on any hope of claiming a *comprehensive* or *systematic* search. With Google the best you can hope for is a *practical* search. You'll see what I mean

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Let's have a look together now to try to tease out some of the issues:

[www.google.co.uk](http://www.google.co.uk)

Search for: **Research methods**

Simple keyword searching like this will find too many irrelevant poor quality results.

In many cases not from academically relevant sources..

We actually will not see many adverts on these university computers, but do a search at home or on café wi-fi and I am sure you will.

Google is a business, it exists to make a profit and is very successful at doing so through targeted advertising.

The over-arching successful company is called Alphabet and is involved in all sorts (smart home software, driverless cars, researching cures for diseases) with a section of the company still called Google produces the search side of the business and the android operating system. <https://abc.xyz/>

90% of the money that funds Alphabet's activities comes from the advertising in Google.

Back to our research methods search - Just look at the crazy amount of results! you couldn't possibly read all these and the chances are that although there is good stuff in there it won't be on the first page.

Google has a very complex and partly top-secret algorithm that decides what results to present and what order to present your results in. Some of it is obvious, such as whether your search words are present and whereabouts and how often, but a big part of the ranking is essentially down to popularity.

This can mean for example, the number of links to a page, where the links are coming from (inc retweets, Facebook shares etc). Obviously academic stuff is typically a bit boring to many people, and unlikely to be popular, so it won't be high up the list! Indeed, this is self-affirming, obscure results become more obscure.

Recent developments have moved the algorithm further away from the 'keyword' searching we are used to towards 'semantic' searching - supposedly Google can understand what you *mean* when you type in a natural language question, the algorithm is using machine learning.

Machine learning is a powerful tool that enables computers to learn by observing the world, recognizing patterns and self-training via experience.

This is very clever but makes it even harder to get Google to do what you want if you are a skilled literature searcher, used to standard search logic.

Personalisation is also an important part of how results are ranked, more on this in a moment.. but just to note that part of how Google ranks its results is to do with what people doing similar searches ended up clicking on, and also what people you are connected to clicked on when they did searches (!)

Our aim in an academic literature search is going to be to get the more relevant results to the top.

So the first of a few tips

You can change the ranking of results by:

Changing the order of the search terms

Repeating one or more of your search terms one or more times

Let's try:

**Research research research methods**

I have also tried it with **chocolate cake** and **chocolate chocolate chocolate cake**