

Library Research for Geography and Environmental Studies Students

Tutorial 3: Choosing databases to search

Once you've thought about your topic, decided on your research question, and chosen some relevant search terms, the next step in your research strategy is to decide which databases to search.

If you're doing advanced, detailed research at the graduate level, it's a good idea to use a research database as your primary search tool for scholarly literature.

There are a few reasons why that's the case.

Research databases, licensed through our libraries, offer curated, discipline specific pathways to scholarly sources.

Database platforms such as ProQuest or EBSCO support Interdisciplinary research by providing access to multiple databases and a broad range of scholarly journals under one search window.

Our Subject Guides, available at the Laurier and University of Waterloo libraries, offer discipline specific as well as more general databases for you to choose from.

Not sure which database to use? Click "view full description" or "more" to read more about what is covered in each database.

I suggest most researchers start with the Web of Science platform.

It provides access to millions of peer-reviewed articles through the Arts and Humanities, Emerging Sources, Social Sciences, and Science Citation indexes.

More information on the [Web of Science Core Collection](#).

Web of Science, like other research databases, lets you build complex searches with exact parameters that find precise, relevant results.

It also lets researchers find **highly cited** peer-reviewed articles, **scholarly review articles** on a topic, and do forward and backward citation searching.

We'll look at how to use some of these techniques in a later video.

Note that you don't have to rely only on one database, and if you plan a search strategy beforehand, you can replicate your searches across multiple databases to retrieve relevant articles for your research.

Should you use more than one database?

It depends on the kind of research project you're conducting and how comprehensive you want to be in your literature search.

It's important to keep in mind what we refer to as the Academic Information Ecosystem.

This diagram illustrates how this complex information ecosystem works.

Different information providers like ProQuest, provide access to journals and articles through their platforms and databases.

Some journals are accessible across multiple databases, while others are not.

Adding in different platforms complicates things.

Some journals are accessible through many different platforms, and many different databases, while others are not.

It's similar to the streaming media ecosystem.

Some media streaming platforms will provide subscribers access to one set of movies that are not available on other platforms.

This is why when conducting systematic literature reviews, expert research teams search across multiple databases to ensure comprehensive coverage.

We'll look at how to do that in the rest of the tutorials in this series.

It is a great tool to have in your scholarly research toolbox.

But there are some things that are problematic about Google Scholar for people conducting advanced literature reviews.

First, not everything in Google Scholar is scholarly, and there is no easy way to limit results to only peer-reviewed articles.

Second, it's difficult to get precise results.

When you have results in the millions, you'll need to refine them to get to articles that are relevant to your research question.

It's difficult to do that, even in the Advanced Search feature in Google.

In fact, a recent peer-reviewed study claimed that Google scholar is "inappropriate as principal search system.

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Cut from earlier edition:

Back to our academic information ecosystem, it's generally a good idea, if you want to do a comprehensive literature review, to consult a number of the databases if your schedule allows it.

You can create a search that you can easily replicate across multiple databases as well to save yourself some time and to ensure you are covering a wider scope of the academic information ecosystem.

We'll discuss that in a later video.

With that in mind, let's look at some alternatives.

If you visit your library's Subject Guides, you'll see a number of databases listed for each individual discipline.

You can't tell the search engine to search

In this video, we'll talk about something you'll rarely talk about at university, but something that's critical and supports the entire academic enterprise.

I'm referring to the academic information ecosystem.

This information ecosystem is a vast world of information, both electronic, and print, that exists to support the research enterprise.

It's a system of producers and consumers, just like a physical ecosystem.

Like any large system, it can be confusing to navigate and understand.

That's why we'll take a few minutes to explore the inner workings of that system now.

The better you understand it, the less confused you'll be, and better prepared to do high quality research.

If you visit the library homepage, you'll see our website has a search box in the middle.

This is one entry portal into the academic information ecosystem.

The portal that we're using here is our library "discovery system" named Omni.

If we do a search here on climate change and forest fires, we'll get lots of results.

Drilling down into these results, we see books, articles, dissertations, reports, even video.

All kinds of results.

But what's happening here?

Where are all these results coming from?

To answer that, let's step back a moment.

We've already learned about how researchers – or scholars, as we've also noted, communicate through various methods, and what their preferred modes of communication are.

I call the system that has grown up to support scholarly communication the Academic Information Ecosystem.

Like an ecosystem, there are ways for you, the consumer of information, to access the system and get at the information that lives there, put out by information producers.

Some are better, and more efficient than others.

That's what I'll show you now.

Let's start with a database, in this case the Environmental Science Collection database.

If you've never encountered the concept of a database, think of it as an electronic container of information.

This database contains thousands of records for individual journals in environmental science.

And those journals contain within them, individual articles.

There are other databases that exist, like the Biological Science Collection, and ERIC, the Education Resources Information Center.

These databases have their own journals that they provide exclusive access to.

But some of the journals, many in fact, are shared across multiple databases.

Some databases also contain unique content, like dissertations and theses.

This content can also be shared with other databases.

Then, note these databases can be searched through larger meta-search platforms, like ProQuest, in this example.

As we move "up" through the ecosystem, we encounter giant information companies that license and provide access to journals and databases as we just saw.

Some of these include ProQuest, Clarivate, which owns Web of Science, and ExLibris.

ExLibris is the provider of our Omni system.

As in our previous example, each database contains journals that can be shared by multiple other databases.

Omni has multiple types of content, including articles, books, reports, and video.

Omni also shares many journals with other databases, but some it doesn't.

So, what are the takeaways from all this?

First, the academic information ecosystem is complex.

It will take a while before you're familiar with how it works.

Like our scholarly conversation, it takes a while to learn the language and the conventions to become fluent in that conversation.

What we've touched on here today is just a very cursory overview.

Secondly, not one place has all academic information within its purview.

For many of your first year assignments, you probably managed to find what you needed using Omni.

But in second year, and beyond, you'll need to do more comprehensive and sophisticated searches.

As you do that, you'll probably find it helpful to consult either a discipline-specific database, or more than one database to ensure you're getting the best and highest quality results.

Sometimes those specialty databases like GeoBase and Web of Science are great to narrow down into a particular field of research.

Check our Subject pages to see what databases fall into your particular discipline.

And don't forget, if you have any questions, feel free to ask me.