

# Library Research for Geography and Environmental Studies Students

## Tutorial 5: Creating and running complex searches

Now that we've seen how to come up with your own relevant search terms and how to decide which databases you'll search in, it's time to think about putting together more complex searches.

Here is an example of a Masters' thesis that outlined a search strategy and created search strings that the author replicated in three different research databases.

This allows for more precise and relevant results to be retrieved, while at the same time letting a search be repeated in multiple areas for broader coverage.

To do this yourself, there are a number of important database functions and tools you should know about.

1. Field searching
2. Boolean searching
3. Exact phrase searching
4. Truncation and Wildcards
5. Proximity operators
6. Filtering

Field searching is a technique where you tell the database search engine where you want to search for your terms.

Most databases search by default in the Article title, Abstract, Author, Journal title, and Subject Heading fields.

They don't necessarily search in the full text of the article.

You can specify different fields to narrow or broaden your results set.

For example, if you know a term or phrase is highly important to your research and perhaps used frequently in the literature, you could specify the Title field to search in by using the drop-down menu to select "Title."

Results for a title only search should be very relevant to the term used.

The Abstract field searches only an article's abstract.

The Full-text, or Anywhere selection gives the broadest search option.

You'll likely retrieve many results, but probably a lot won't be relevant.

Use combinations of field searching to make your searches more relevant, or to find more results.

Boolean searching is a technique used to combine terms in a precise manner.

Using AND between two terms like park AND planning specifies that the set of results must contain all the terms you specify.

In this case the set of results must have both park and planning somewhere in the record.

The illustration represents the results visually.

Each circle shows the set of results that contain each word.

The area in red shows results containing both terms.

Using OR between two terms specifies results may contain either one or the other word.

The set of results is larger, but also less precise than a search using AND.

Using NOT removes the word from a set of results.

You can use this operator when you know a term has nothing to do with your research topic but is showing up in your list of results.

For example, you're researching parks, but you don't want results showing Disney, which is a theme park.

Not should be used carefully, because you may inadvertently subtract results that are relevant to your topic.

Exact phrase searching occurs when you type double quotes around a phrase, specifying this exact set of words should be searched for.

Truncation and Wildcards allow you to search for variant spellings.

The ? character is used to replace only a single character in a word.

Wom?n retrieves woman or women.

The \* or asterisk is used to replace one or more characters.

Farm\* retrieves results for farm, farms, farmed, or farming, and more.

Proximity operators broaden your search to find results where search terms are separated by up to a certain number of words of each other, either before or after.

For example computer NEAR/3 careers.

Filters are parameters you can specify, before or after you run your search, and affect what your results display.

They are usually found along the left-hand side of a database results screen.

They can include categories such as date range, document type, author, subject, journal publication name, and many more.

An important filter to note is the peer-reviewed articles filter.

In ProQuest and EBSCO, this is done through selecting a check box in the initial search, or applied after to the set of results.

In other databases, notably Web of Science, Scopus, and GEOBASE, there is no peer-reviewed selection box.

Selecting "Articles" in a set of results will filter results to peer-reviewed research articles.

Let's look at a real-life example to see this work in practice.