Search Strategy

Part 1: Thinking About Your Topic

So what do you actually put in those search boxes in a database? If you spend a few minutes thinking about what to search, you will save yourself a ton of time.

A good way to begin is to make a list of words that describe the topic you’re searching for (keywords)—these words should be single concepts and as precise as possible.

For example, if you are writing about whether yoga helps reduce the stress level of college students, you might start with a list like this:

- yoga
- college students
- stress

You want to choose the terms or concepts that are most important for getting at your topic. Then add synonyms, related concepts, and other areas you might want to investigate to your list—for example:

- relaxation
- college-aged
- anxiety
- tension
- university students

Also consider whether you could use broader terms to help with your search—so you could add terms like:

- exercise
- stretching
- young adults

When you are thinking of terms, try to use terms:

1. That are single-concept (ex. "yoga" instead of "yoga to decrease stress")
2. That are precise and meaningful (ex. "young adults" instead of "benefits" or "level" or "outcomes"--these words are too ambiguous to add much to your searches.)

3. That are necessary and add to your search (for example, you probably wouldn't need to specify "exercise" if you are just looking for yoga--since yoga is a type of exercise. Also, it's probably not going to help much to use the term "decrease"--not only is it somewhat ambiguous, but it's also the only logical relationship between the two topics of "yoga" and "stress.")

Part 2: Searching the Database

Once you have your list of search terms ready, start searching! To get to one of our databases, click on Databases from the Foley home page. Then choose your database--if you aren't sure, check our "Research Guides" for some great suggestions about which database to use.

For this example, I'll be showing you Academic Search Complete (the second one down in the Databases list). It's a great database to search for articles about any discipline, and it has a lot of useful search features.

Once I have my database open, I can put in my search terms--it's best to use one term per box, and try not to use redundant terms (see the AND/OR/NOT section for how to include synonyms).

Then I hit the search button and take a look at my results.

If you don't get what you're looking for the first time, try modifying your search terms. You can use synonyms or related concepts (ex. anxiety instead of stress) or getting rid of unnecessary words (ex. we may not need the word students, since they're the
largest group affiliated with college). Remember, all databases (including Google) are basically big word-matching machines, so you’re results are only going to be as good as the words you put in. My modified search might look like this:

If I’m still not finding what I’m looking for, I can try **broadening** my search. For example, if there are no articles about yoga and stress, what about exercise and stress? Or yoga and depression? Are there any related or broader categories that might help me with my project? Another modification might look like this:

Learning to modify your search to get better results will help you find what you’re looking for without having to search through a bunch of irrelevant results! So try some variations and see what you can find.

**Part 3: Limiting Your Results**

Now you’ve probably found some relevant results--but are they the types of articles you need? Maybe your professor wants you to use articles from the last ten years, or articles that are peer-reviewed. Or maybe you’re getting a ton of articles that aren’t even in English. How do you limit your search to the types of articles you’re looking for?

Our databases have excellent options for limiting your results and the basic ones are typically listed on the left side of the page.
Here's an example from Academic Search Complete:

![Image of search results]

The most popular limiters are **Scholarly/Peer-Reviewed** and the **date slider**. Checking the Scholarly/Peer-Reviewed box limits your results to articles from journals that use a peer-review process. If you aren’t familiar with what this means, watch the "Peer-Review in 3 Minutes" video in the video section--basically, it means that articles are reviewed for quality by a group of experts in the field prior to publication.

You can also move the date slider to choose a particular time period you want articles from--for example, if I only wanted articles from the last five years, I’d slide the left slider over to 2010.

A lot of students use the **Full Text** limiter, but we don’t recommend it. What this limiter does is limits your results to articles that are immediately available from the database you’re searching. We have articles from a lot of different sources, so this limiter actually cuts out a lot of articles that we have immediate access to.

If you want to get fancy, you can use the other limiters on the left-hand menu, like limiting by **Subject** or **Language**.
If you get crazy with the limiters, you can limit your results too much, and get too few results, but knowing the basics will help you rule out a lot of irrelevant stuff.

Also, the **Advanced Search** (look right under the search boxes at the top) usually has some more options, but they tend to be specific to each discipline. For example, our medical and psychological databases have options to limit by population (age, gender, etc.) and our business databases allow you to search by ticker symbol. Check out the special options in your subject area!

**Part 4: Search Strategies I – AND/OR/NOT**

**Using AND:**

You might have noticed, in our earlier searches, that each of our words was combined with an AND. On this page, we're going to talk about what that means--and how you can use the operators (AND/OR/NOT) to control what results you get.
Basically, these operators control how the database interprets your search terms. **When you use AND, the database will only show you articles that contain all of your search terms.** If you want to visualize this, it might look something like this (each circle is all the articles with that term, and the orange area is your results):

![Diagram of Venn diagram showing College Students, Stress, and Yoga intersecting with each other.](image)

The important thing to remember with AND is that it narrows your results, which means you get fewer (and hopefully more precise!) results. Some people think that, if they don't find what they are looking for, they can just keep adding more words--if you are using AND, this will never get you more results (imagine we just kept adding more circles to the diagram above and cutting the center area smaller).

**Using OR:**

What if you want to do a search for any of your search terms, rather than all of them? **Using OR will give you results that match any of your search terms.** For example, let's say I wasn't just interested in yoga, but I wanted all the articles about anything similar--let's say yoga, tai chi, and pilates. Then I might put together a search like this (I just click on the drop-down arrow next to the AND to change the default AND to an OR):

![Search screen showing EBSOhost with OR and OR options for yoga, pilates, and tai chi.](image)
This search would get me any article that used any of these search terms. The visual would look something like this:

Notice that this search would retrieve any article that uses any of the terms--so an article about pilates, that never mentioned yoga, would be one of your results. OR searches are most useful for including synonyms or related concepts (ex. stress OR tension OR anxiety). OR broadens your search, meaning it gives you a greater number of results (by expanding what you’re looking for). Keep in mind that you can get way too many results using OR--the above search has over 10,000 results!

**Using NOT:**

**The last operator is NOT, which is used to exclude a particular concept.** For example, let’s say I wanted articles about exercise, but I didn’t want to include any articles about yoga. Then I might put together a search like this:

![Search Interface](image)

Basically, NOT is a way of excluding any articles about a topic. Visually, this search would look something like this:
Note that every article about yoga is excluded. NOT is most useful when you are doing a search and keep getting irrelevant results. For example, if you are looking for articles about Washington State but keep getting articles about Washington, D.C. ("Washington NOT D.C.") or if you are searching for articles about AIDS (the disease) and keep getting articles about hearing aids ("AIDS NOT hearing").

If you want to be fancy, you can also use more than one operator in the same search, for example:

```
Searching: Academic Search Complete | Choose Databases

<table>
<thead>
<tr>
<th>Field</th>
<th>tai chi OR yoga</th>
<th>Enter a field (optional)</th>
<th>Search</th>
</tr>
</thead>
<tbody>
<tr>
<td>AND</td>
<td>stress OR tension OR anxiety</td>
<td>Enter a field (optional)</td>
<td></td>
</tr>
<tr>
<td>AND</td>
<td>college students</td>
<td>Enter a field (optional)</td>
<td></td>
</tr>
</tbody>
</table>

Basic Search  Advanced Search  Search History
```

This search uses OR to combine synonyms for the same concept, while using AND to combine each concept group. You might want to experiment with this, but keep in mind that it can quickly get algebraic, because you have to tell the database which concepts to group together. You can make groups with parentheses, so this search could also be written:

(tai chi OR yoga) AND (stress OR tension OR anxiety) AND college students

Experiment and see if you find searching with operators to be helpful!

**Part 5: Search Strategies II – Quotes and Wildcards**

**Using Quotes to Search an Exact Phrase**
There are two more search strategies that will help you make your search results more precise, and databases can vary by how these are interpreted, but they are generally very effective. The first strategy is using quotes to make sure your concept is searched as a phrase. For example, if I want articles about the **public school system** and I keep getting articles with titles like these:

Note that this article has all the relevant words in the title, but they aren't *grouped* together. I can use quotes (ex. "**public school system**") to make sure that the database searches it as a complete phrase, rather than individual words. Keep in mind, though, that you will only get results with exactly what you put in quotes.

**Using the Asterisk to Create Open-Ended Words (Wildcard Searching)**

Like we've talked about, the databases usually try to match exactly what you type in, so sometimes databases don't recognize all the variations of a word that you might be looking for. For example, let's say I'm looking for all the articles about **education**--I probably wouldn't want just articles that use that exact word, but I might want articles that use the words:

- Education
- Educator
- Educators
- Educational
- Educate
- Educates
- Educating

You could probably think of even more of them! And while databases typically get some of the word variants in a normal search (ex. singular and plural), you can control exactly which you get by using wildcard searching.
If I use educat* as a search term (note that I am using an asterisk after the letters that all the words have in common), I would include all these words in my search at the same time.

Keep in mind that you can include words unintentionally, too. For example, if I did the search edu*, I would also get articles with the words educe, eduction, etc. Here’s an example of how these search terms would look in a database:

Give it a try and see if you find this strategy helpful!