

## Boolean Operators – Part 2

Welcome to part 2 of “an introduction to Boolean operators”

In this brief tutorial, you’ll learn:

1. How to use Boolean operators in a real research database, and
2. How to combine Boolean operators in an effective and systematic manner

Let’s use a research question to demonstrate the process.

Imagine that you have been asked to write a paper about the traditions surrounding pregnancies in Japan.

You *could* approach a question like this by doing a long series of keyword searches, using many different combinations of words and pouring through endless lists of results to find articles that answer your question.

However, there are some problems with this sort of serial approach to searching:

First: You will probably spend a long time doing this, and may never get any useful results

Second: You will almost certainly end up missing some great articles that would help you with your paper.

Third: You will have to go through a lot of the same articles multiple times, as duplication is common in serial searching.

As an alternative to the serial-search approach, try using what you learned about Boolean operators in part 1 to catch all your results with a single search – with less time wasted, fewer missing articles, and no duplications.

There are 6 steps to performing an effective, systematic search using Boolean operators. Using our research question as an example, we’ll go through each step and hopefully end up with a list of results that will answer our question.

The *first* step in using Boolean operators for online searching is to identify two to four “main concepts” that describe the information that *must* be in any article we retrieve in order for it to be useful to us.

In the case of our research question, these concepts would be *traditions*, *pregnancy* and *Japan*.

Step *two* in the process involves identifying alternate words that could be used to represent each of these concepts.

To do this, start by drawing a table and writing the three concepts in the first column. Then, list any alternate words for each concept. For instance, the words *reproduction*, *birth*, and *prenatal* could all be used to represent the concept “pregnancy”.

Also, be sure to include alternate word *forms* like reproduce and reproductive in your table, as these will make a difference in your search results.

For this research question, I have decided to use the EBSCO database CINAHL, which specialize in nursing and health resources. Other good choices for this topic might include ones anthropology or sociology databases.

Once inside the database, the next step is to search each word in your table individually. This starts to compile a list of terms in your search history for you to use in later steps.

Once you're done, you can expand your search history to see each word that you have searched. Notice how I have kept all of my alternate words and synonyms together in my search history. In general, I try to keep my search history organized by concept like this because it makes combining the terms much easier in steps 5 and 6.

In step 5, start combining your terms using OR by selecting each word within a concept – like the words representing *pregnancy* – and clicking “search with OR” to produce a search phrase like *this one*.

Then *clear the search box* and repeat this process for the concepts *traditions* and *Japan*, so that all your concepts appear with all of their associated words in the search history like *this*.

The final step in systematic searching is to select the three OR combinations that you have just constructed and bring those *concepts* together by clicking “search with AND”

Following this process brings all of your synonyms and concepts together into a single search. Now all you have to do is scroll through your results to find the article than answers your research question.