

Online Search Techniques

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Introduction

Searching the **library databases** or **Internet search engines** (e.g., *Google* or *Yahoo*) can often be a frustrating experience, especially when irrelevant or too many results are retrieved. The following are some search techniques you can use for retrieving more relevant results.

I. Identify the Keywords in Your Thesis Statement

Before you begin using a library database or search engine, it is a good idea to write down all the keywords and phrases that describe the topic or information you are seeking. You should also write down any synonyms or related terms. These keywords and phrases can be used as your search terms.

Example: Does television viewing encourage aggressive behavior in children?

Simple search: **television AND aggressive behavior AND children**

Complex search: **(aggress* or fight*) AND (child* OR teen*)**

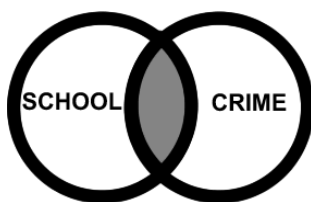
II. Use Boolean Operators to Narrow or Broaden Your Search

Boolean searching is based on a system developed by George Boole, a 19th century mathematician. Most library databases and Internet search engines support Boolean searching. The power of Boolean searching is based on connecting keywords with three basic operators: **AND**, **OR** and **NOT**. Here is how they work:

AND

Type **AND** between your keywords to **narrow** your search. The database or search engine will only retrieve those articles or web pages that contain **both** words. Using **AND** will **decrease** the number of results.

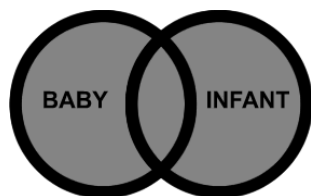
Example: school AND crime



OR

Type **OR** between your keywords to **broaden** your search. The database or search engine will retrieve those articles or web pages that contain **at least one** of these words. Using **OR** will **increase** the number of results (especially if not used in combination with **AND** or **NOT**). Use **OR** between keywords that are **synonyms** or have **related** or **similar meanings**.

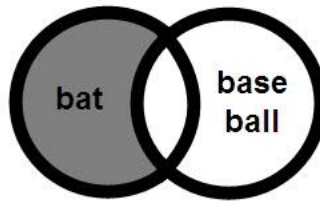
Example: baby OR infant



NOT

Type **NOT** before a keyword to **exclude** that keyword from your search. Using **NOT** will **decrease** the number of results. The best use of **NOT** is when you are searching for a keyword that may have **multiple meanings**.

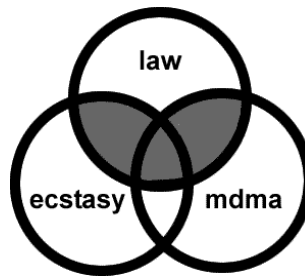
Example: **bat NOT baseball**



Combining Boolean Operators

Use **parentheses ()** to keep combination searches in order. In the example below, the database or search engine will retrieve articles or web pages that must contain the word *law* and at least one of the words in parentheses.

Example: **law AND (ecstasy OR mdma)**



III. Use Truncation to Expand Your Search

Using an asterisk (*) or question mark (?) at the end of a root word (known as *truncation* or *stemming*), allows you to retrieve results containing any form of the root word.

Example: typing **teen*** will find **teen, teens, teenage, teenager, teenagers**

Be careful not to end the stem or root of a word too early. You may retrieve results you did not expect.

Example: typing **cat*** will find **cat, cats, catalog, catastrophe, catsup**, etc.

Note:

- Different databases use different symbols to truncate words. However, most of databases, such as the *Library Catalog*, *Academic Search Complete* and *Factiva*, use the asterisk (*) as the truncation symbol. If in doubt, check the *Help* screen of the catalog or database you are using.
- Some search engines, such as Yahoo, automatically search for all forms of a keyword (e.g., typing *teenager* will automatically find: *teen, teens, teenage, teenager, teenagers*). You do not have to type a truncation symbol.

IV. Use Exact Phrase Searching to Narrow Your Search

To look for an exact phrase, type your phrase within **quotation marks (" ")**.

Example: **"attention deficit disorder"**

For more information on search techniques, check out the online demo and tutorial links available from the web page: *Step 4 - b. Online search strategies* from the *Guide to Research at JSRCC Libraries*:

<http://libguides.reynolds.edu/research>.