

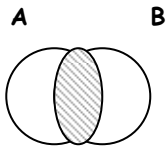
An Overview of Research Strategies

The Research Process

1. Define the problem.
Determine questions to be answered and list key words
2. Determine best resources - Use the online Research Assignment Pathfinder
Get an overview -Encyclopedia - Books - Electronic databases - Websites
3. Locate resources and find information
Reserve book shelf - OPAC (Online Public Access Catalog) - St. Francis Library web page for available databases - Search engines (Ask.com)
4. Use the information
Take notes - Make copies - highlight important passages - **Gather information for citations**
5. Organize and produce
Answer questions - Outline - Write paper - Create presentation or artifact
6. Evaluate
Review final product - Spell check - Revise

The Big 6: Information Skills for Student Achievement - www.big6.com
Cambridge Rindge & Latin School - <http://www.crlsresearchguide.org>

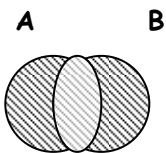
Boolean Operators



Apples **AND** Oranges

The **AND** operator is used to narrow a search or to make it more specific. In the example on the left, set A, which is all items that contain the word "apples" is put in an "and" relationship with set B, which is all items that contain the word "oranges".

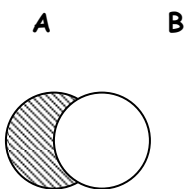
The result is a set that contains **only** those items that contain **both** the word "apples" **AND** the word "oranges".



Apples **OR** Oranges

The **OR** operator is an inclusive operator. In the example on the left, set A (apples) is put in an "or" relationship with set B, (oranges).

The result is a set that which contain A, all items which contain B, and all items which contain A and B. The **OR** operator is often used to broaden a search or to complete a concept by including synonyms or variant terms for the same concept.



Apples **NOT** Oranges

The **NOT** operator is used to narrow a search but it is done by exclusion. In the example on the left, set A (apples) is put in a "not" relationship with set B (oranges).

The result is a set that includes items with the word "apples", but eliminates those that contain the word "oranges". The **NOT** operator can eliminate items with useful information, however, because it does not weigh the significance of the occurrence of the word. If the item is primarily about apples and only mentions oranges incidentally, the item will not be retrieved. The **NOT** operator should be used with caution.

Truncation & Wildcards

To increase the number of hits retrieved, you might consider using a **truncation symbol**, (*). Truncation will pick up variations of a word stem. Truncation symbols vary, depending on the database.

e.g., critic* will find.

critic
critics
criticism
critical

The wildcard symbol can be used to replace one letter in a word. This will instruct the computer to do a search and match all letters in the word and use any letter to replace the wildcard symbol.

e.g., Wom*n will retrieve

woman
women.

Thompson Rivers University: http://www.tru.ca/library/guides/advanced_research_techniques.html

Website Evaluation

Before using an website's information be sure to evaluate the site for two main questions.

1. **Authority/Credibility:** Who owns the website and why?
 - Is there an author? Is the page signed?
 - Is the author qualified? An expert?
 - Who is the sponsor?
 - Is the sponsor of the page reputable? How reputable?
 - Is there a link to information about the author or the sponsor?
 - If the page includes neither a signature nor indicates a sponsor, is there any other way to determine its origin?
 - Look for a header or footer showing affiliation.
 - Look at the URL. *http://www.fbi.gov*
 - Look at the domain. *.edu, .com, .ac.uk, .org, .net*
2. **Content:** Does the web site contain accurate, reliable information?
 - Is the information reliable and error-free?
 - Is there an editor or someone who verifies/checks the information?
 - Is the page dated?
 - If so, when was the last update?
 - How current are the links? Have some expired or moved?
 - Does the information show a minimum of bias?

The Good, The Bad & The Ugly: or, Why It's a Good Idea to Evaluate Web Sources <http://lib.nmsu.edu/instruction/evalcrit.html>

Common Research Mistakes

- Misspelled search terms
- Using common words with multiple meanings, i.e. bond - Do you mean municipal bonds, chemical bonds or James Bond?
- Do not use Capital letters
- Failing to use quotes for multi-word terms

Citation

It is important that you remember to give credit to the sources you use in your research papers. You therefore need to learn how to cite these sources.

As a general rule, if it would be hard for your reader to come across your fact(s) through their own effort, the more you need to cite it.

YOU SHOULD CITE A SOURCE IF:

- you quote a source verbatim - word for word.
- you paraphrase a passage
- you summarize a passage
- you include obscure information
- you borrow someone else's opinion