

You want to search a library database or the Web for information on a particular topic. How do you structure a good search?

Defining the Topic. Let's say you want to research how males and females learn and if abilities in certain subject areas differ by gender. The first thing you may want to do is write down your topic:

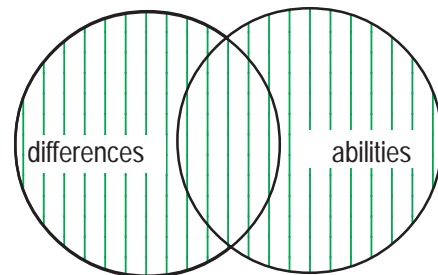
Are there gender differences in the mathematical abilities of males and females?

Next identify the best terms to use in searching. Note the significant concepts, or key words as they are underlined above.

Combining Your Keywords. You tell the search engine or database how to combine your chosen keywords through the use of the connecting words **AND** and **OR**.

OR

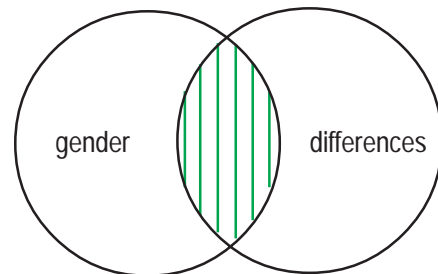
Use **OR** when you are willing to accept any of two or more concepts. If you enter **differences OR abilities**, the computer will retrieve information on differences by itself, abilities by itself, as well as information on the two topics together, as illustrated in the diagram to the right. The **OR** connector is very good for linking synonyms or related concepts in order to retrieve as much relevant information as possible, or for broadening your search. The search would be entered as below:



difference or abilities

AND

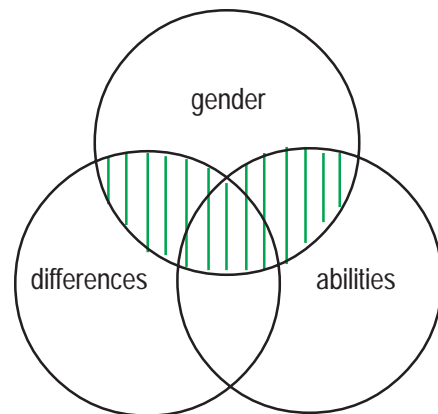
Use **AND** when you require the information retrieved to have ALL your specified keywords. If you want to find information comparing the differing abilities of females and males, you would combine gender and differences with **AND**. The Venn diagram at right demonstrates the breadth of this search. The search statement entered in the database would look like this:



gender and differences

AND and OR

If you use both **AND** and **OR** in the same search statement, you will need to group your keywords with parentheses to let the search system you are using know how you want the words combined. The diagram at the right illustrates how the search engine or database will find only items that cover gender, in conjunction with the topic differences or the topic of abilities. Your search statement might look like this:



gender and (differences or abilities)

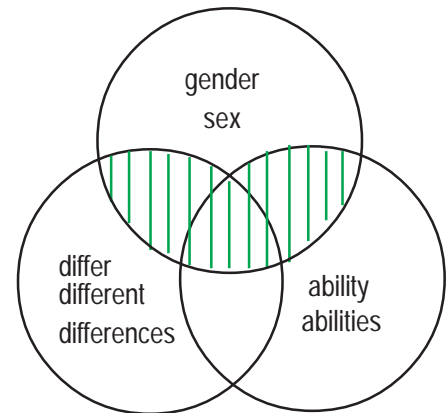
Broadening Your Search. What if you didn't find enough information on your topic? You may want to try broadening your search, using more search terms.

Using OR. You could use **OR** to broaden your search. In our example you may be able to do so by adding a synonym or related term for abilities or gender:

(gender or sex) AND (differences or abilities or aptitude)

Truncating or stemming. Another possible way to broaden your search is to truncate particular words. In many search systems, if you use the word "differences," the computer will look only for "differences." The computer won't search for variations of the word such as "different" or "differing". Truncation or stemming enables you to search for words with common roots or stems, using the system's truncation symbol (usually an asterisk or a question mark). You will also capture any plurals or possessive word ending. To broaden your search even further, and assuming the database or search engine uses an asterisk for truncation, you might try searching:

(gender or sex) AND (differ* or abilit*)



The results are illustrated in the Venn diagram at the right.

Narrowing Your Search. Let's say you found too much information. How do you narrow your search?

Using AND. You could use **AND** to add another concept to your search to narrow it. For example, you might add the term athletes to narrow the search to information on anorexic or bulimic teenage athletes:

(gender or sex) AND (differ* or abilit* or aptitude) and math*

Using Adjacency or phrase searching. Another way to narrow a search is to require that two or more words be adjacent to each other. In some search systems such as EBSCO, when you enter a term such as "sex role," the system will search for the two words as a phrase. In other systems, unless you specify to that "sex role" is a phrase by placing the words within quotation marks, the database or search engine will locate all the articles, pages, or books that include the word, "sex" and all the items that include the word, "role". Here are some examples of how to employ phrase searching in several popular databases and search engines:

"sex role" - Use quotation marks in *Google, Yahoo, MLA Bibliography, JSTOR* or *Investext*
sex role - no quotes are necessary in *Academic Search Premier* and *LexisNexis*

Using Proximity searching. In a situation where you are finding too many strange or irrelevant items in your search results, it is possible in some systems to match keywords within a paragraph or even a sentence. Here is an example of how searching for the keywords gender, differences and mathematics within one paragraph would be done in LexisNexis:

gender w/p differences w/p mathematics

Want to Know More? These are just the basics of keyword searching. Most databases and search engines have an online help section, where you can learn more about advanced keyword searching. To see if truncation, phrase and proximity searching are supported in a specific database or search engine, and how to use these searching techniques, consult the Library Database Searchers' Cheat Sheet, online at:

<http://web.uflib.ufl.edu/admin/cht_shts.pdf>.