Search techniques: Boolean operators

Computers can be very effective tools to locate information, but they are ONLY machines. Computer output depends upon human input. Computerised search mechanisms are based on Boolean logic. When you use and enter certain words known as Boolean operators, you are telling the computer exactly how to perform a search - one that can be tailored to your specific needs.

The most commonly used Boolean operators are: AND, OR, and NOT. The phrase you enter into a search box is called the search string (of syntax). Databases often show Boolean operators as buttons or drop-down menus that you can click to combine your search terms or results.

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
<th>Possible search strings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>AND</td>
<td>This operator combines the individual words (terms) in order to create a more specific search. It NARROWS your search.</td>
<td>cats AND dogs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Some search engines use a plus (+) sign instead of the word AND. +cats +dogs</td>
</tr>
<tr>
<td>OR</td>
<td>This operator combines possible synonyms of the individual words in order to create a wider search. It BROADENS your search.</td>
<td>films OR movies OR motion pictures</td>
</tr>
<tr>
<td>NOT</td>
<td>This operator limits (reduces) your search results by excluding specific terms. It NARROWS your search in a specific way.</td>
<td>arsenal NOT football</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Some search engines use the minus sign (-) instead of the word NOT. +arsenal –football</td>
</tr>
</tbody>
</table>
Combining complex searches

- If you have been searching for subject headings AND thinking of synonyms for each of your terms, the process is more complicated than if you were just combining two simple searches.

- First of all you need to combine all of your synonyms for one concept together using OR (both your subject headings and your keywords). Then you would combine each of those combinations together using AND.

Follow these steps to combine complex searches

- Look at your Search History table. This shows you every search you have carried out so far.

- Identify all the searches (subject heading and keywords) you carried out about topic 1 and tick the box to the left of every set.

- Click on the OR button

- This produces a combination set at the bottom of your search history table, containing all results about topic 1 altogether.

- Now tick every set of results you generated about topic 2 and combine them using OR as well.

- You should now have a second combination set at the bottom of your search history table.

- Now tick every set of results you generated about topic 3 and combine them using OR.

- You should now have a third combination set.

- **The final stage is to combine your combination sets!**

- To do this, just tick your three combination sets – but this time combine them by clicking on the AND button.

- This narrows the search to leave you with one final set of results that contains all your topics together