Boolean Operators | Quick Guide, Examples & Tips

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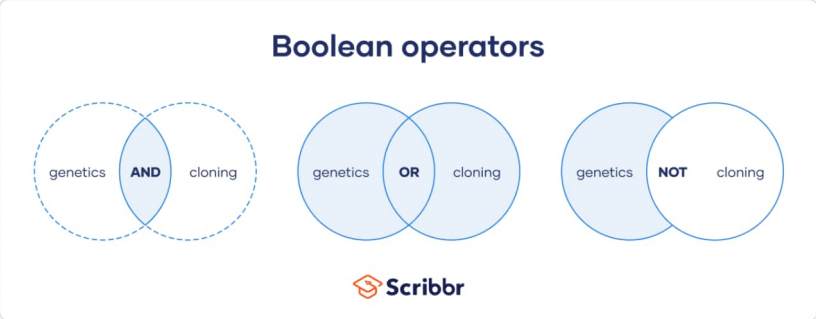
Boolean operators are words and symbols, such as AND or NOT, that let you expand or narrow your search parameters when using a database or search engine. When you search using these operators, it is known as a Boolean search.

You can use Boolean operators such as **AND**, **OR**, and **NOT** alongside keywords to create a Boolean string that will refine your search to find the most relevant results and sources.



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How to use Boolean operators

Knowing how to use Boolean operators effectively can save you a lot of time and help you to find useful sources, determine the relevance of your research topic, and create strong research questions. It's also very helpful when you're working on a literature review or systematic review.

Boolean operator	Function	Example
AND	Provides results that contain **both or all** keywords	paradigm AND syntagm
OR	Provides results that contain **either** keyword	meteor OR meteorite
NOT or AND NOT	Provides results that contain **the first** keyword but **not the second**	football NOT soccer
Quotation marks ""	Provides results with **the exact phrase**	"Newtonian mechanics"
Parentheses ()	Allows you to **group together** keywords and control the order in which the terms will be searched	(rural OR urban) AND sociology

AND

AND will provide search results containing **both or all** of your keywords.

Use this when you want results that contain two or more specific keywords.

> **Example: Using AND**
>
> Anthropocene AND climate change AND ecosystem

OR

OR will provide search results containing **at least one** of your keywords.

Use this when you want results that contain at least one (though not necessarily both) of your chosen keywords.

> **Example: Using OR**
>
> horticultural OR agricultural

NOT

NOT will provide search results containing **the first** of your keywords **but not the second**. Make sure to put your keywords in the correct order when using NOT, as the search results provided will exclude the latter keyword.

Use this when you want results that contain one specific keyword but not another.

> **Example: Using NOT**
>
> centrifugal NOT centripetal

Parentheses: ()

Parentheses allow you to **group together** keywords and control the order in which the terms will be searched, just like in a mathematical statement. Keywords and Boolean operators **within parentheses will be searched first**, followed by keywords outside parentheses.

For example, the combination shown below will provide results that are initially filtered to contain at least one of "id" or "ego," and then further refined to also include "developmental."

> **Example: Using parentheses**
>
> (id OR ego) AND developmental

You can also use more than one pair of parentheses. The search will filter results based on the innermost parenthetical keywords first, followed by the keywords in outer parentheses, and finally the keyword(s) outside parentheses.

> **Example: Using multiple sets of parentheses**
>
> ((id OR ego) AND Lacan) AND developmental