Search Online Book Catalogues, Databases, Search Engines

Boolean Operators

Boolean Search Examples

Implied Boolean Operators

Proximity Operators

Proximity Operators vs Boolean Operators

Truncation & Wildcard

Search Techniques: Boolean Logic

What is Boolean?

In searching we use Boolean Operators: AND, OR, NOT to link words and phrases to try to obtain results that answers our queries as close as possible.

These Boolean operators stems from the Boolean logic formulated by British mathematician George Boole (1815 – 1864) in the field of algebra where they are used to create True or False statements.

For search engines, Boolean operators are used to connect keywords into a "search statement" with the purpose to include or exclude keywords in a way to give rise to specific search results depending on the mix and match and order of the Boolean operators used.

Search Techniques: Boolean Operators

Boolean "**AND**"
Narrows the search as results must have every one of the keywords used.
The more keywords used the narrower the search.
e.g. stem AND cell ; stem AND cell AND research

Boolean "**OR**"
Widens the search. Any one or combination of the keywords will be in the search results.
The more keywords used the more search results.
e.g. Malaysia OR college ; Malaysia OR college OR university OR institution

Boolean "**NOT**"
Narrows or limits the search by making sure search results with the word we do not want does not get retrieved even if the word we want is in it.
e.g. baby NOT food
This means all documents with the word food will be disregarded even if the word baby is in it.

Ref: http://www.sc.edu/beaufort/library/pages/bones/lesson8.shtml

Search Techniques: effects of Boolean Operators

SEGi College Subang Jaya
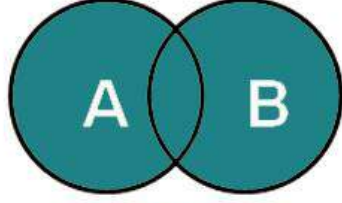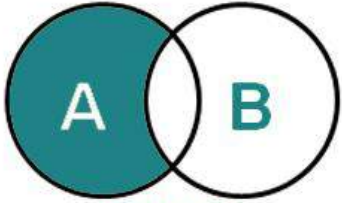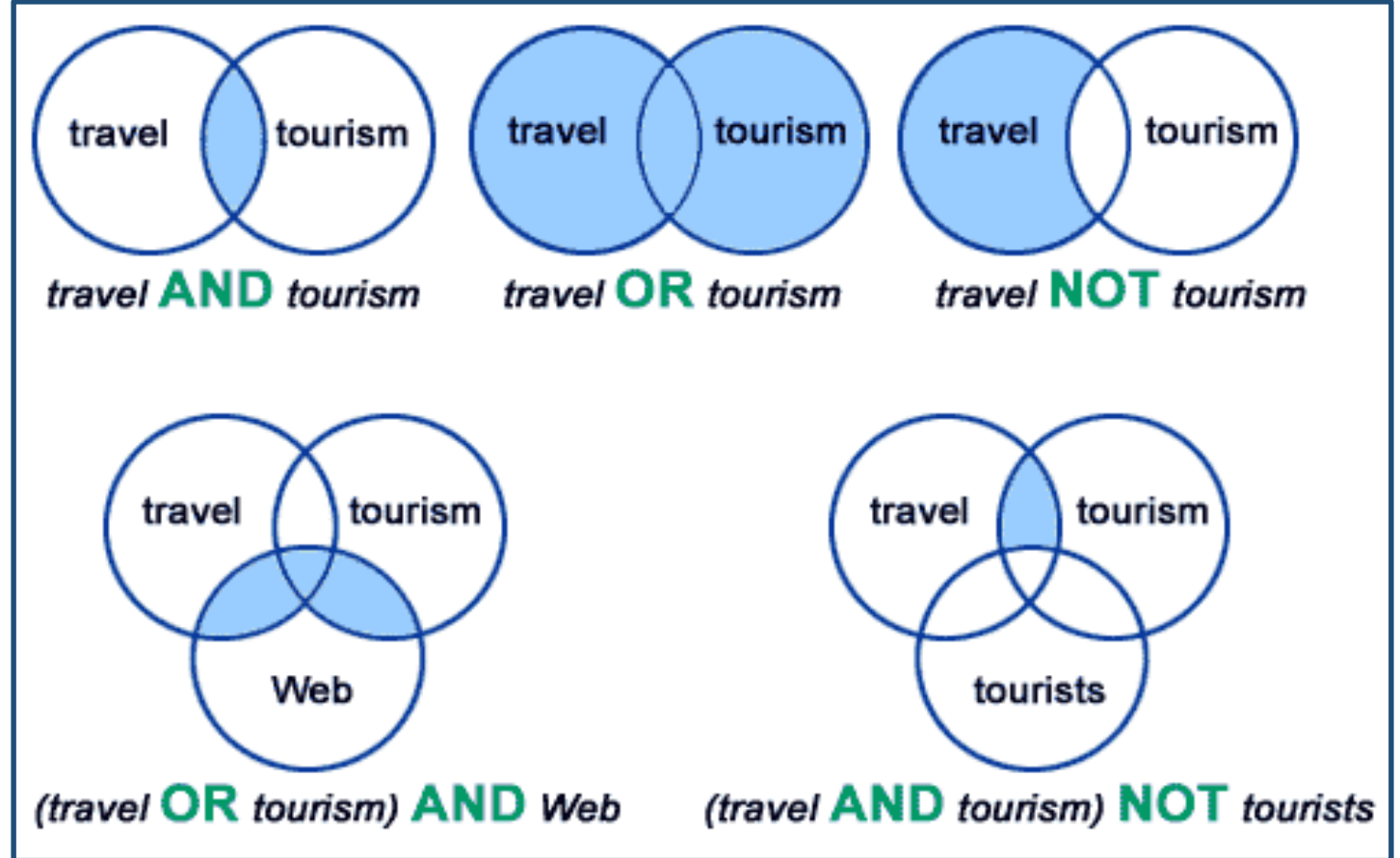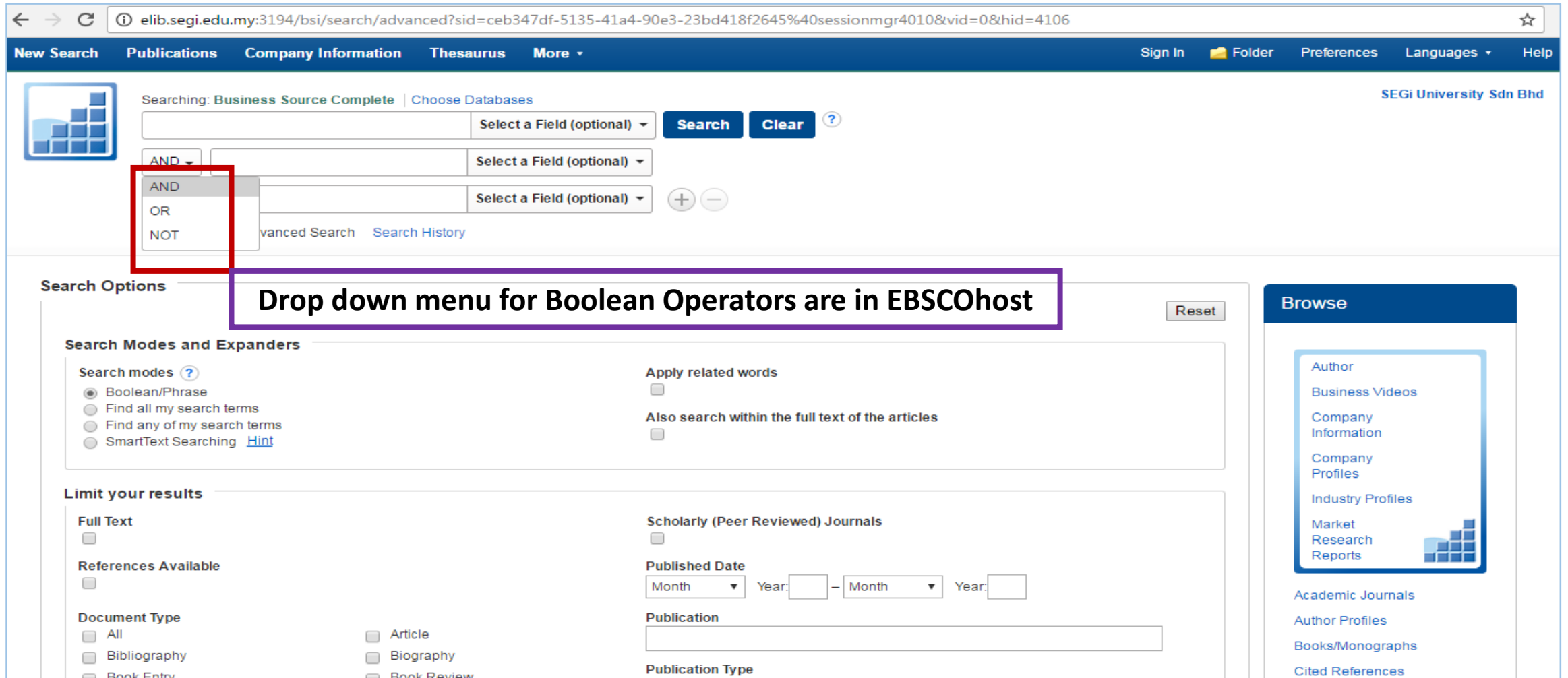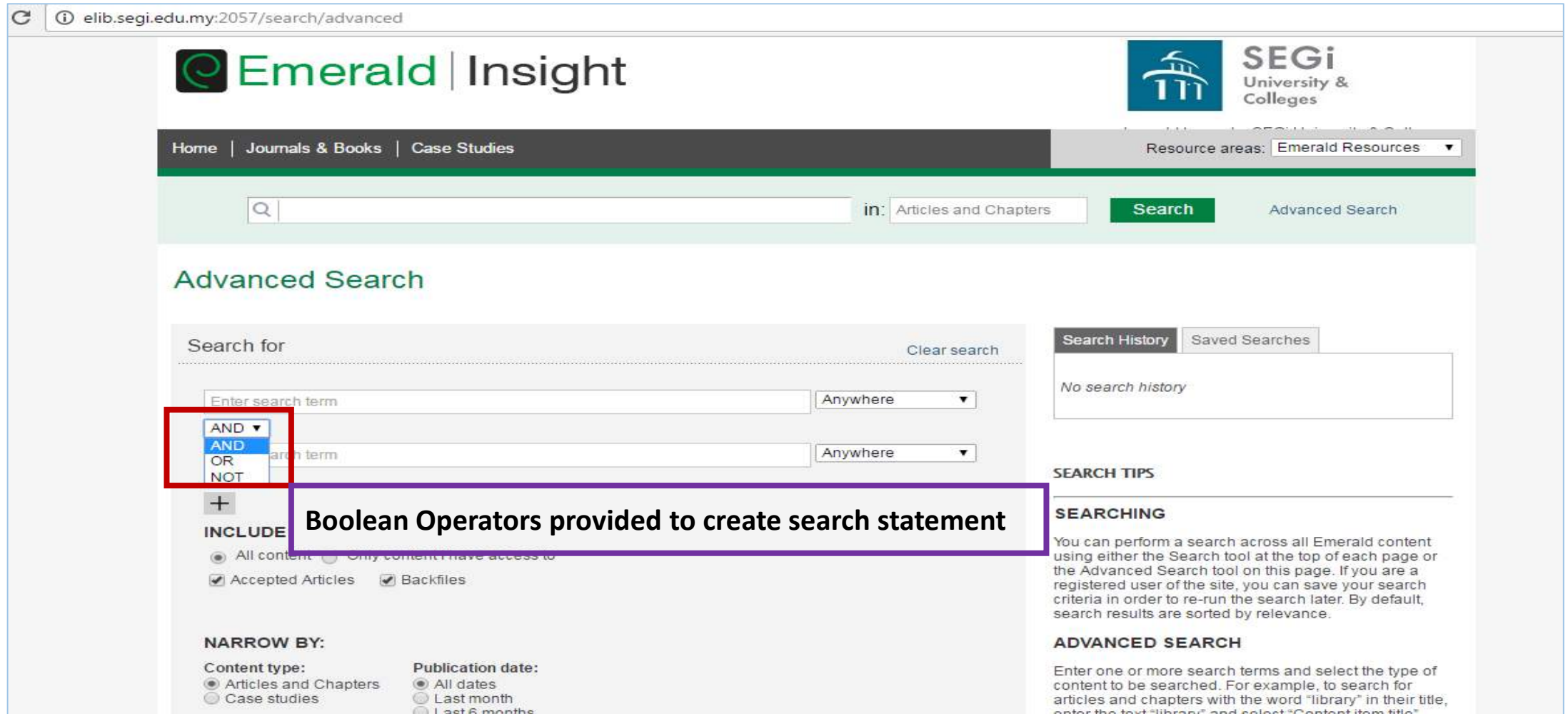A member of SEGi University Group
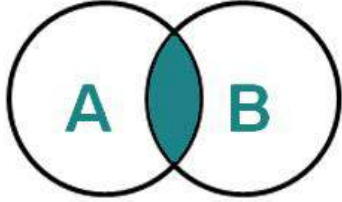
A AND B	Retrieves all records having concept **A** and concept **B** in the same record. Using **AND**, the number of hits retrieved decreases.
A OR B	Retrieves records containing either concept **A** or concept **B**. Used usually to connect synonyms or related terms. Using **OR**, the number of hits retrieved increases.
A NOT B	Retrieves records containing concept **A** but not concept **B**. Use with caution as it might eliminate some relevant records.

travel **AND** tourism   travel **OR** tourism   travel **NOT** tourism

(travel **OR** tourism) **AND** Web   (travel **AND** tourism) **NOT** tourists

Diagram from
http://aub.edu.lb.libguides.com/c.php?g=291188&p=1939708

Diagram from
https://ircutp.wordpress.com/utp-irc-faqs/boolean-operators/

Search Techniques: Boolean Operators

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Search Techniques: Boolean Search Examples

Drop down menu for Boolean Operators are in EBSCOhost

Search Techniques: Boolean Search Examples

Search Techniques: Boolean Search Examples

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with **all** of the words → **equates to using AND**

with the **exact phrase** → **Equates to using parentheses " … " to make sure keywords appear in results in that order**

with at least **one of the words** → **Equates to using OR**

without the words → **Equates to using NOT**
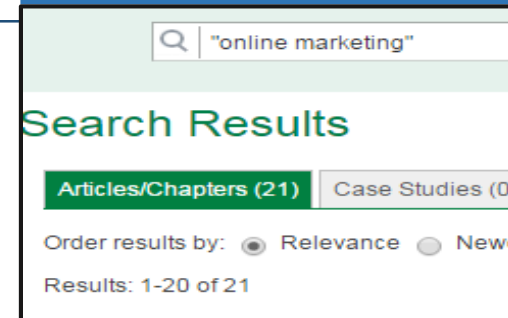
Search Techniques: Implied Boolean Operators

Using implied Boolean operators in Basic Search Emerald to look for articles/chapters with the word online but without marketing e.g. +online –marketing Found 19816 articles/chapters.

Compare to search +online +marketing which found 27227 results.

Compared to search "online marketing" which found 21 articles/chapters.

Ref: http://www.sc.edu/beaufort/library/pages/bones/lesson8.shtml

Search Techniques: Proximity Operators

Boolean operators based on Boolean logic (AND, OR, NOT) work on an exclude or include principle which is accepted by most search engines and databases.
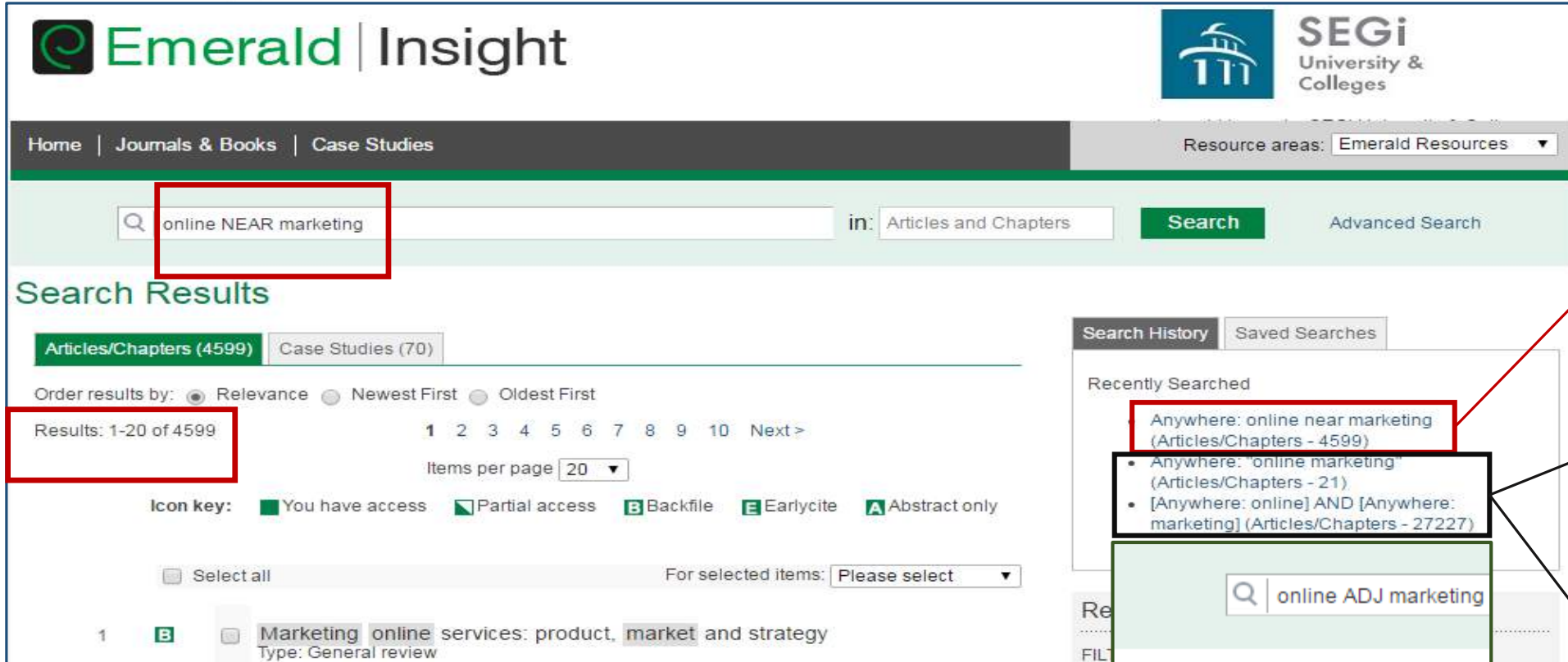
while

Proximity or positional operators work on a "distance between search terms placed in any order" principle. Only few search engines employ proximity operators (NEAR, ADJ). Proximity operators (SAME, FBY) are limited to advanced searching in special databases but not in search engines.

e.g. online NEAR marketing

Notes: online is within a specified distance from marketing
          returns more relevant results compared to using Boolean AND

Next slide illustrates this using Emerald
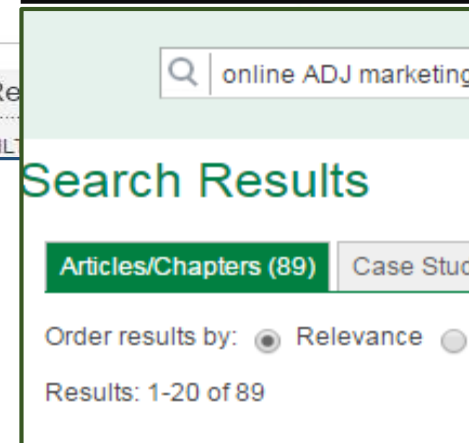
Ref: http://www.sc.edu/beaufort/library/pages/bones/lesson8.shtml

Search Techniques: Proximity Operators vs Boolean Operators

Compare:

Using online NEAR marketing returns 4599 results. Online and marketing can in any order.

Using "online marketing" (online followed by marketing) returns 21 results.

Using online AND marketing returns 27227 results.

Using online ADJ marketing (online and marketing in any order) returns 89 results.

Truncation is a search technique that uses the root of a word to search so as to avoid missing out relevant documents that has the root word but with different endings.

e.g. child* = child, children, childhood, childlike

comput* = compute, computer, computing

Common symbols used for truncation are: * ! ? # and they are attached to the end of the root word.

Note: Different databases uses different symbols

The Truncation symbol (*) may also be used between words to match any word e.g. searching EBSCOhost.

e.g. a midsummer * dream will return results that contain the exact phrase, a midsummer night's dream.

Wildcard is a search technique that replaces one letter in a word with a symbol.

Common symbols used for wildcard are: * ! ? # and they are placed within the word.

e.g. wom!n = woman, women

ne?t = neat, nest, next, newt

Search Techniques

Please connect with the Library should you need to attend hands-on basic search skills sessions. Thank you very much.