



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.

Search Techniques: effects of Boolean Operators

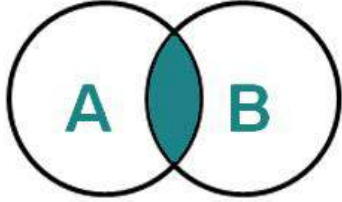
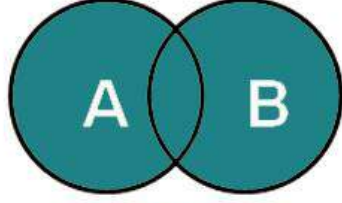
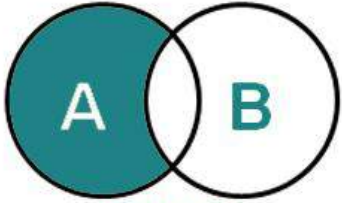
 <p>A AND B</p>	<p>Retrieves all records having concept A and concept B in the same record. Using AND, the number of hits retrieved decreases.</p>
 <p>A OR B</p>	<p>Retrieves records containing either concept A or concept B. Used usually to connect synonyms or related terms. Using OR, the number of hits retrieved increases.</p>
 <p>A NOT B</p>	<p>Retrieves records containing concept A but not concept B. Use with caution as it might eliminate some relevant records.</p>

Diagram from

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

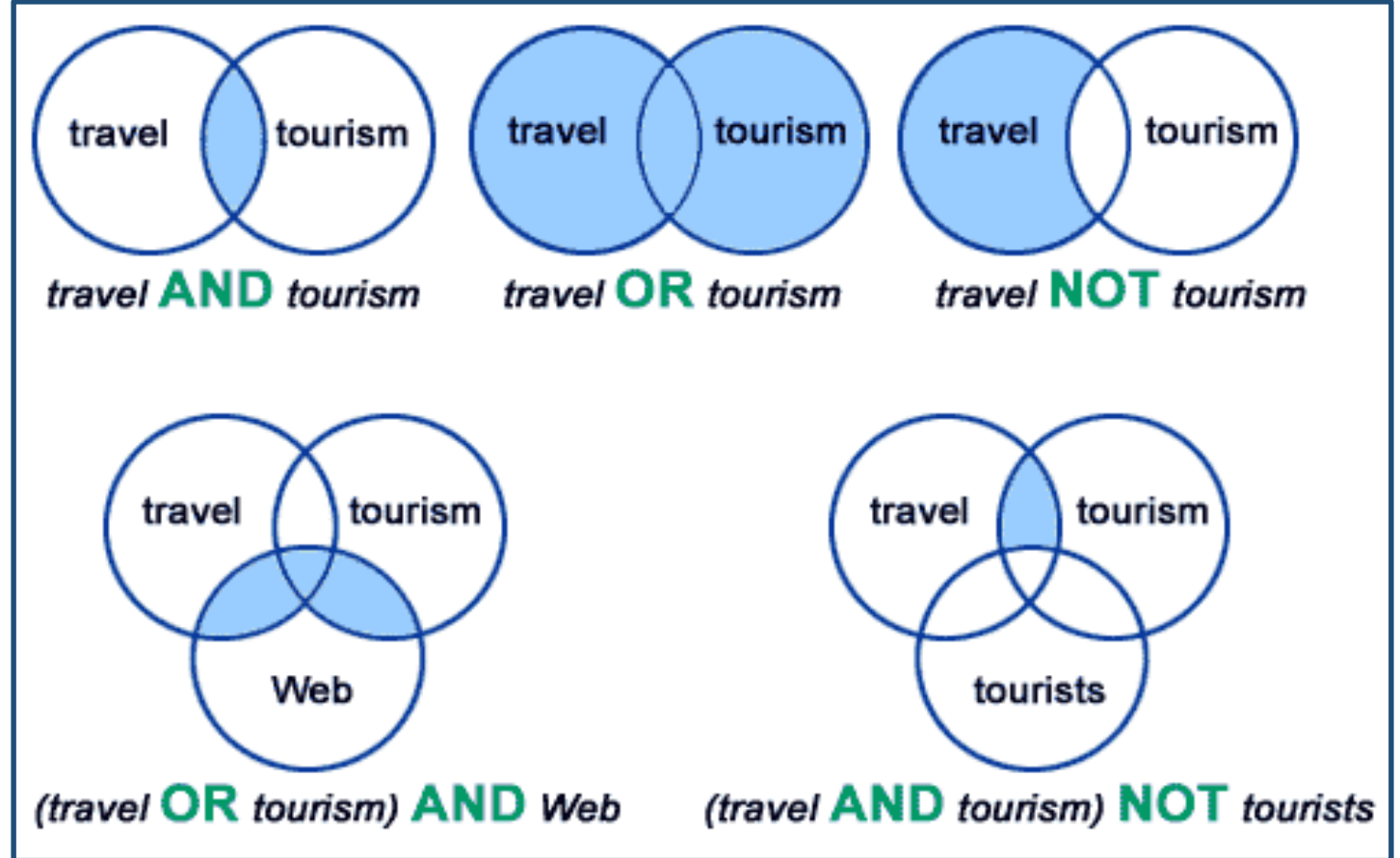


Diagram from

<https://ircutp.wordpress.com/utp-irc-faqs/boolean-operators/>

Search Techniques: **Boolean Operators**

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

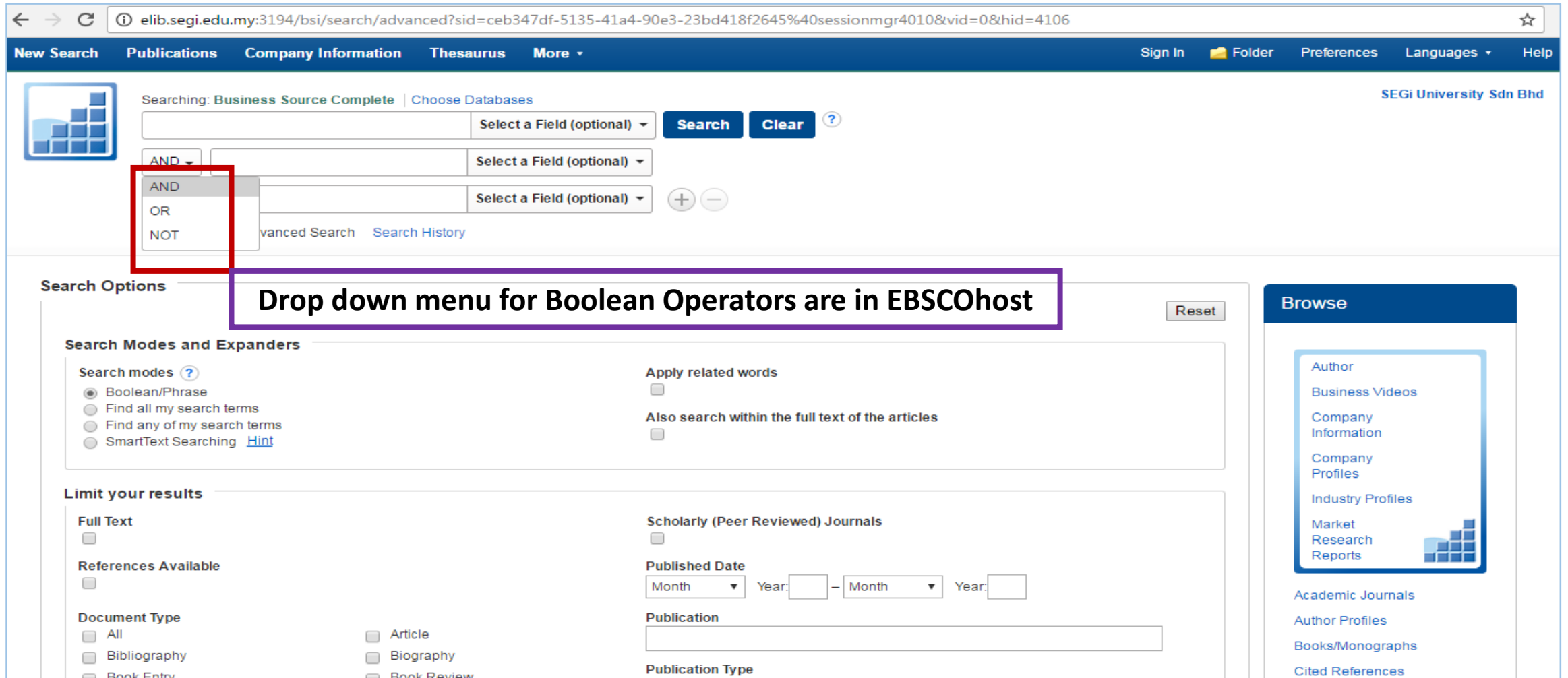
Boolean “**NOT**”

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

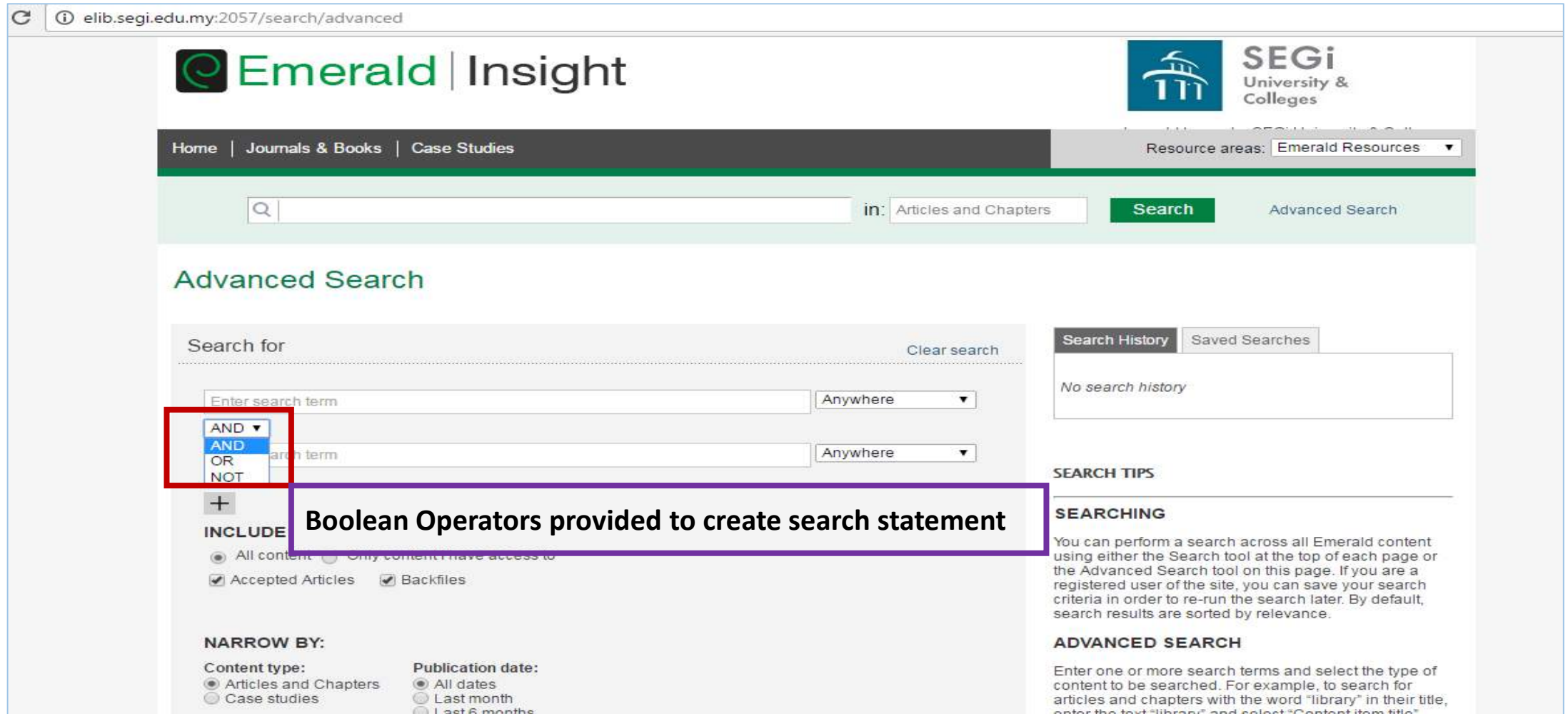
This means all documents with the word food will be disregarded even if the word baby is in it.

Search Techniques: Boolean Search Examples



The screenshot displays the EBSCOhost search interface. At the top, the URL is `elib.segi.edu.my:3194/bsi/search/advanced?sid=ceb347df-5135-41a4-90e3-23bd418f2645%40sessionmgr4010&vid=0&hid=4106`. The navigation bar includes links for **New Search**, **Publications**, **Company Information**, **Thesaurus**, and **More**. On the right, there are links for **Sign In**, **Folder**, **Preferences**, **Languages**, and **Help**. The main search area shows a search bar with the text "Searching: Business Source Complete" and a "Choose Databases" link. Below the search bar, there are three input fields for search terms, each with a "Select a Field (optional)" dropdown. A dropdown menu for Boolean operators is open, showing **AND**, **OR**, and **NOT** options. The **AND** option is highlighted with a red box. Below the search bar, there are links for **Advanced Search** and **Search History**. A purple box highlights the text: **Drop down menu for Boolean Operators are in EBSCOhost**. The **Search Options** section includes **Search Modes and Expanders** with radio buttons for **Boolean/Phrase** (selected), **Find all my search terms**, **Find any of my search terms**, and **SmartText Searching**. There are also checkboxes for **Apply related words** and **Also search within the full text of the articles**. The **Limit your results** section includes checkboxes for **Full Text**, **References Available**, and **Document Type** (All, Bibliography, Book Entry, Article, Biography, Book Review). There are also fields for **Scholarly (Peer Reviewed) Journals**, **Published Date** (Month, Year), and **Publication**. On the right, the **Browse** section lists various search options: **Author**, **Business Videos**, **Company Information**, **Company Profiles**, **Industry Profiles**, **Market Research Reports**, **Academic Journals**, **Author Profiles**, **Books/Monographs**, and **Cited References**.

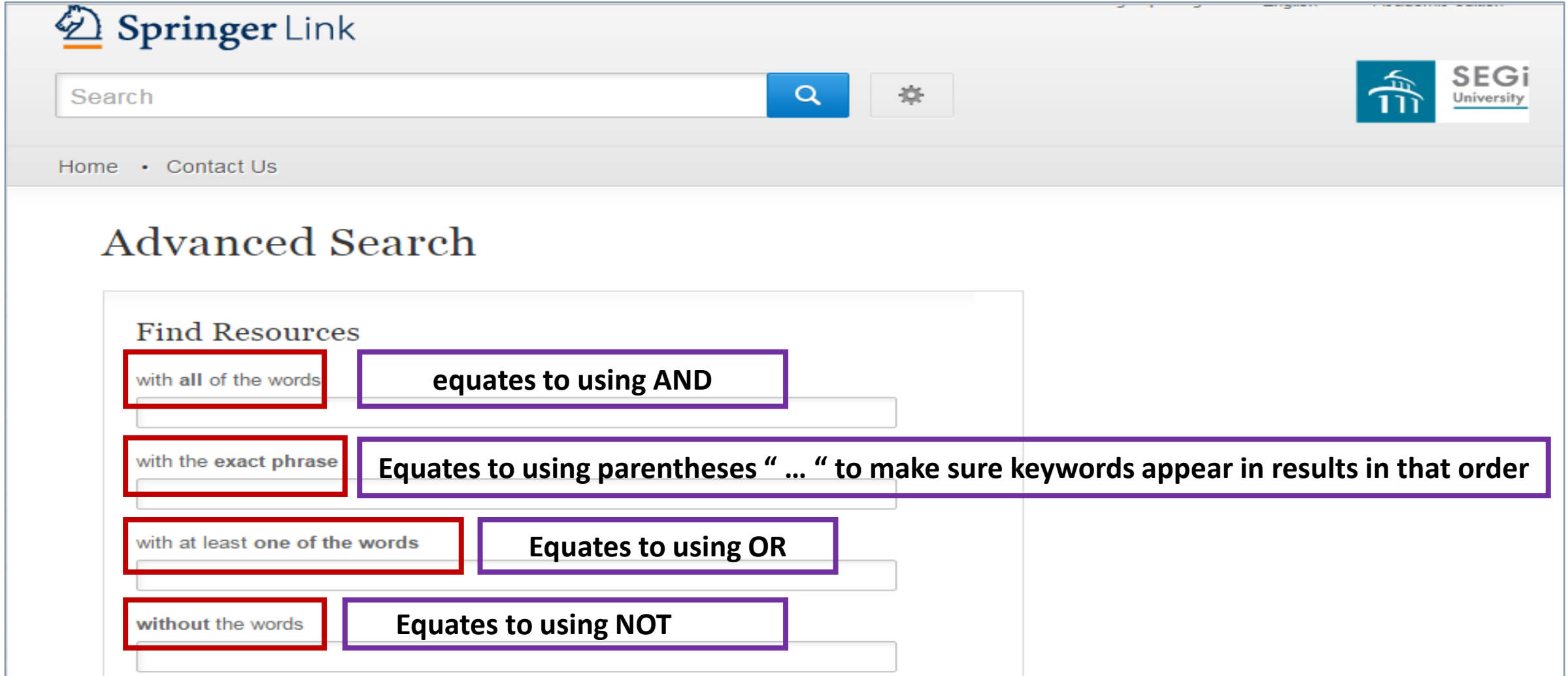
Search Techniques: Boolean Search Examples



The screenshot displays the Emerald Insight search interface. At the top, the URL is `elib.segi.edu.my:2057/search/advanced`. The page features the Emerald Insight logo and navigation links for Home, Journals & Books, and Case Studies. A search bar is present with a dropdown menu set to "Articles and Chapters" and a "Search" button. Below the search bar, the "Advanced Search" section is visible. It includes a "Search for" field with a "Clear search" link. Two search input fields are shown, each with a dropdown menu for search scope (currently set to "Anywhere"). The first dropdown menu is highlighted with a red box and contains the following options: AND, AND, OR, and NOT. A purple box highlights the text "Boolean Operators provided to create search statement" overlaid on the search interface. To the right, there are tabs for "Search History" and "Saved Searches", with the search history currently empty. Below these are sections for "SEARCH TIPS", "SEARCHING", and "ADVANCED SEARCH".

Boolean Operators provided to create search statement

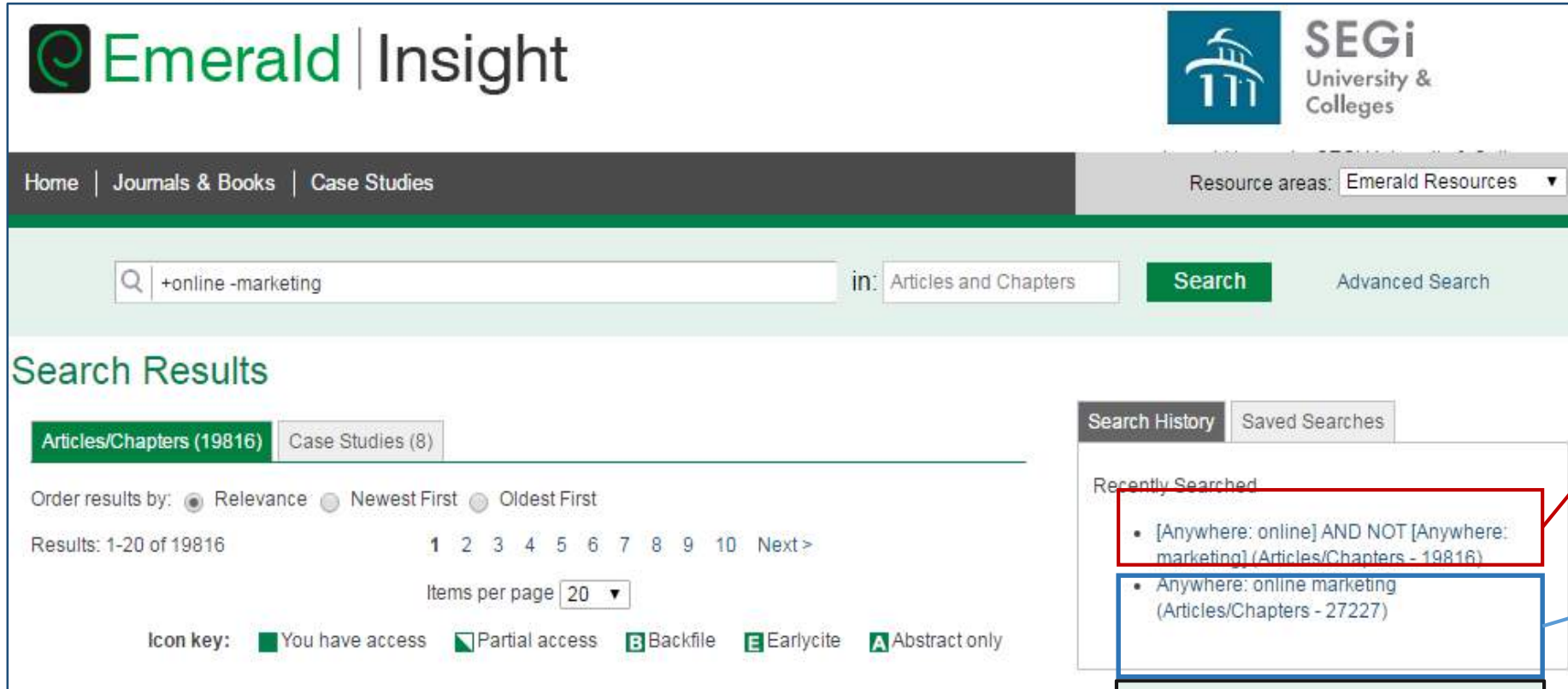
Search Techniques: Boolean Search Examples



The screenshot shows the Springer Link website interface. At the top left is the Springer Link logo. A search bar is located in the top center, and the SEGi University logo is in the top right. Below the search bar is a navigation menu with 'Home' and 'Contact Us'. The main content area is titled 'Advanced Search' and contains a section 'Find Resources' with four options, each with a red box around the option text and a purple box around the explanation:

- 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**

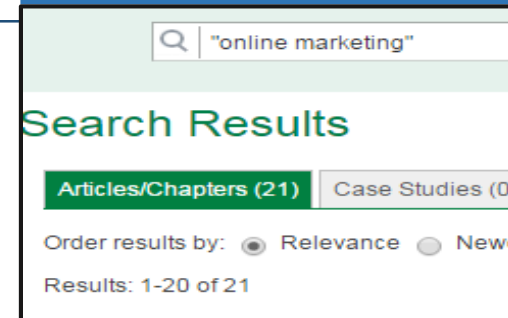


The screenshot shows the Emerald Insight search interface. The search bar contains the query '+online -marketing' and the results are filtered to 'Articles and Chapters'. The search results page shows 19816 articles/chapters. The search history dropdown is open, showing two entries: '[Anywhere: online] AND NOT [Anywhere: marketing] (Articles/Chapters - 19816)' and 'Anywhere: online marketing (Articles/Chapters - 27227)'. The search history dropdown is highlighted with a red box and a blue box. The search results page also shows a search bar with the query '+online -marketing' and the results are filtered to 'Articles and Chapters'.

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.



The screenshot shows the Emerald Insight search interface. The search bar contains the query 'online marketing' and the results are filtered to 'Articles and Chapters'. The search results page shows 21 articles/chapters. The search history dropdown is open, showing two entries: '[Anywhere: online] AND NOT [Anywhere: marketing] (Articles/Chapters - 19816)' and 'Anywhere: online marketing (Articles/Chapters - 27227)'. The search history dropdown is highlighted with a red box and a blue box. The search results page also shows a search bar with the query 'online marketing' and the results are filtered to 'Articles and Chapters'.

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

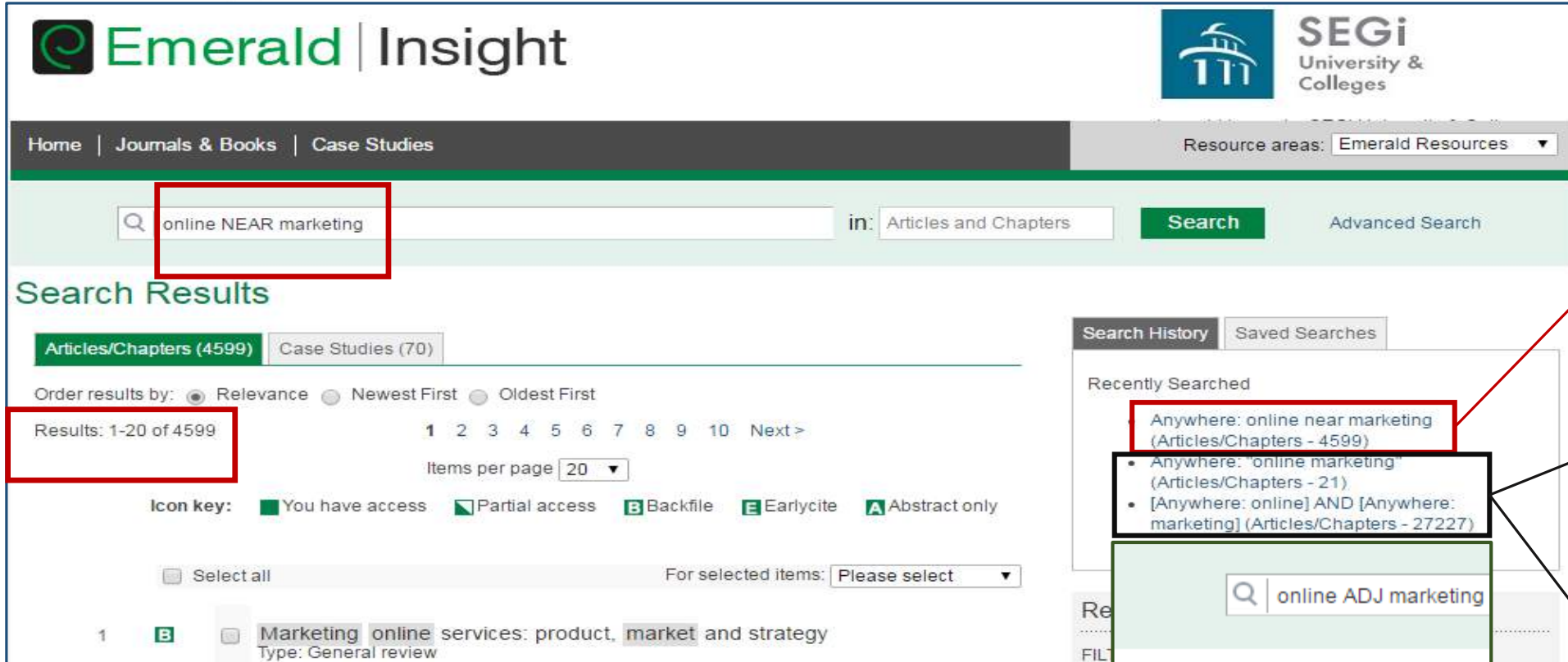
Proximity or positional operators work on a “distance between search terms placed in any order” principle. Only few search engines employ proximity operators (NEAR, ADJ). Proximity operators (SAME, FBY) are limited to advanced searching in special databases but not in search engines.

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

Search Techniques: Proximity Operators vs Boolean Operators



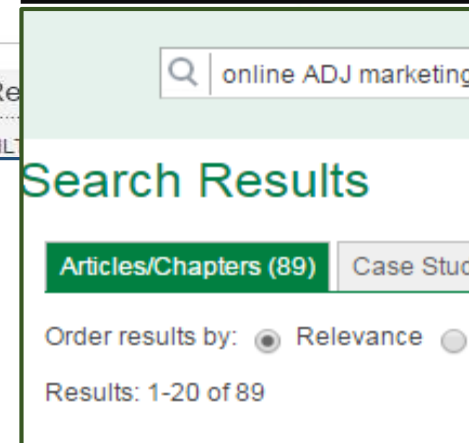
The screenshot shows the Emerald Insight search interface. The search bar contains the query "online NEAR marketing" and the results are filtered to "Articles and Chapters". The search results page shows 4599 results for "Articles/Chapters" and 70 for "Case Studies". The results are ordered by Relevance. A red box highlights the search bar and the "Results: 1-20 of 4599" text. A search history window is open, showing the search query "Anywhere: online near marketing (Articles/Chapters - 4599)" and two other related queries: "Anywhere: 'online marketing' (Articles/Chapters - 21)" and "[Anywhere: online] AND [Anywhere: marketing] (Articles/Chapters - 27227)".

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.



The screenshot shows the Emerald Insight search interface for the query "online ADJ marketing". The search results page shows 89 results for "Articles/Chapters" and 0 for "Case Studies". The results are ordered by Relevance. A red box highlights the search bar and the "Results: 1-20 of 89" text.

Search Techniques: **Truncation & Wildcards**

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



SEGi
College
Subang Jaya
A member of
SEGi University Group

Search Techniques

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