



دانشگاه علوم پزشکی و خدمات بهداشتی، درمانی ایران
کتابخانه دانشکده بهداشت

Search Strategies





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Search Strategies



روش های جستجوی پیشرفته در پایگاه های اطلاعاتی

رویا وصال آزاد
مسئول کتابخانه دانشکده بهداشت





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Search Strategies



بنام خداوند جان و





Think and Guess!

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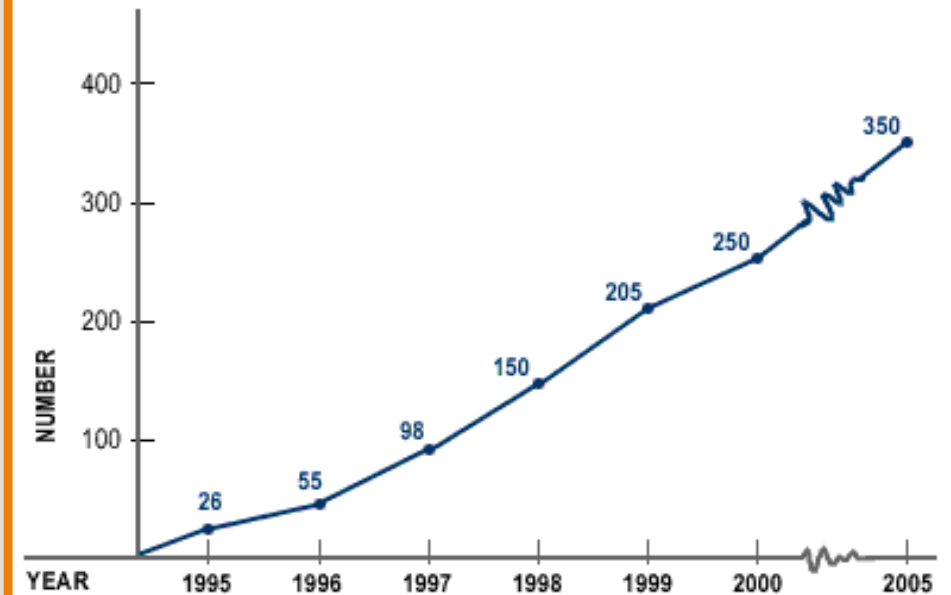
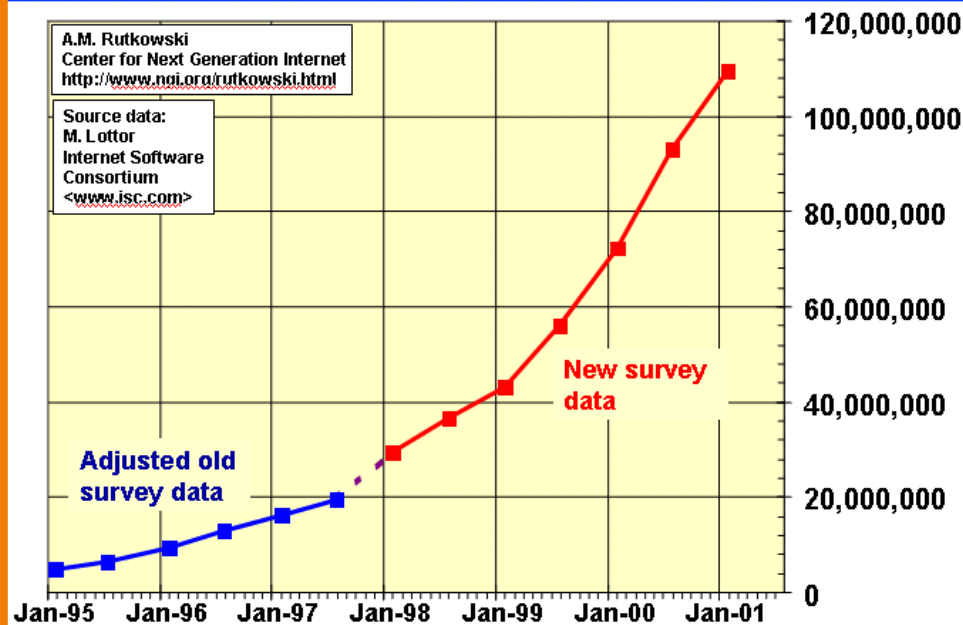
Try Guessing the URL!



Web Growth

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Internet Hosts: 1995-2001





Five steps to better search results

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- 1. Summarize your topic**
- 2. Select your Keywords**
- 3. Identify synonyms and alternative keywords**
- 4. Link your keywords and phrases**
- 5. Locating and evaluating your results**



Create a Search Strategy

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1. Define text words
2. Determine synonyms for the text words
3. Control for different spellings or using appropriate truncations
4. Consider brand names when searching for a specific drug treatment
5. Perform test searches – I
6. Identify “controlled vocabulary” (keywords) used for the indexing of databases (MeSH for MEDLINE, EMTREE for EMBASE)
7. Decide on whether to perform an “exploded” or a “focused” search for keywords
8. Check if all words are spelled correctly!!!!
9. Combine logically all search terms
10. Perform test searches – II
11. Customize the syntax of your search strategy to the specific databases

1. Summarize your topic



A great way to test your understanding of the assignment topics to summarize it in your own words:

- **Read your assignment topic or question**
- **Reflect on the aim of the assignment while thinking about the tasks involved**
- **Rewrite the main concepts in a sentence or paragraph.**

2. Select your keywords



After you have summarized the topic, circle, highlight or underline the keywords and phrases that are relevant to your topic.

Discuss the environmental impact of plastic water bottles in Australia.

3. Identify synonyms and alternative keywords



Not all of the relevant literature will use exactly the same keyword, so you will need think about possible synonyms (words that mean the same thing), alternate keywords, or words with variant spellings. If you are having trouble thinking of some alternative keywords it can sometimes help to visit an encyclopedia or dictionary.

Identify synonyms and alternative keywords



Discuss the environmental impact of plastic water bottles in Australia



pollution

litter

resource depletion

energy consumption



packaged water

water container

polyethylene terephthalate

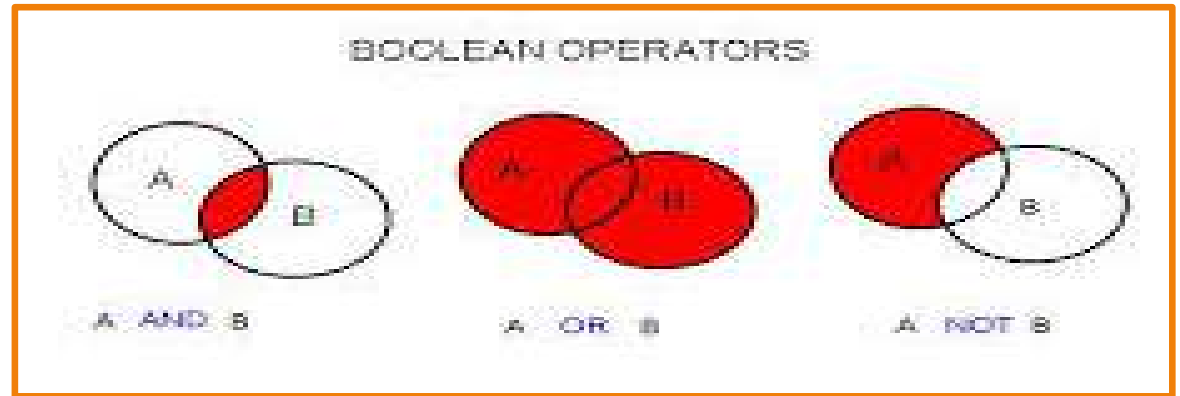
4. Link your keywords and phrases



Think about how you will use your keywords and phrases to construct a search.

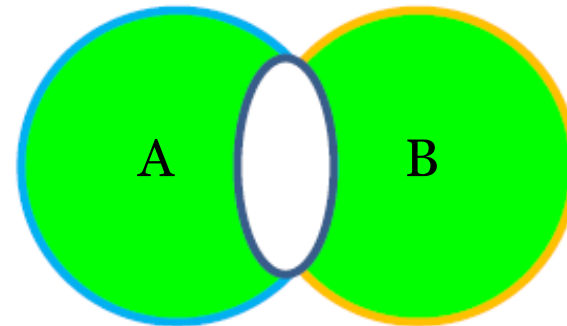
- **Boolean operators**
- **Phrase Searching**
- **Proximity Searching**

Boolean Operators



Use **AND**, **OR**, **NOT** to combine keywords. For instance, using **AND** will find result both words, using **OR** will find either keyword, and **NOT** will find only one of your keywords.

XOR Operator



$(A \text{ OR } B) \text{ NOT } (A \text{ AND } B)$

Operators

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Phrase Searching

- Use quotation marks “ “ to find exact phrase.

Proximity Searching

- NEAR Operator
- NEXT Operator
- Within Operator
- Followed By
- Pre
- Adjacency

Operators

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Truncation

- Truncation, also known as stemming, uses a character such as asterisk (*) or question mark (?) at the end of a word, which allows you to search for a root form of a word and pick up any ending.

Wildcard Symbols

- Wildcard symbols can be typed in place of a letter or letters within a keyword if you are not sure of the spelling or if there are different forms of the root word.

Operators

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ASTERISK *

- The asterisk can be used on most resume databases and non-Internet search engines as a root word/stem/truncation search.

Brackets []

- To search for a phrase in such a way that the pairs of words are in close proximity to each other.

Operators

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Field Searching

- **Field searching lets you tell a database exactly where you want your keywords to be found.**

Domain Searching

- **Site:**
- **Inurl:**

Operators

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Words in URL

- **Inurl:word**
- **Allinurl:word1 word2**
- **Allinurl:"word1 word2"**

Host Search

- **Site:URL**

SEARCH IN SITE TITLE

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- **Intitle:word**
- **Allintitle:word1 word2**
- **Allintitle:“word1 word2”**

SEARCH BY FILE TYPE

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- **Filetype: extention**

5. Evaluating your results



If you are not getting the right results, or are getting too many or too few results, you might need to revise your search strategy.

Which Way to Search: by Subject or Keyword?

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Actually, you can use either or both of these methods to search for your topic. But in a keyword search, the computer will look for the word wherever it appears, and in a subject search it will look for the word as an assigned “subject” term, or even as the first word in a set string of terms.



Simple Vs Advanced Search

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Simple Search

- **Very broad**
- **Retrieves thousands of irrelevant files**

Advanced Search

- **Narrowing the search**
- **Boolean Operators**
- **Phrase searching**
- **Field search**
- **Truncation**

PICO strategy (an example)

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- **P**roblem – myalgic encephalomyelitis
- **I**ntervention – Prozac
- **C**omparison – alternative medicine
- **O**utcome – relief of all or some of her symptoms

Once the keywords/phrases are identified, a **simple, focused, clinical question** can be formulated, as follows:

*A **young woman** suffering from **myalgic encephalomyelitis** has been prescribed **Prozac** but would like to know if **alternative therapies** might provide **symptom relief**.*

STAGE ONE			
P	I	C	O
Myalgic encephalomyelitis	Antidepressants	Alternative therapy/medicine	Symptom relief
OR	OR	OR	OR
ME	Fluoxetine	Complementary therapy/medicine	Pain relief
OR	OR	OR	OR
Post viral fatigue syndrome	Prozac	Homoeopathy	Balanced moods
OR		OR	OR
Yuppie flu		Reflexology	Calm sleep
		OR	OR
		Nutritional/diet therapy	Increase in energy levels
		OR	
		Acupuncture	

P

I

(Myalgic encephalomyelitis OR ME OR Post viral fatigue syndrome
OR Yuppie flu)

AND

(Antidepressants OR Fluoxetine OR Prozac)

STAGE TWO			
P	I	C	O
Myalgic encephalomyelitis	Antidepressants	Alternative therapy/ medicine	Symptom relief
AND		AND	AND

In summary, to develop an effective search strategy, you must:

1. Break down the clinical scenario and formulate a more manageable question.
2. Identify the key words and make a note of relevant synonyms.
3. Combine using appropriate Boolean concepts.

Embase syntax: a comparison with Ovid

Description	Embase	Ovid	Comments
Field search	heart:ti	heart.ti.	
Multiple field search	heart:ti,ab	heart.ti,ab.	
Phrase search	'heart attack' "heart attack" heart-attack	heart attack	<u>Embase</u> : hyphens can be used instead of single or double quotes
Adjacency (same order)	heart next/1 attack	heart adj attack	<u>Ovid</u> : adj = <u>no</u> intervening words
Adjacency (any order)	heart near/n attack	heart adjn attack	<u>Ovid</u> : adjn indicates <u>any</u> order
Truncation (unlimited)	heart*	Heart\$	<u>Ovid</u> also *
Mandated wildcard	wom?n	wom#n	1 character (exactly)
Optional wildcard (0-1 char.)	colo*r	colo?r	Embase: * = 0-n characters
Truncation in phrase	heart next/1 attack*	heart attack\$	
... with field limit	(heart next/1 attack*):ti	heart attack\$.ti.	Fixed order
... not adjacent	(heart near/2 attack*):ti	heart adj2 attack\$.ti.	Any order
Truncation + wildcard	sul*ur next/1 dioxid*	sul#?ur dioxid\$ Or sul*ur dioxid\$	<u>Ovid</u> #? = 1 or 2 characters
Multiple truncation	structur* near/2 relat*	structur\$ adj2 relat\$	Any order
Multiword phrase (i)	"structure activity" next/1 relat*	structure activity relat\$	Next operator is used ¹⁾
Multiword phrase (ii)	(structur* next/1 activity) and relat*	structur\$ activity relat\$	

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Thank You

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