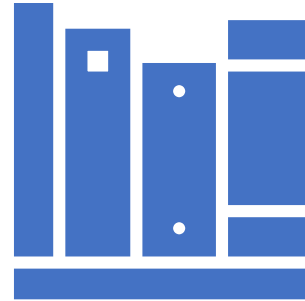


# Search Strategies

Ayesha Abed Library

BRAC University



# Research Process

## Choose a Topic

- Understand your assignment parameters, requirements, and due dates

## Conduct Background Research

- Search for news articles, top hits on Google, Databases etc

## Refine your Topic

- Narrow down what you want to investigate. Think about the who, what, when, where, and why for your topic.

## Create a Research Question

- Come up with a tentative question you want to answer in your project.

## Develop a Search Strategy

- Select your resources and develop your keywords

## Search

- Conduct multiple searches in relevant resources

## Evaluate your Results and Sources

- Use the CRAAP model: currency, relevancy, authority, accuracy, and purpose

## Adjust and/or Repeat your Search

- Try different keywords, resources, and strategies depending on your needs

## Start Writing

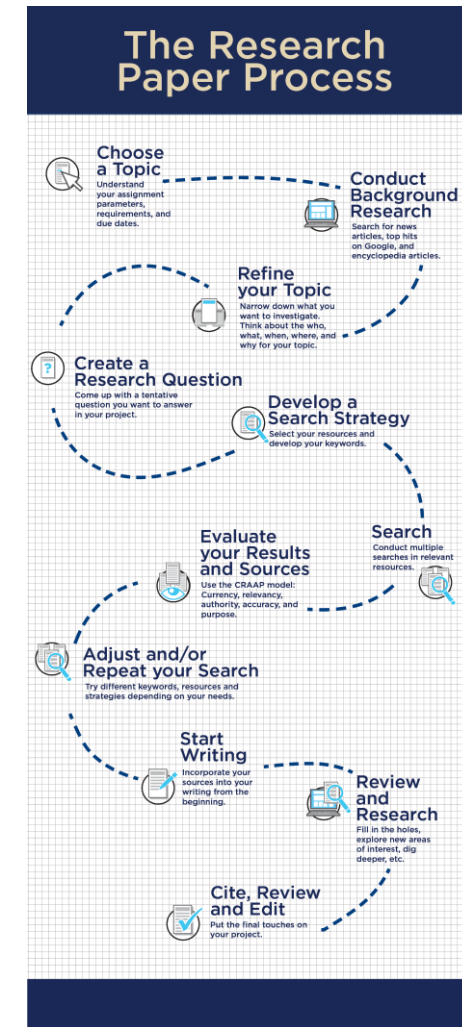
- Incorporate your sources into your writing from the beginning

## Review and Re-Search

- Fill in the holes, explore new areas of interest, dig deeper, etc.

## Cite, Review, and Edit

- Put the final touches on your project



Source: "Research Process Demystified @ Pitt: Research Process." *LibGuides*, [pitt.libguides.com/researchprocess/process](http://pitt.libguides.com/researchprocess/process).

Accessed 7th April 2022.

# Search Strategy

- A search strategy is an organized structure of key terms used to search a database. The search strategy combines the key concepts of your search question to retrieve accurate results.
- Your search strategy will account for all:
  - possible search terms
  - keywords and phrases
  - truncated and wildcard variations of search terms
  - subject headings (where applicable)
- Each database works differently so you need to adapt your search strategy for each database. You may wish to develop a number of separate search strategies if your research covers several different areas.
- It is a good idea to test your strategies and refine them after you have reviewed the search results.

Taken from: "Literature searching explained", [https://library.leeds.ac.uk/info/1404/literature\\_searching/14/literature\\_searching\\_explained/4](https://library.leeds.ac.uk/info/1404/literature_searching/14/literature_searching_explained/4). Accessed 18<sup>th</sup> April 2022

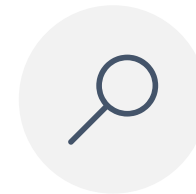
# Developing Effective Search Strategies



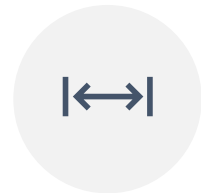
Examine your question



Identify your key concepts



Identify alternative search terms



Consider using limits



Combine your search terms



Review your results



Adjust your strategy

# Examine your Question



- Understanding all of the terms in your question/ research topic.
- Knowing what depth of information you need.
- Considering the parameters of your research, e.g., it may cover a particular period or geographical region.
- Is there enough literature on your topic?
- Is the scope of your topic realistic?

# Identify your key concepts/keywords

- Select the keywords from your topic statement

For Example:

- The use of [e-learning](#) in [higher education](#)
  - Discuss the relationship between [poverty](#) and [teenage crime](#)
- Key terminology/Keywords can be easily be found by looking into:
    - Your **research questions**
    - Articles found from **background research** (textbooks, general encyclopedias, subject-specific encyclopedias, article databases etc)
    - **Bibliographies** found at the end of books and articles

## Purpose of Background Research

- Provides a good overview of the topic if you are unfamiliar with it.
- Helps identify important facts -- terminology, dates, events, history, organizations, etc.
- Can help refine your topic.
- Leads to bibliographies which provide additional sources of information.



# Identify Synonyms or Alternative Search Terms



- Based on the keywords you identified, select **synonyms**, **related terms** and **alternate forms** of each of these keywords

- **Synonyms:** most concepts will have other words/phrases which have the same or a similar meaning as your original term.

For Example: **E-learning – online learning, virtual learning**

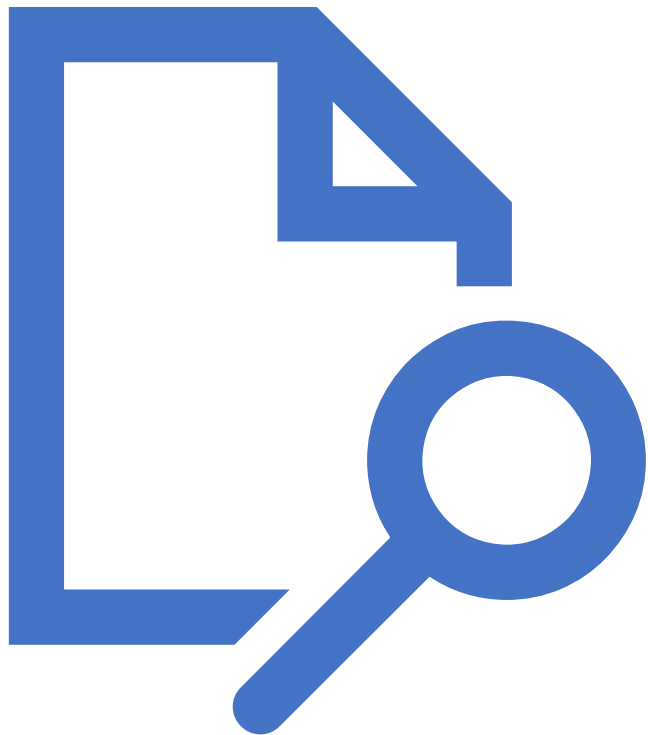
**Higher education – university, college, adult education**

- **Alternative spellings:** some terms might have different spellings, especially in American English. Wildcards allow you to do this.

For Example: **behaviour, behavior**

- **Alternative endings:** you might want to search for different forms of the same root word, for example, plurals or different tenses.

Example: **women, woman**



## Search Strategies

# Searching Techniques



# Phrase Searching

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Use quotation marks " " around phrases to search the term as a phrase. Otherwise, the database or Google may separate the words.

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For Examples:

“Human Rights” “Social Justice” “Social Media”

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# Boolean Operators

- Boolean operators (AND, OR and NOT) allow you to try different combinations of search terms or subject headings.
- Databases often show Boolean operators as buttons or drop-down menus that you can click to combine your search terms or results.
- The main Boolean operators are:

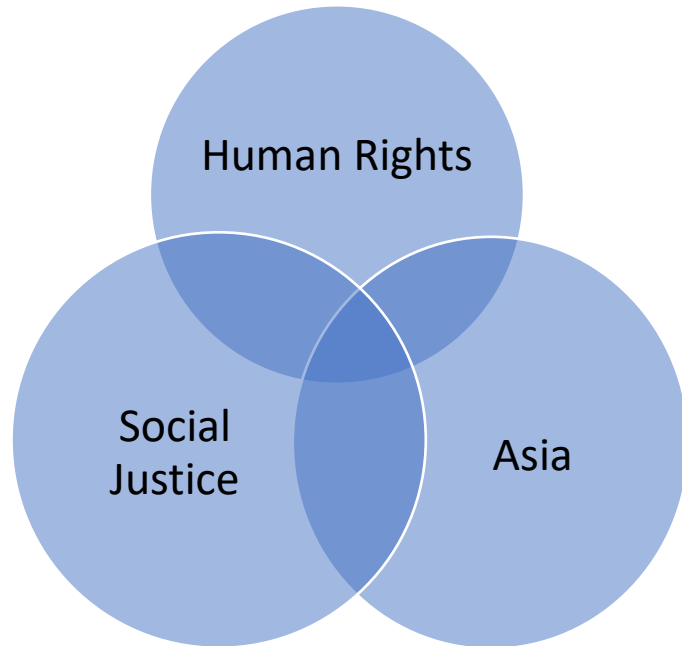
OR

AND

NOT

## AND

Results contain ALL of the search terms



Examples:

**Human Rights and Social Justice in Asia**

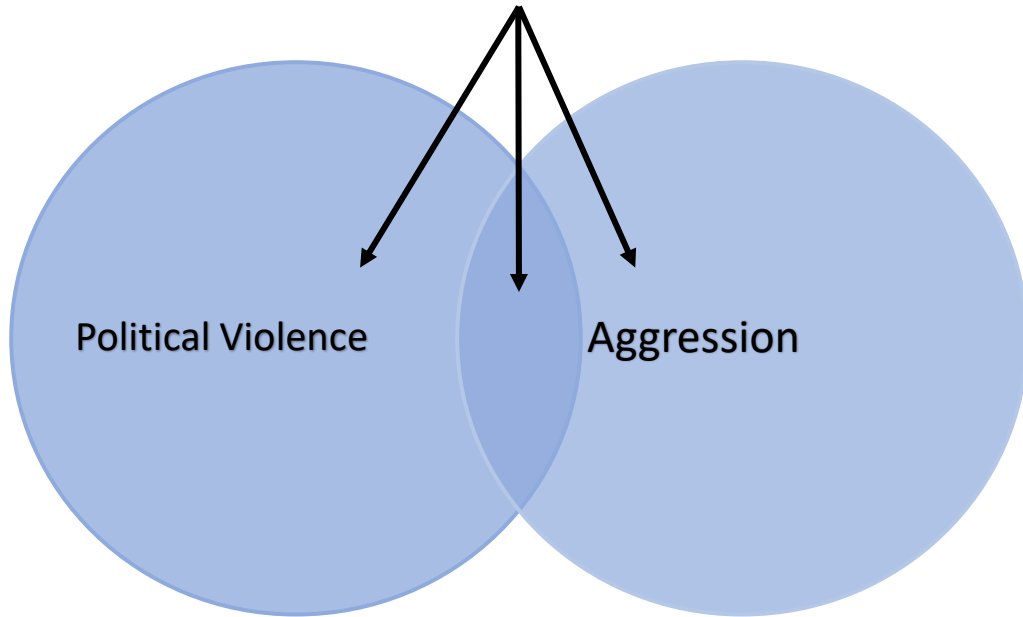
“Human Rights” AND “Social Justice”

“Human Rights” AND “Social Justice” AND Asia

- **AND** combines search terms so that each search result contains all of the terms.
- It is used to narrow (limit or restrict) searches.
- Multiple terms can be combined with the AND operator to further restrict search results.

## OR

Results contain ANY of the search terms,  
but not necessarily all of them



The Boolean operator **OR** is used to broaden (expand) searches.

- You would use **OR** to combine terms with the same meaning (synonyms)
- Use parentheses () around the ORs if other Boolean operators are used.

For Examples: **Political Violence in Asia**

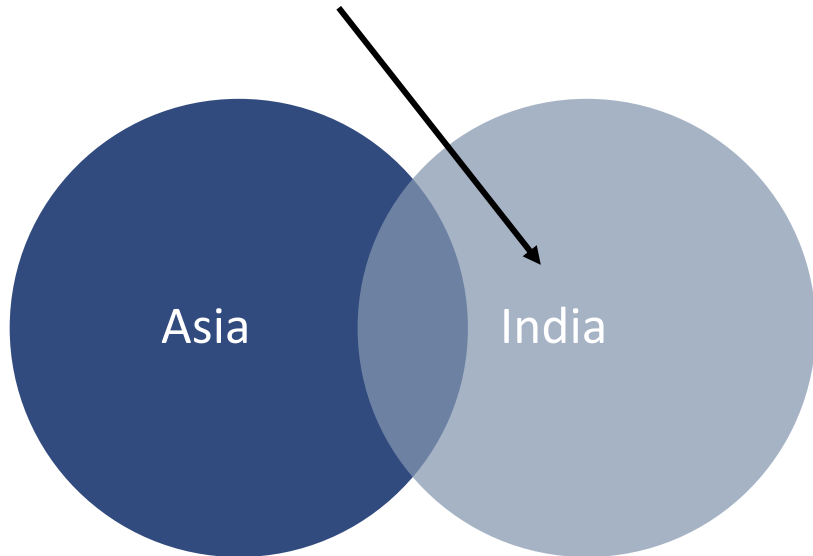
("Political Violence" OR Aggression) AND Asia

Examples: **Political Violence in Asia**

("Political Violence" OR Aggression) AND  
Asia

# NOT

Exclude results containing the second search term



- Use **NOT** to exclude words from your search.
- Narrow your search, telling the database to ignore concepts that may be implied by your search terms

Example:

("Political Violence" **OR** Aggression)  
**AND** Asia **NOT** India

# Truncation/Wildcards



*Can be used for:*

Root words that have multiple endings. Example: sun = suns, sunshine, sunny, sunlight

Words that are spelled differently, but mean the same thing. Example: color, colour

**Note:** The truncation symbol varies by database. Consult the database's "help" or "search tips" pages for details.

**Truncation or wildcard symbols** allow looking for variations of words.

They often broaden your search results.

For example, searching on sport\* would bring up variations such as sport, sports, sporting, sporty, etc.

**Wildcards Examples:**

Wom!n = Woman, Women

Colo?r= Color, Colour



# Searching with Subject Headings

- **Database subject headings are controlled vocabulary terms that a database uses to describe what an article is about.**
- **Using appropriate subject headings enhances your search and will help you to find more results on your topic.** This is because subject headings find articles according to their subject, even if the article does not use your chosen keywords.
- **You should combine both subject headings and keywords in your search strategy for each of the concepts you identify.** This is particularly important if you are undertaking a systematic review or an in-depth piece of work
- **Subject headings may vary between databases, so you need to investigate each database separately to find the subject headings they use.**

# Citation Searching

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- **Citation searching is a method to find articles that have been cited by other publications.**
- **Use citation searching (or cited reference searching) to:**
  - **find out whether articles have been cited by other authors**
  - **find more recent papers on the same or similar subject**
  - **discover how a known idea or innovation has been confirmed, applied, improved, extended, or corrected**
  - **help make your literature review more comprehensive.**
- **You can use cited reference searching in:**
  - **Google Scholar**
  - **Web of Science**
  - **Scopus**
- **Cited reference searching can complement your literature search. However, be careful not to just look at papers that have been cited in isolation. A robust literature search is also needed to limit publication bias.**



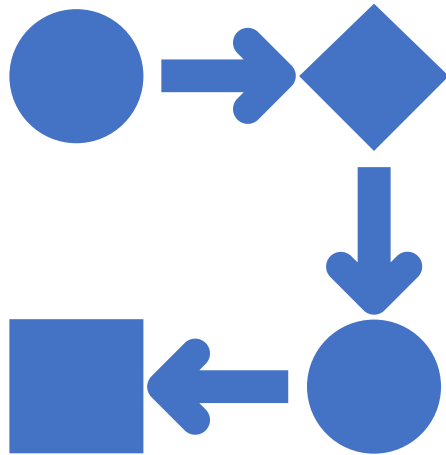
# Use Search limits



- **Each database offers a different range of limits. Many databases allow you to limit your searches by publication year, language and publication type. Some may even allow you to restrict your search to specific types of query.**
- **Limits should be applied at the end of your search after you have retrieved all the results relevant to your topic. Apply limits one at a time so you can see what effect they have on your results.**
- **Using too many limits may make your search too narrow. In this case, you could use search filters instead.**

# Review your results

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- **It's important to remember that searching is an iterative process; you will often not immediately get the results you want.**
- **If you're satisfied with the list of results returned from your original search, you may stop.**
- **If you get too many or too few results, you will need to adjust your search strategy.**

# Adjust Your Strategy

## Too few results

Think	Think of some additional alternative terms for your key concepts
Remove	If you have multiple concepts, remove the least important one
Remove	If you have used limits, remove some of them
Use	Use <b>truncation</b> or <b>wildcards</b> to pick up alternative word endings

# Adjust Your Strategy

Too many results

Use	Use narrower, more precise search terms
Remove	Remove some of your alternative search terms
Add	Add another concept to focus the area of your research
Use	Use more limits



# Evaluate Your Sources

- **Author:**
- Who is the author?
- Why should I believe what he or she has to say on the topic?
- Is the author seen as an expert on the topic? How do you know?

## **Current:**

- How current is the information in the source?
- When was the source published?
- Is the information out of date?

## **Accuracy:**

- Is the content accurate?
- Is the information presented objectively? Do they share the pros and cons?

## **Purpose:**

- Why was the information published and who is the intended audience?
- Is the creator trying to sell, inform, entertain, persuade?
- Is it fact or opinion?
- Is it biased or balanced?

# Search Basics

Keys to conducting a good search include:

- **Do some background research on your research topic**
- **Conduct multiple types of searches.**
- **Try searching a broad topic and then narrow down the search field**
- **Search multiple locations and look for a variety of sources.**
- **Combine words and phrases using the search strategies**
- **Copy or save citations as you search for easier resource retrieval later.**



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Thank You

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