

Research Methodology: Searching the Literature

Yesoda Bhargava

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Why learn how to search literature?

- Google query results may provide limited results and pertaining to vast fields.
- We are looking for narrow research area pertaining to our domain.
- Relevant works in our area of interest.
- Identify your broad area of interest.
- Identify 5-6 portals for research literature.

Key Computer Science Resources

- IEEE/IET Electronic Library (IEEE Xplore)
- Lecture Notes in Computer Science (SpringerLink)
- ACM Digital Library
- Science Citation Index (Web of Science)
- Scopus
- SAGE Research Methods Online
- Science Direct
- Web of Science

Key Health Sciences Resources

- CINAHL
- MEDLINE
- COCHRANE LIBRARY
- EMBASE
- PsychINFO
- PubMed
- Web of Science

IEEE Xplore Example

- Go to home page of [IEEE Xplore](#).
- Click on Advanced Search.
- Suppose I want to study about Data modelling for Cancer Disease.
- I use 3 search terms: Cancer, Data, Modelling.
- Since, I want papers to contain information on all three, I use AND operator.
- Cancer AND Data AND Modelling.
- IEEE Search query: **((("All Metadata":Cancer) AND "All Metadata":Data) AND "All Metadata":Modelling)**
- You may use multiple search terms and different operators.
- OR Operator: When you want to search papers related to one topic but referred to by different terms.
- For example: Food, nutrition, diet, consumption behaviour, dietary habits.
- When using compound search terms enclose in curved brackets.

Advanced Search ?

Advanced Search

Command Search

Citation Search

Enter keywords and select fields.

Search Term

in

All Metadata



AND

Search Term

in

All Metadata



AND

Search Term

in

All Metadata



Publication Year

☐ Documents Added Between: 12/02/2020 and 12/09/2020

☐ Specify Year Range

1872

2021



From

To

1872

2021

Reset All

Search

Figure 1: Snapshot of IEEE Advanced Search

Search Term in [?](#)

AND in

AND in

Publication Year

☐ Documents Added Between: 12/02/2020 and 12/09/2020

☐ Specify Year Range

1872

From To

Figure 2: Snapshot of IEEE Advanced Search.

Advanced Search

Command Search

Citation Search

Enter keywords and select fields.

Search Term

"dietary pattern"

in

All Metadata

?

OR

Search Term

"food habits"

in

All Metadata

↑

×

OR

Search Term

nutrition

in

All Metadata

↑

×

+

Publication Year

☐ Documents Added Between: 12/02/2020 and 12/09/2020
 ☐ Specify Year Range

1872

2021

From

1872

To

2021

Reset All

Search

Figure 3: Snapshot of IEEE Advanced Search.

Showing 1-25 of 1,275 for **(((("All Metadata": "dietary pattern") OR "All Metadata": "food habits") OR "All Metadata": "nutrition")** ×

☐ Conferences (1,098)
 ☐ Journals (140)
 ☐ Magazines (27)
 ☐ Books (5)
 ☐ Early Access Articles (5)

Show

☒ All Results
☐ Open Access Only

Year ^

Single Year Range

1972 2020




From To

1972 2020

Author v

☐ Select All on Page

Sort By: **Relevance** v

☐ **mHealth for Mother and Child Health Nutrition - A Review and Proposed Design for Indonesia Focus on Early Life Nutrition in Indonesia** 
 Lily Indriani Octovia; Nurul Ratna Mutu Manikam; Fiastuti Witjaksono; Krisadelfa Sutanto; Aliya P. Koesoema; Soegijardjo Soegijoko; Yoke S. Irawan
 2017 5th International Conference on Instrumentation, Communications, Information Technology, and Biomedical Engineering (ICICI-BME)
 Year: 2017 | Conference Paper | Publisher: IEEE
 ▶ Abstract (html)  (265 Kb) 



☐ **Application of baby's nutrition status using Macromedia Flash** 
 Ima Kurniastuti
 2017 4th International Conference on Computer Applications and Information Processing Technology (CAIPT)
 Year: 2017 | Conference Paper | Publisher: IEEE
 Cited by: Papers (1)
 ▶ Abstract (html)  (394 Kb) 

Figure 4: Snapshot of IEEE Advanced Search.

Web of Science Example

Select a database All Databases ▼

Basic Search Cited Reference Search Advanced Search

<input type="text" value="cancer"/>	✕	Topic ▼
And ▼	<input type="text" value="data"/>	✕ Topic ▼
And ▼	<input type="text" value="modelling"/>	✕ Topic ▼

+ Add row | Reset Search

Timespan
All years (1900 - 2020) ▼


Figure 5: Snapshot of Web of Science Advanced Search.


PubMed Example

PubMed Advanced Search Builder


PubMed.gov
[User Guide](#)

Add terms to the query box

All Fields  Enter a search term

AND 
[Show Index](#)

Query box

((cancer) AND (data)) AND (modelling) 


Search 

Figure 6: Snapshot of PubMed Advanced Search.

Important points

- OR operator is usually used in Scoping/Systematic Review Search.
- To search for systematic reviews search on [COCHRANE REVIEWS](#)

Recommendations to improve Searching Skills

- Attempt a scoping review in your Masters if possible, as a feasible topic for dissertation.
- Use key resources in your fields to search for literature and then use Google in the end of all searches.
- Use a Reference Manager (BibTex, Mendeley, Zootero, EndNote) to systematically store all research papers you read.

Upcoming Lectures

- Types of Research Designs: Descriptive Research.
- Experimental, Quasi-Experimental, and Ex Post Facto Designs
- Qualitative Research Methods.
- Mixed-Method Designs.
- Action Research and Participatory Designs
- Analysing Quantitative Data
- Analysing Quantitative and Mixed-Methods Data