Searching For SCHOLARLY INFORMATION: Where & How

LIBRARY SESSION FOR ENCS 282

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AGENDA

1. Where to search?
2. What are scholarly sources?
3. What are the major library search tools?
4. How to organize citations and references efficiently?

WHAT SEARCH TOOL DO YOU USE TO FIND ACADEMIC INFORMATION?

WHAT IS THE DIFFERENCE?

GOOGLE SCHOLAR

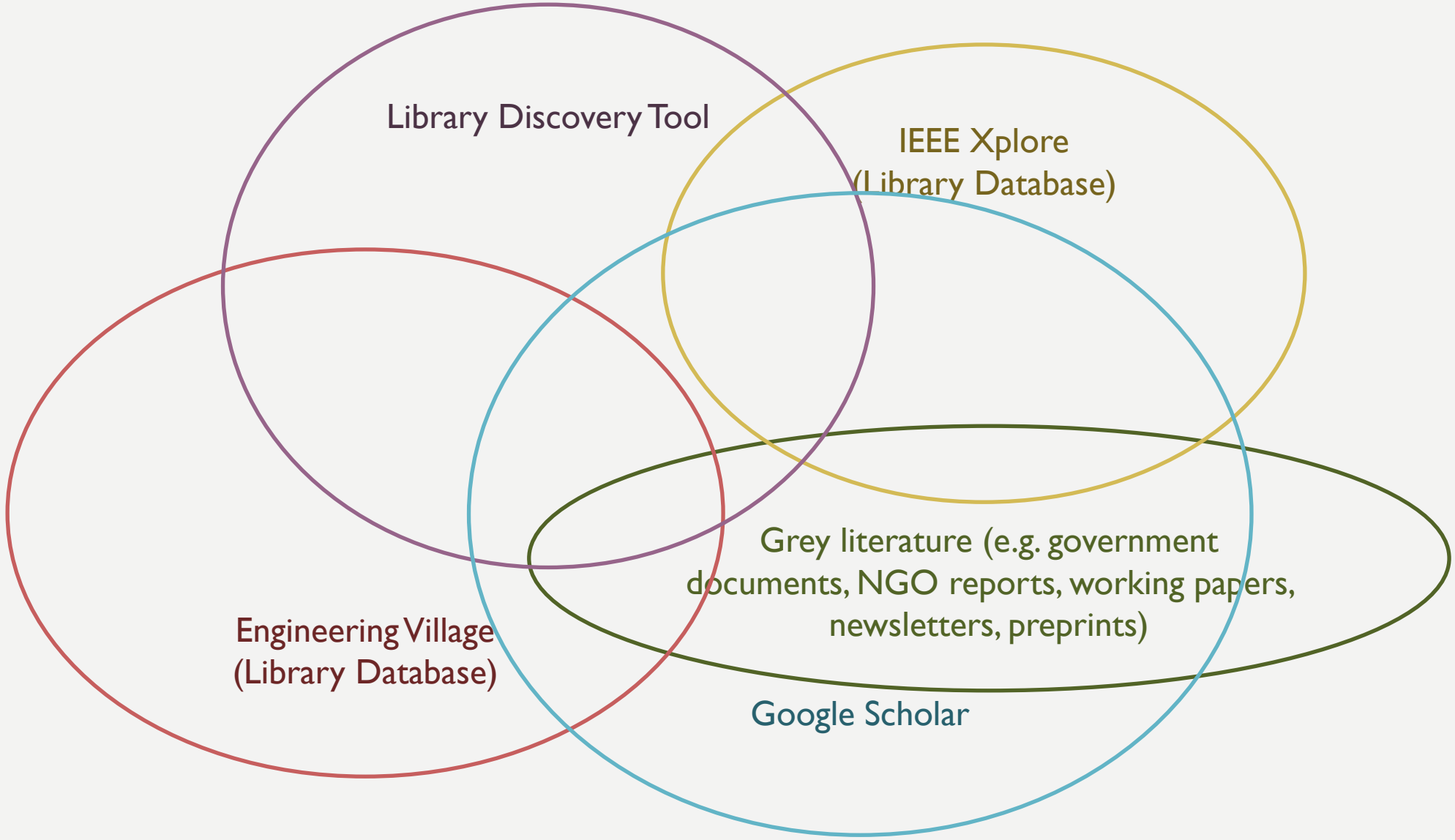
Volume | Quantity | Quick

LIBRARY DATABASES

Depth | Quality | Thorough

Left image: Yinan Chen, Dining Court, public domain, https://pixabay.com/photos/dining-court-shopping-mall-corridor-347314/
Right image: Jason Briscoe, Cooking, public domain, https://unsplash.com/photos/VBsG1VOgLIU

WHERE SHOULD YOU SEARCH?



EVALUATE INFORMATION

EQUALLY IMPORTANT IN ACADEMIA AND PROFESSIONAL PRACTICE

EVALUATING INTERNET INFORMATION

WHAT DO FACT CHECKERS DO?

- Spend more time scanning the snippets on the results page before clicking
- Know what you read before you read it
- More lateral reading than vertical reading

Caulfield, M. (2019, June 19). SIFT (The Four Moves). *Hapgood*. https://hapgood.us/2019/06/19/sift-the-four-moves/

Wineburg, S., & McGrew, S. (2019). Lateral Reading and the Nature of Expertise: Reading Less and Learning More When Evaluating Digital Information. *Teachers College Record*, *121*(11), 1–40. https://doi.org/10.1177/016146811912101102

EVALUATING INTERNET INFORMATION

CONSIDERATIONS

- Who is behind the information?
- What is the evidence?
- What do other sources say?

STRATEGIES

- Click restraint
- Lateral reading
- Check emotions
- Expertise and Consensus

Caulfield, M. (2019, June 19). SIFT (The Four Moves). *Hapgood*. https://hapgood.us/2019/06/19/sift-the-four-moves/

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MAJOR TYPES OF INFORMATION SOURCES

WHAT IS CONSIDERED SCHOLARLY?

WHAT SOURCE TYPE IS IT?

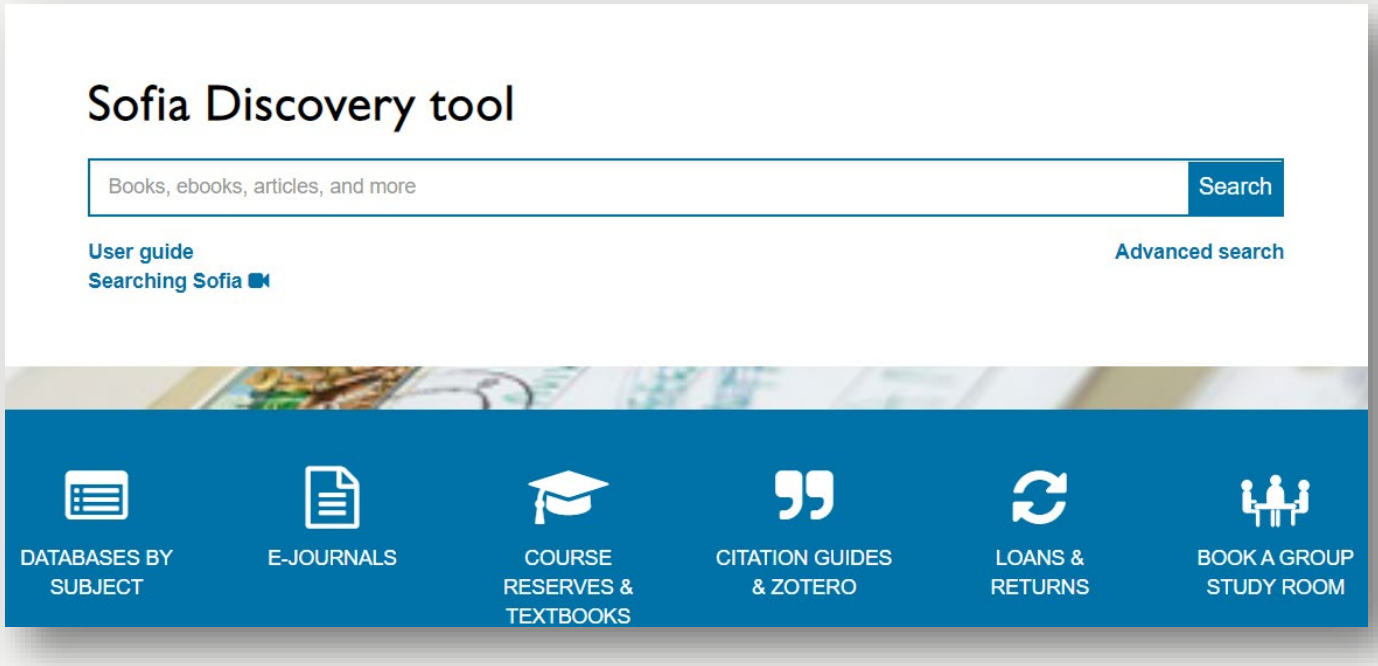
AN ACTIVITY ON MENTIMETER

CITE A WIDE RANGE OF SOURCES FOR THEIR DIFFERENCES IN PURPOSE, SCOPE, AND PERSPECTIVES

MAKE USE OF SCHOLARLY SOURCES GENEROUSLY

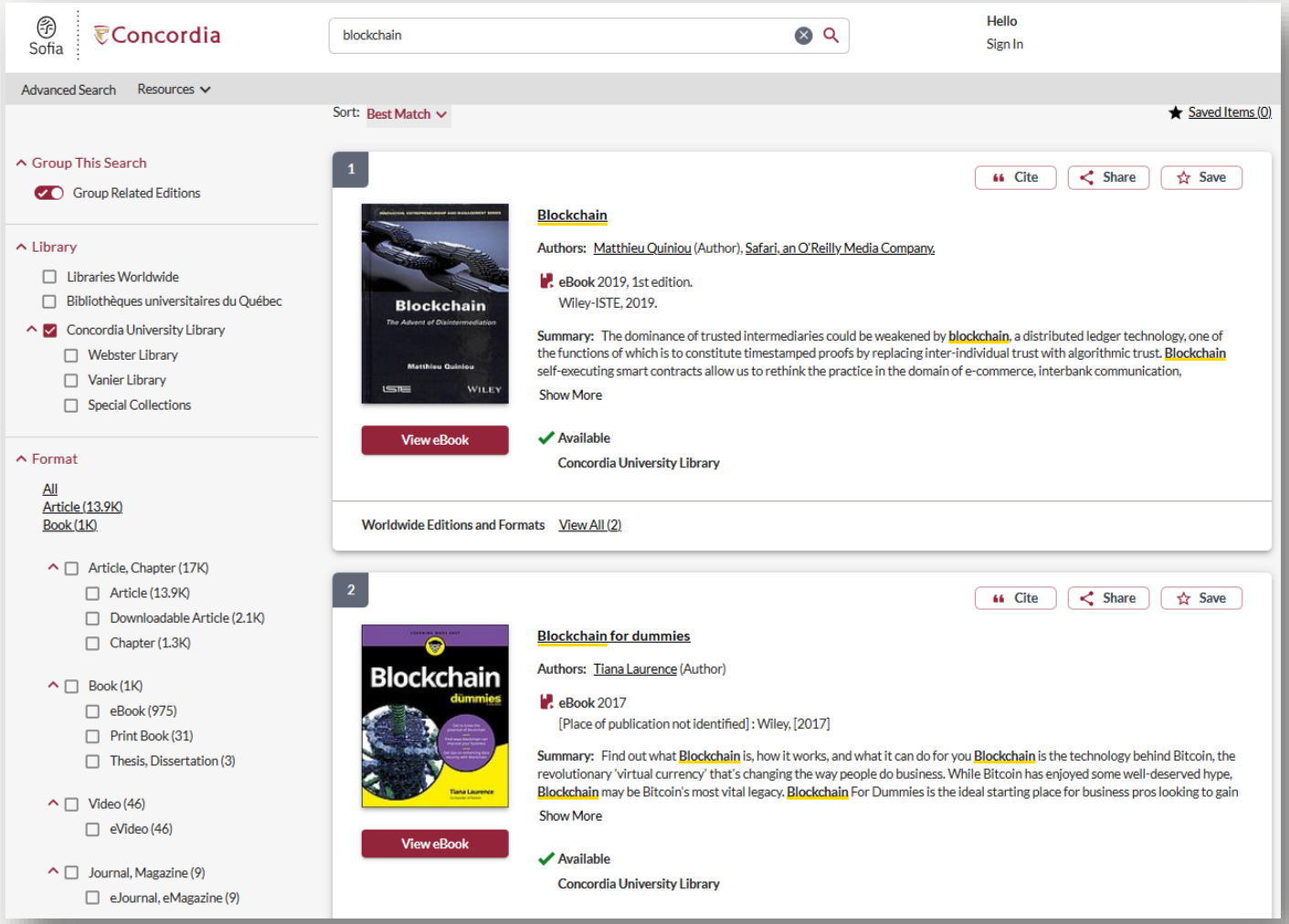
LIBRARY DISCOVERY TOOL

THE MAIN LIBRARY SEARCH TOOL



LIBRARY DISCOVERY TOOL

- Front and centre on the library homepage
- A good starting point for a general search across library resources
- Answer questions such as:
  - Does the library have this book?
  - Does the library have this journal article?
  - Does the library have some background/overview information on a topic?



LIBRARY DISCOVERY TOOL

- A search for a broad keyword such as *blockchain*
- Refine options include:
  - Format types (e.g. ebooks)
  - Publication years
- Shows results with Concordia full text access by default
  - Easily expand to other university libraries in Québec or Worldwide
  - Easily make requests for items from other university libraries

LIBRARY DATABASES

OVER 400 OF THEM ORGANIZED BY DISCIPLINE

Engineering Village™

IEEE Xplore® Digital Library

Clarivate Web of Science™

SciFinder^n® A CAS SOLUTION

Scopus®

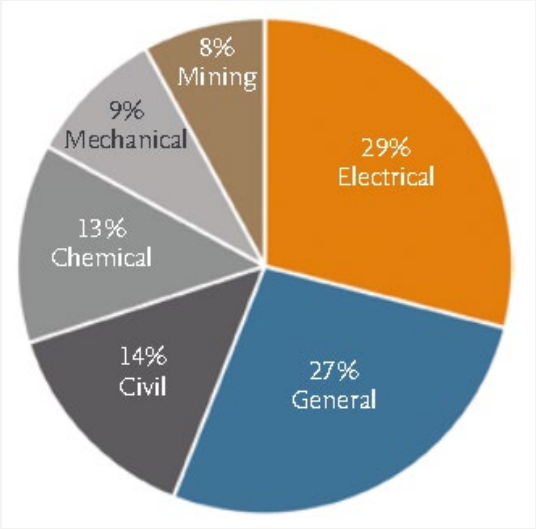
Knovel®

LIBRARY DATABASES

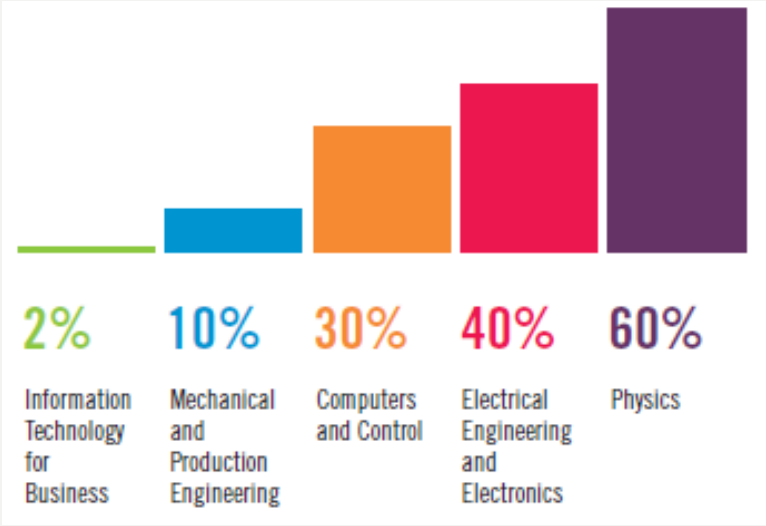
- Content is usually more in-depth and specialized
- More options to search, expand, or refine
- Answer questions such as:
  - Where can I find journal articles on a specific aspect of a topic
  - How can I combine different elements/keywords in a search?

ENGINEERING VILLAGE

A CLOSER LOOK AT AN ENGINEERING DATABASE

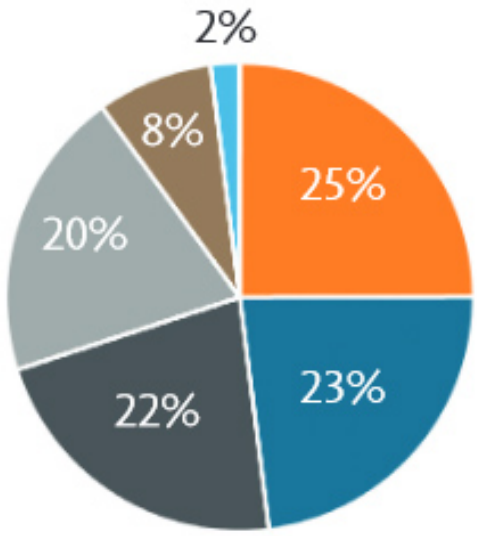


Compendex



Inspec

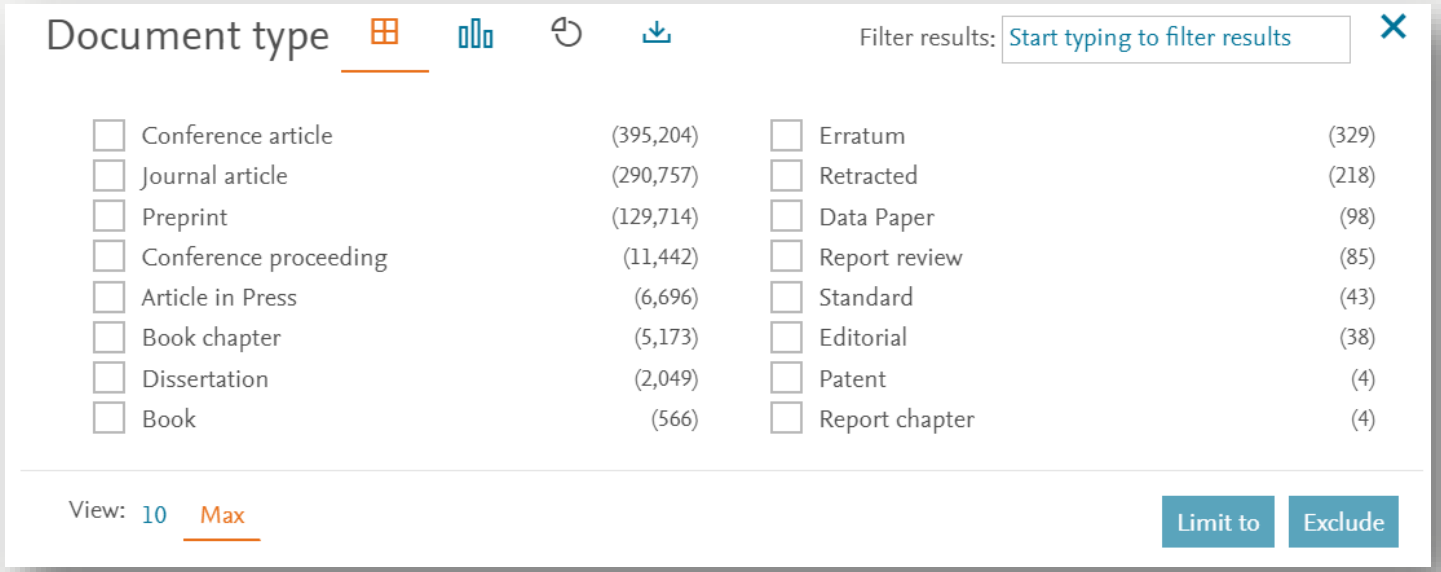
- Human Geography – 25%
- Environmental Sciences – 23%
- Physical Geography – 22%
- Geology – 20%
- Oceanography – 8%
- Geomechanics – 2%



GEOBASE

WHAT CONTENT IS INCLUDED?

With a coverage of 1884 to the present, the three indexes **Compendex**, **Inspec**, and **GEOBASE** provide content in general engineering as well as more specialized engineering disciplines.



IS THE CONTENT PEER-REVIEWED?

- Journal articles are peer-reviewed
- Some conference articles/proceedings are peer-reviewed
- Recently, preprints have been included in the results in Compendex
- Preprints are NOT peer-reviewed, but are helpful in exploring the latest papers

SEARCHING EFFECTIVELY

IN ACADEMIC DATABASES

SEARCHING EFFECTIVELY

- Break down a topic into key concepts
- Brainstorm synonyms
- Explore, revise, and refine
- Trace references

- Avoid long phrases or sentences
- Avoid noise words
- Don’t give up after the first try
- Too broad or too specific?

Research Question

How does electronic waste recycling affect citizens living in Guiyu, China?

Key Concepts	Synonyms
Electronic waste	E-waste
Recycling	Reuse, management
Guiyu	Guiyu, Guangdong, China

FROM A TOPIC TO KEY CONCEPTS

Think through your topic before searching.

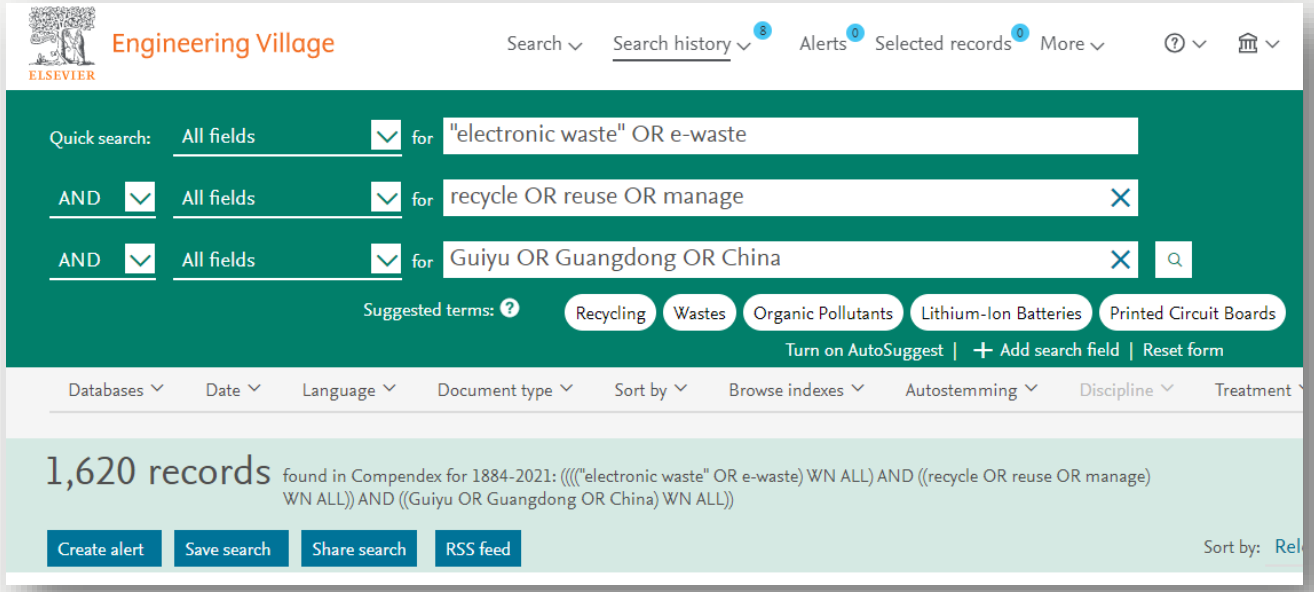
Breaking down a topic helps develop effective keywords.

Key Concepts

Electronic waste
Recycling
Guiyu

Synonyms

E-waste
Reuse, management
Guiyu, Guangdong, China



COMBINE THE KEY CONCEPTS

Search can be built up from a simple one to a complex one, allowing the combination of many keywords or concepts.

Sample Topic:

How does electronic waste recycling affect citizens living in Guiyu, China?

A QUICK DEMO OF ENGINEERING VILLAGE

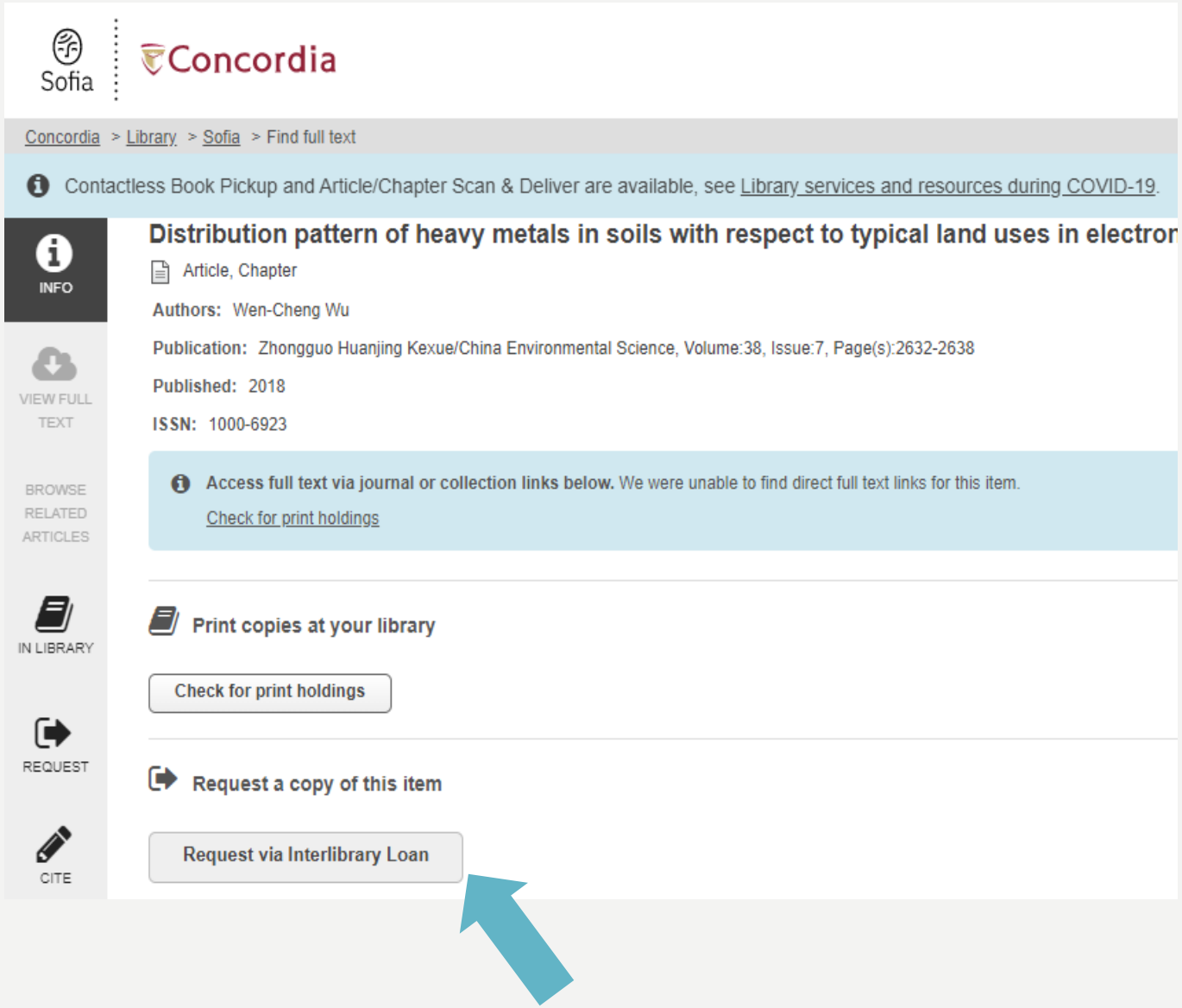
"Full text" button, if one exists

"Find it @ Concordia" button to check the library's other subscriptions. If not available, request it via **Interlibrary Loan**.

HOW TO ACCESS FULL TEXT?

Full text may be readily available. If not, the "Find it @ Concordia" button can help check for full text availability in the library.

INTERLIBRARY LOAN

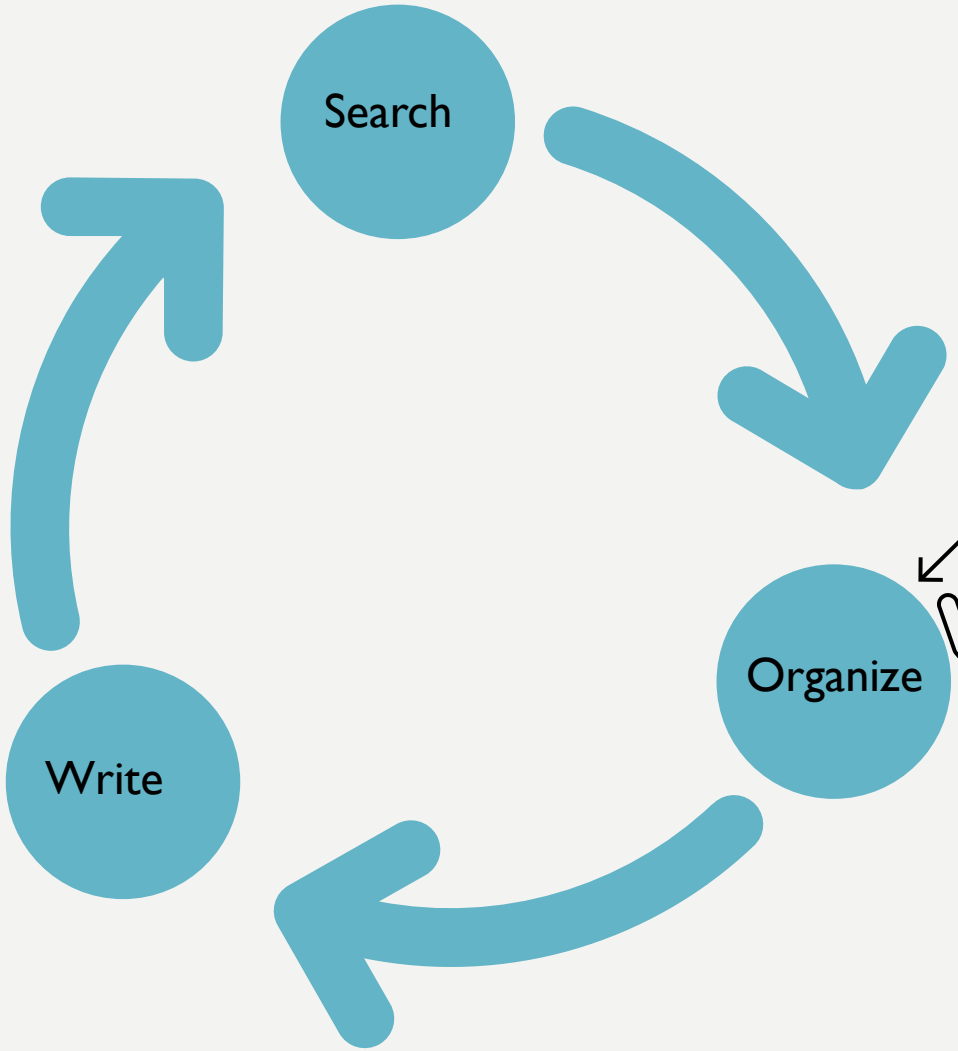


- If Concordia Library doesn't have it, use Interlibrary Loan
- Takes a few days or longer to process depending on the item

DOCUMENTING SOURCES

CITING IT PROPERLY AND EFFICIENTLY

ORGANIZING IS PART OF THE PROCESS



- Saving records/links
- Arranging sources into folders/tags
- Taking notes
- Documenting steps
- Sharing in a group /updating teammates
- Citing and referencing

…

Sample text

As demonstrated in [1], lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed sed porta arcu, ac efficitur arcu. For example, see [2]. Suspendisse dui turpis, condimentum vitae porttitor in, elementum eu mauris. Pellentesque enim nisl, volutpat sed efficitur id, blandit at quam. Nulla dui augue, varius sit amet leo mollis, sollicitudin vehicula justo. However, [3]–[5] contested that proin est sem, sagittis eget leo vel, gravida porttitor quam. Phasellus sed mauris eleifend, pharetra lacus in, eleifend nulla.

References

[1] R. Nagayama, R. Banno, and K. Shudo, "Identifying impacts of protocol and internet development on the bitcoin network," in *2020 IEEE Symposium on Computers and Communications, ISCC 2020, July 7, 2020 - July 10, 2020*, Rennes, France, 2020, vol. 2020-July, doi: 10.1109/ISCC50000.2020.9219639.

[2] L. M. Lach *et al.*, "The health and psychosocial functioning of caregivers of children with neurodevelopmental disorders," *Disability and Rehabilitation: An International, Multidisciplinary Journal*, vol. 31, no. 9, pp. 741–752, 2009, doi: 10.1080/08916930802354948.

[3] E. Zaghloul, T.T. Tong, M. W. Mutka, and J. Ren, "Bitcoin and blockchain: Security and privacy," *IEEE Internet Things J.*, vol. 7, no. 10, pp. 10288–313, Oct. 2020, doi: 10.1109/JIOT.2020.3004273.

[4] T.H. Chang and D. Svetinovic, "Improving bitcoin ownership identification using transaction patterns analysis," *IEEE Trans. Syst. Man Cybern., Syst.*, vol. 50, no. 1, pp. 9–20, Jan. 2020, doi: 10.1109/TSMC.2018.2867497.

[5] P. A. Laplante, *Technical Writing: A Practical Guide for Engineers, Scientists, and Nontechnical Professionals*, 2nd ed. New York: CRC Press, 2018 [Online]. Available: https://doi-org.lib-ezproxy.concordia.ca/10.1201/9780429467394

IEEE CITATION STYLE

- Based on a numbering system
- In-text citations are numbers in square brackets
- Full citations are listed on the reference list at the end
- There are official abbreviations to be followed (e.g. journal title)

WHAT REFERENCE MANAGER DO YOU USE?

CHOOSING THE RIGHT CITATION TOOL

Online citation generator
✓ Quick and on the fly ✓ For a small number of references ✓ No account is required
× No storage × No saving while browsing × No integration with word processors × Not many citation styles to choose

EasyBib

Cite This For Me

zoterobib

Built-in features in search platforms

(e.g. Sofia, Google Scholar)

CHOOSING THE RIGHT CITATION TOOL

Reference manager
✓ Web-based and also a downloaded software ✓ For small and big research projects ✓ A storage to save and organize all references ✓ A browser extension for saving while browsing ✓ PDF annotating and notetaking ✓ Integration with word processors (e.g. MS Word, Google Doc) ✓ Collaboration in group projects
! Basic set-up is required ! An account (freemium model) is required

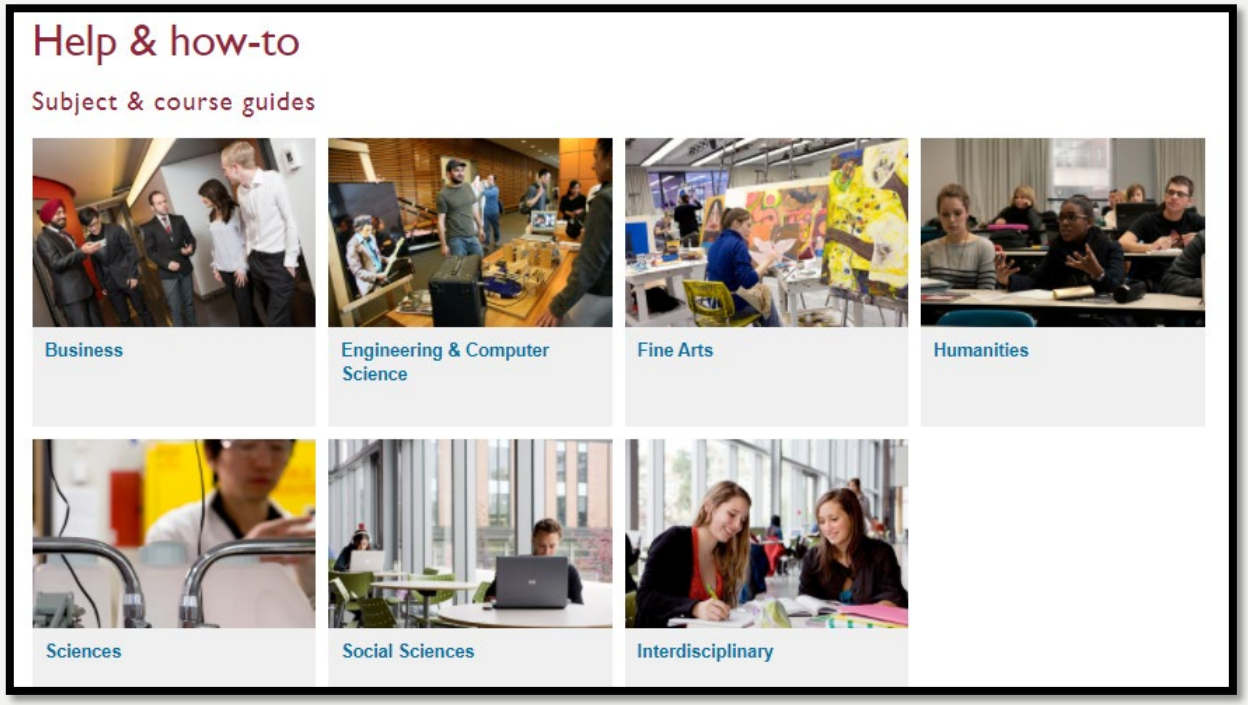
zotero

MENDELEY

EndNote™

QUICK INTRODUCTION TO ZOTERO

1. Set-up and download
2. Save references/sources from the web browser
3. Generate in-text citations and prepare the reference list automatically via a Word plugin



HELP & HOW-TO GUIDES

Subject guides are available for all schools, including one for Engineering and Computer Science.

General guides cover various topics from peer review articles to annotated bibliography.

ASK A LIBRARIAN

Contact the library in-person, by email, chat, or phone.

Contact your subject librarian (that's me!)

Chloe Lei

Teaching & Research Librarian, Engineering & Computer Science

chloe.lei@concordia.ca

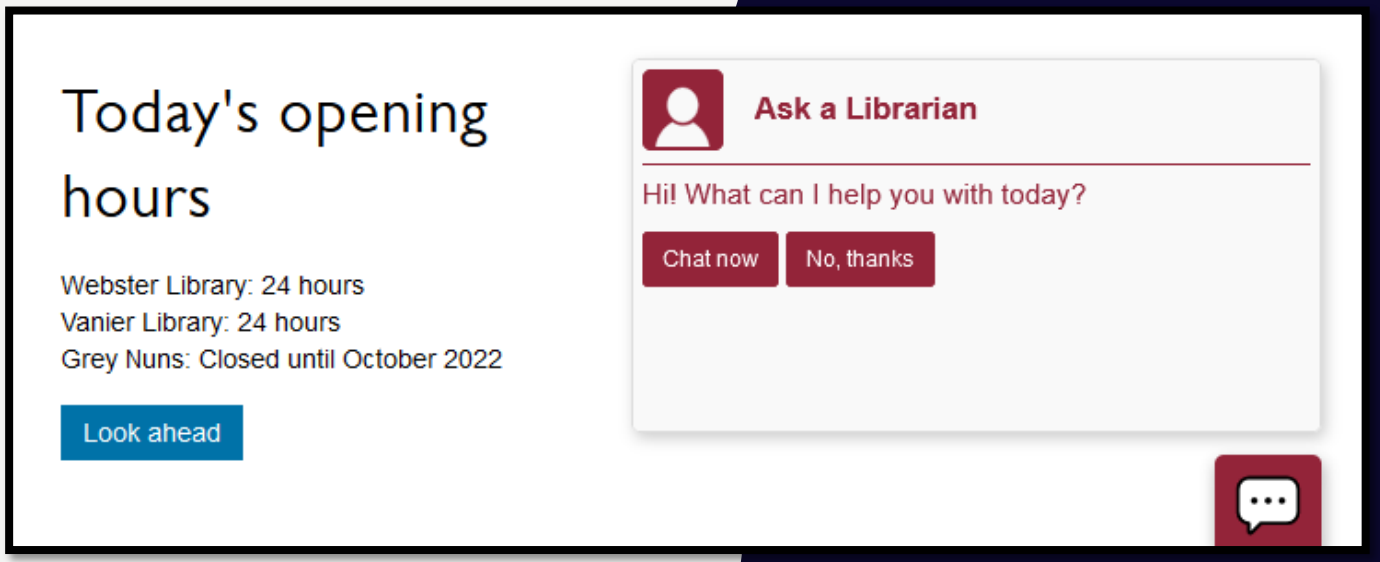
514-848-2424 ext. 7909

Feel free to contact me for an appointment in-person or online.

SCHEDULE AN APPOINTMENT

I can help you with library resources and services, including but are not limited to:

- Locate specific items (e.g. books, articles)
- Navigate resources related to engineering and computer science
- Literature searching
- Citations and references
- Recommend new resources



QUESTIONS?