How to Conduct an Effective Literature Search and Manage the Results

BAE 815 Zifei Liu

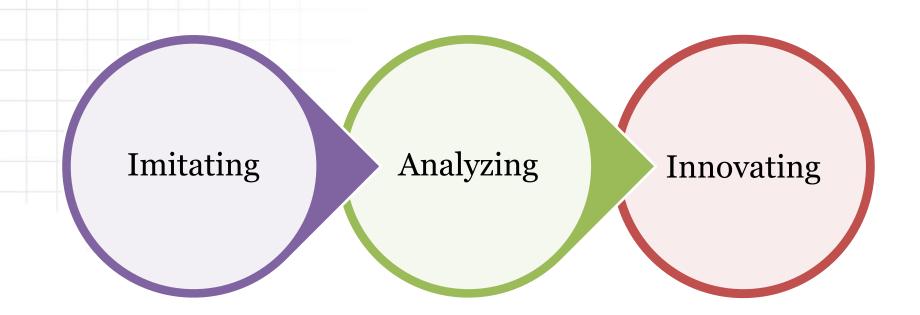


"The greatest part of a writer's time is spent in reading, in order to write: a man will turn over half a library to make one book."

- Samuel Johnson



Research Lifecycle





Purpose of Literature Search

- ✓ Understand your topic
- ✓ Nurture good taste in research
- ✓ Develop critical thinking



Understand your topic

- Identify variations in definitions used by researchers and define your terminology.
- Identify appropriate research methodologies and validated instruments.

Nurture good taste in research

- Read selectively
 - Only abstraction <20%</p>
 - Introduction & conclusions ~50%
 - Methods, results and details >80%

Develop critical thinking

- Identify general patterns in research.
- Identify main gaps in knowledge
- Identify principal areas of dispute and uncertainty.
- Juxtapose studies with conflicting findings and explore explanations for discrepancies.



Sources of Search



Types of Literature

- Primary literature
 - Present new data and contains personal views of experimenters about the data
 - Peer reviewed
- Secondary literature
 - Derived from primary literature (reviews, textbooks)
 - Not peer reviewed, less reliable
- Tertiary literature
 - Index or textual condensation of primary and secondary sources (dictionaries, encyclopedias, Wikipedia...)

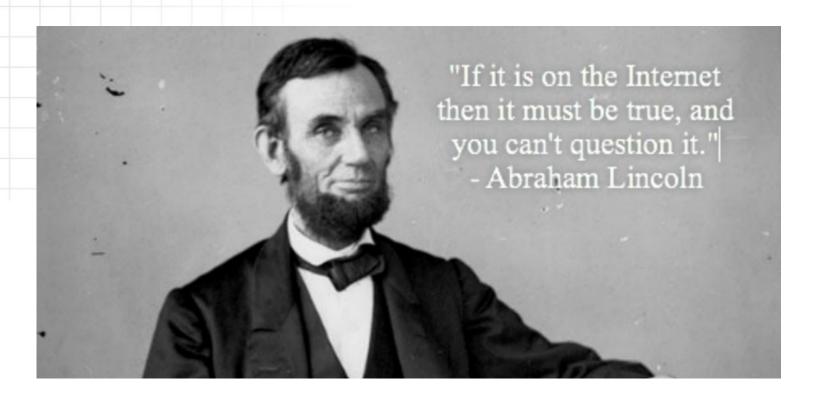


Sources of Search

- Library catalogues: Books
- Research databases: Journal articles
- Internet, Google Scholar...

Going Beyond Google

Convenient but has limitations



Research Databases

- Academic, reliable, and up to date.
- Each database has some unique searching features.
- The cost of databases are paid by the library, and you are allowed to access them without charges.

Searching strategies



Generating key words (search terms)

Creating a well-focused question



Breaking down your questions into concepts



Example

"The effects of television violence on children"

- Television/ TV /adverts / DVD etc
- Violence/aggression
- Children/teenagers/youth
- Parental control? Peer pressure?
- Crime? Psychological?



Run Your Search by Concepts

- Identify subject headings for each concept
- Think of alternative keywords or terms for each concept, and search each concept separately
- Combine terms for the same concept with "OR"
- Combining concepts using "AND"
- Put any "NOT" terms at the end.



Running your search(es)

Concept 1

Search #1 =

Search #2 =

Search #3 =

Search #4 =

Concept 2

Search #6 =

Search #7 =

Search #8 =

Search #9 =

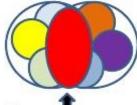
Search #5 = #1 OR #2 OR #3 OR #4



Search #10 = #6 OR #7 OR #8 OR #9



Search #11 = #5 AND #10



Results





Controlled Vocabulary

A controlled vocabulary is a set of established terms

- every term represents a single concept
- only one term is used for that concept

Example: Many words can be used to represent the concept "people who teach."

teachers
faculty
instructors
professors
tutors
educators
lecturers, etc

In a controlled vocabulary one of these will be chosen to represent the concept MeSH = Faculty
Faculty, Dental
Faculty, Medical
Faculty, Nursing, etc.



Controlled vocabulary searching

- Find out what the controlled vocabulary term is for each concept.
- Can make your search more precise and easier.

Free-text (keyword) searching

 Have to think of every possible synonym or alternate spelling of your search terms and include all of them in your search.



Limitations with controlled vocabularies searching

- New concepts take time to be added
- There is often a lag phase during which the newest articles aren't indexed
- NOT all databases use a controlled vocabulary



Test your searching strategy

- Checking to see if your "target articles" appear in the results.
- Judge not by what you have retrieved but by what you may have missed!

Citation Searching

- Find a key reference
 - Trace backward: follow its reference list
 - Trace forward: follow all references that cite it
 - Look at subject indexing for the key reference and use to modify your search terms
- A feature of Web of Science: citation map



Hand searching

 Identify key journals in your field and browse them cover to cover

 Identify important authors and leading research group in your field and follow their work



Keeping Up to Date

- It is an iterative process.
 - You must do it from time to time throughout your course of research.
 - Documenting your search.



Working with Your Results



Get Organized Early On!

- Combine search results from each database
- Remove duplicates
- Remove inappropriate studies
- Rank important studies

Manage Your References

- Specialist software (all owned by Thomson Scientific who also own Web of Knowledge)
 - EndNote
 - ProCite
 - Reference manager
- Web-based services
 - EndNote Web
 - RefWorks
 - Zotero



What can they do?

- Manage references
 - Store, organize and share. May store links to documents or pdf files within database.
 - Search external databases from within the reference management software, and save references retrieved.
- Format references
 - Get reference list generated automatically.
 - Allow you to change the reference style in few clicks.

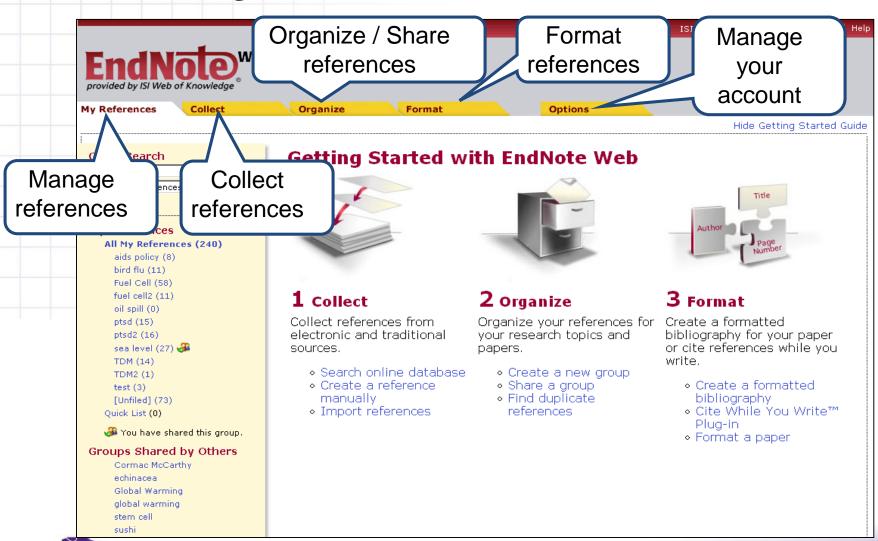


Choose Your Tools

- EndNote
 - Must be purchased and installed on your machine
 - Doesn't require a web connection to access your downloaded records
- EndNote Web, RefWorks
 - Free to members of university but may has limited feature
 - Web based access your records anywhere
- Reference Manager
 - Best for group use

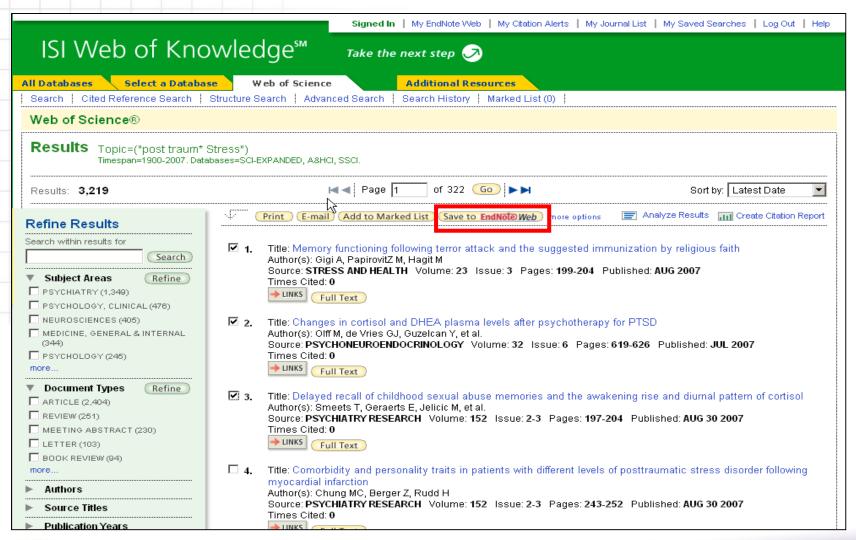


A Quick Look at EndNote Web



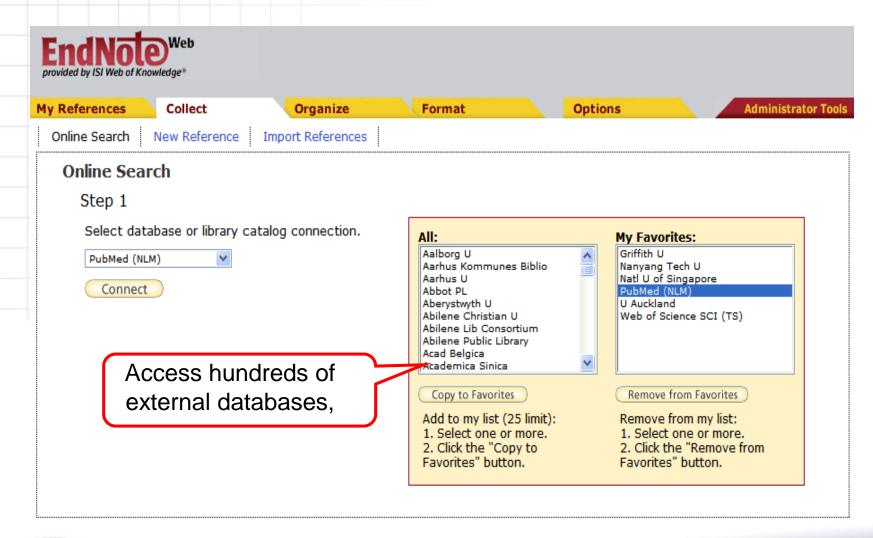


Add References





Search from within EndNote Web





Share References with Collaborators

My References Collect Organize Format Options

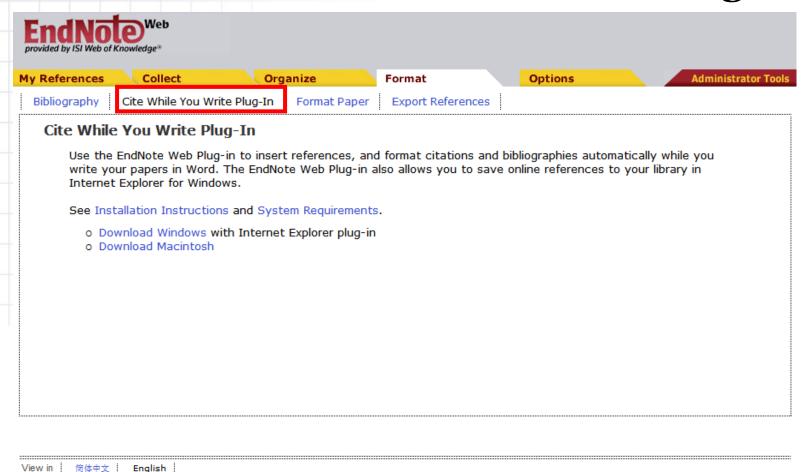
Manage My Groups Others' Groups Find Duplicates

Manage My Groups

	Number of	
My Groups+	References	Share
Aortic Valve	24	Manage Sharing Rename Delete
♣ ARCI	7	Manage Sharing Rename Delete
ARI	13	Manage Sharing Rename Delete
AV	8	Manage Sharing Rename Delete
Bose Institute	33	Manage Sharing Rename Delete
CIFOR	14	Manage Sharing Rename Delete
CLRI	2	Manage Sharing Rename Delete
CSIR	15	Manage Sharing Rename Delete
El Nino	4	Manage Sharing Rename Delete
Fish waste	24	Manage Sharing Rename Delete
Griffith	8	Manage Sharing Rename Delete
IACS	3	Manage Sharing Rename Delete



Install the "Cite While You Write" Plug-in



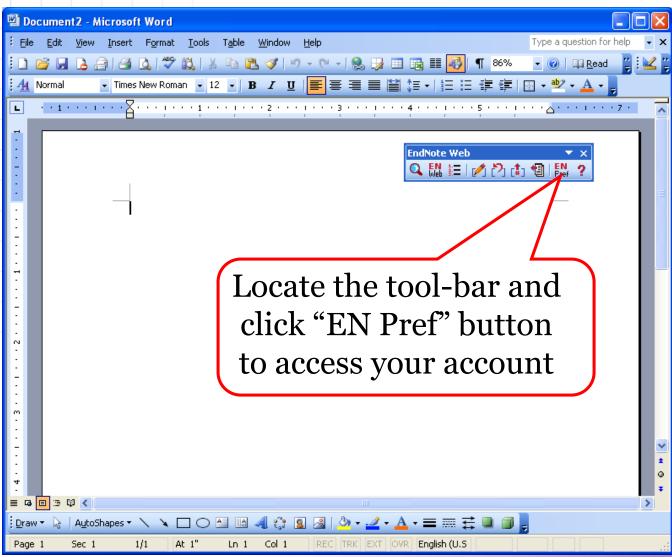
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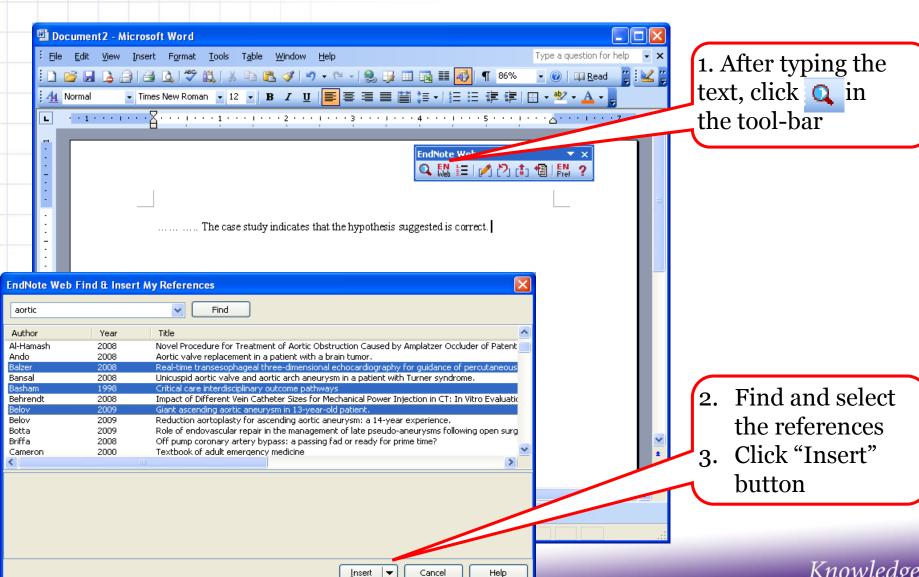
English

EndNote Web Tool-bar in Word





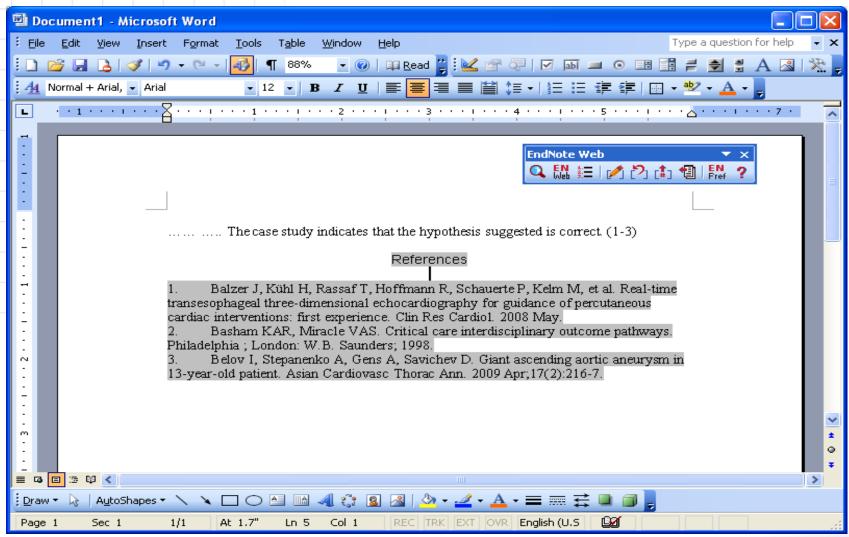
Inserting Citations While You Write



95 items in list

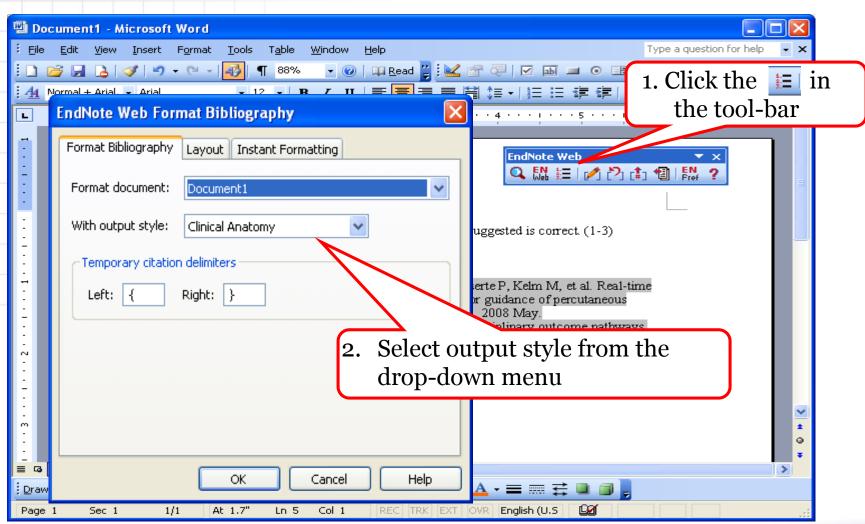
Library:

References List Appear at the End of the Text



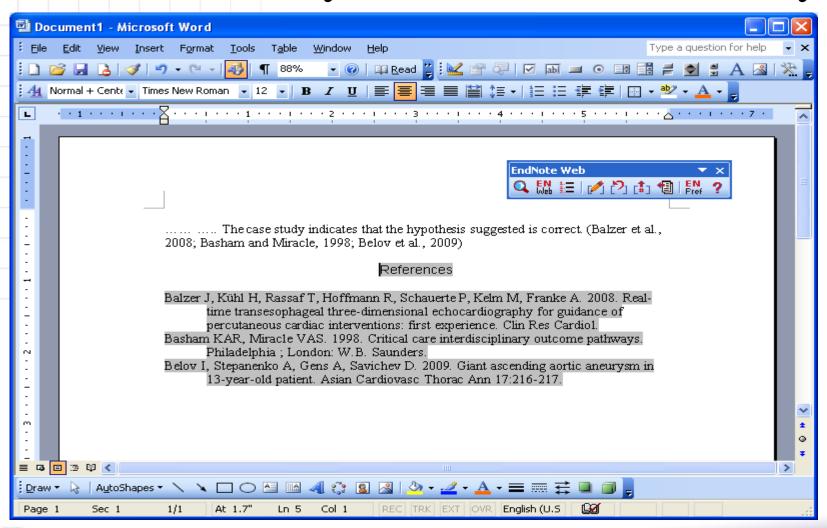


Change the Reference Style





From "Numbered style" into "Author-Date style"

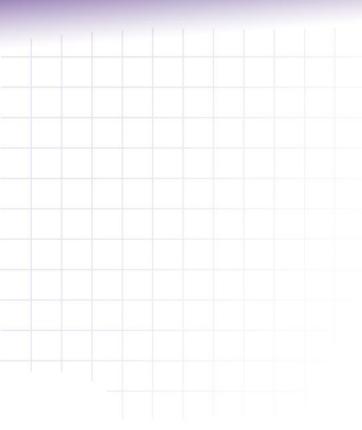




Let's do a little group work

- Write down your research question, break down your questions into concepts.
- Which database or search engine do you use for you literature search?
- What tools do you use to organize your literature? Share your experience.







Quick overview of EndNote

- Available on all networked PCs at LSE
- Using Version X.4
- Available off campus via the Remote desktop
- Imports records from Library Catalogue and some databases

A quick look at EndNote

- Now in version 13 EndNote X3
- Good backwards compatibility with earlier versions
- Easy to import/export to other reference management software
- ALWAYS KEEP BACKUPS!



EndNote

- Offers sophisticated, flexible tools for organizing references and PDFs and for creating bibliographies
- Offers most comprehensive array of citation output styles
- Link EndNote records to PDFs and other types of documents saved on your hard drive
- In EndNote version X2 and higher: download article PDFs automatically
- Can add figures and tables to your EndNote library
- Use UC-eLinks to find the full text of the article from within EndNote
- EndNote software must be purchased and installed onto your computer
- Best option for large research projects



EndNote

http://www.endnote.com/

- Personal Bibliographic Database
- Imports from hundreds of reference formats
- Saves MeSH Terms and URLs of References
- Powerful Search and Sort Methods
- Connects directly to PubMed, Biosis and other sources
- Integrates directly with Word
- Automatically formats bibliographies and footnotes
- Formats citations & references for hundreds of journals
- Complete user control of formatting



RefWorks

- Web-based, so it can be used on all operating systems, at any computer connected to the Internet
- Format bibliographies in Word
- Direct import available from most article databases
- Import citations from RSS feeds
- Full-text access to most articles is easy: UC-eLinks works inside RefWorks
- Good for collaborative projects: share a citation database, or creat a group logon
- Easy to learn and use



