



In the name of Allah, Most Gracious, Most Merciful

How to write a literature review

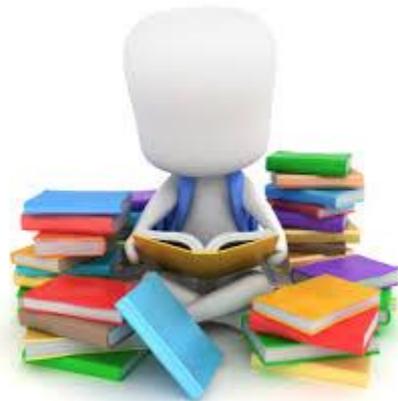


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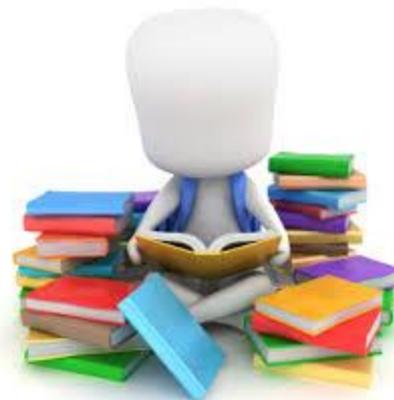
Objectives of this lecture

- ▶ Understand what is “literature review”?
- ▶ Understand why it is important?
- ▶ Recognise what makes a good literature review?
- ▶ Understand how to write a good literature review?
- ▶ Adopt a critical approach when writing review



What is meant by “literature” and “review”

- ▶ **“Review”** means an **overview** summarizing major parts and bringing them together to build a picture of a topic.
- ▶ **“The Literature”** means the major **writings** - especially **scholarly writings** - on the topic. (i.e what is written on the topic by others). “It is the body of scholarly, professional information that is used by professionals and scholars working on that topic area”
- ▶ **“The literature”** may include:
 - ▶ journal articles
 - ▶ books
 - ▶ Information from the net
 - ▶ published essays
 - ▶ government reports, and so on.



Literature Review: Comprehensive Definition

“A Literature Review **Surveys** scholarly articles, books, and other sources (e.g., dissertations, conference proceedings) relevant to a topic for a thesis or dissertation. Its purpose is to demonstrate that the **writer** has **insightfully and critically surveyed relevant literature** on his or her topic **in order to convince an intended audience that the topic is worth addressing**”

~from *Writing the Successful Thesis and Dissertation: Entering the Discussion*

By Irene L. Clark



Why do literature review?

- ▶ To identify gaps in the research area
- ▶ To avoid inventing the wheel
- ▶ To continue from what others have completed.
- ▶ To know other people working in the field
- ▶ To measure the depth of knowledge of the subject.

Literature review vs an academic research paper

- ▶ An **academic research paper** focuses on developing a new argument, and contain a literature review as one of its parts. The literature is used as a foundation to build up and as a support for a new insight that this research has contributed.
- ▶ A **literature review** focuses on summarizing and synthesizing the arguments and ideas of others without adding new contributions.



So, in general:

- ▶ **Literature Review** is a summary of **previous research** on a topic.
- ▶ It reviews the **scholarly literature relevant** to the topic one is studying.
- ▶ It helps to **design the research methodology** and help others to **interpret the planned research**.
- ▶ It focuses on a **specific topic of interest** to the researcher and includes a **critical analysis** of the relationship among different works, and relating this research to the present work.
- ▶ It is **not** an annotated bibliography in which one summarize briefly each article that has been reviewed.

An effective literature review (sometimes called “background and significance” or “theoretical orientation”) is essential to every successful proposal/research, from art, history to chemical engineering, and from early graduate study fellowships and small grants to completion fellowships and postdocs (Bitting, 2012).

What are the main questions and problems that have been addressed to date?

What are the gaps?



Literature search and review on the topic



What are the major issues and debates about the topic?

How is knowledge on the topic structured and organized?

What are the key theories, concepts and ideas?

How have approaches to these questions increased our understanding and knowledge?

Literature Review may be:

- ▶ A part (subsection) of a larger report of a:
 - ▶ Research proposal,
 - ▶ Research project or research grant,
 - ▶ Research paper,
 - ▶ Thesis (masters or PhD)
 - ▶ Separate assignment
 - ▶ Scholarly journal article
- ▶ It can be a stand-alone bibliographic essay:
 - ▶ A review article, that is published in a scholarly journal
 - ▶ Theoretical report e.g a Masters thesis, without research (theoretical) to understand and write up current research on a topic

A literature review

- ▶ Has a simple **summary of the sources**, and **organizational pattern** (synthesis).
- ▶ A **summary**: a recap of the important information of the source,
- ▶ A **synthesis**: re-organization, or a reshuffling, of that information.
 - ▶ It might give a **new interpretation of old material** or **combine new with old interpretations**.
 - ▶ Or it might trace the intellectual progression of the field, including major debates.
 - ▶ And depending on the situation, the literature review may evaluate the sources and advise the reader on the most pertinent or relevant information.



Aim of the Literature Review

- ▶ To show the reader (your supervisor, examiner) that you have read, and have a good grasp of, the main published work concerning a particular topic or question in your field (guided by your research objective or by the issue or thesis you are arguing and will **provide the framework for your further work**).
- ▶ To present to the reader a **critical discussion**, showing insight and an awareness of differing arguments, theories and approaches.
- ▶ It is synthesis and analysis of the relevant published work, linked at all times to your own purpose and rationale.



Why write a literature review?

- ▶ Literature reviews provides a **guide** to a particular topic.
- ▶ Provide a **solid background** for the research investigation.
- ▶ Gives an **overview** and acts as a **stepping stone**.
- ▶ Places the planned study in an **historical perspective**.
- ▶ Helps to keep **up to date** with what is **current in the field**.
- ▶ Helps avoid unnecessary **duplication of research**..
- ▶ Emphasizes the **credibility of the writer** in his or her field.
- ▶ Helps in suggesting research in a specific previously **unexplored direction**.

(Comprehensive knowledge of the literature of the field is essential to most research)

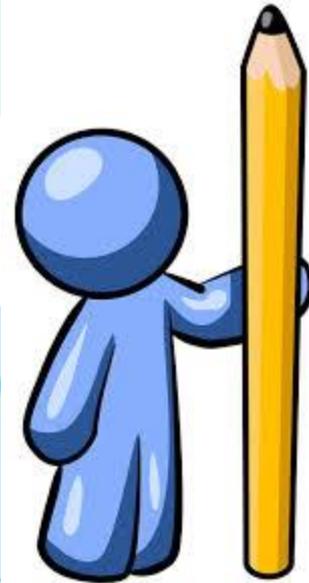
Why are literature reviews necessary?

- ❖ They are necessary for several reasons.
 - ▶ They are an essential part of the research process.
 - ▶ They give an overview of a topic's theoretical background.
 - ▶ Researchers use literature reviews to identify gaps in existing knowledge and to set the context for their research studies.
 - ▶ Students can be asked to complete a literature review as part of their course to help them understand a topic more deeply.
 - ▶ Writing a literature review can enable a student to demonstrate what they have learned about a topic and develop their own connecting ideas within that topic further.

The literature review should:

- ▶ Compare and contrast different authors' views on the topic of research
- ▶ Groups those authors who have drawn similar conclusions
- ▶ Be Critical of the methodology aspects
- ▶ Points out areas of disagreement between authors
- ▶ Highlight exemplary studies
- ▶ Highlight gaps in research
- ▶ Shows how the planned study relates to previous studies
- ▶ Shows how the planned study relates to the literature in general
- ▶ Concludes by summarizing what the literature says.

(Caulley (1992) of La Trobe University)



Some questions raised before writing a Literature Review

- ▶ What is **known** about the subject?
- ▶ What is the **current status of research** in this area?
- ▶ Are there any **gaps in the knowledge** of the subject?
- ▶ Have areas of **further study** been identified by other researchers that may be considered in the present research?
- ▶ What was **identified by others** (methods, problems etc) who have studied this field and how this may influence this planned research?
- ▶ What is the **best methodology** for this research?
- ▶ What aspects have generated **significant debate** on the topic?



Outline

1. Choosing your topic
2. Narrowing down your topic
3. Operationalizing variables/constructs
4. Contributing to the field of International Psychology
5. Identifying a gap in the literature
6. Features of a problem statement
7. Features of a purpose statement
8. Generating a research question
9. Delimitations (Scope of the study)
10. Developing a conceptual framework
11. Determining the methodology
12. Writing chapter one

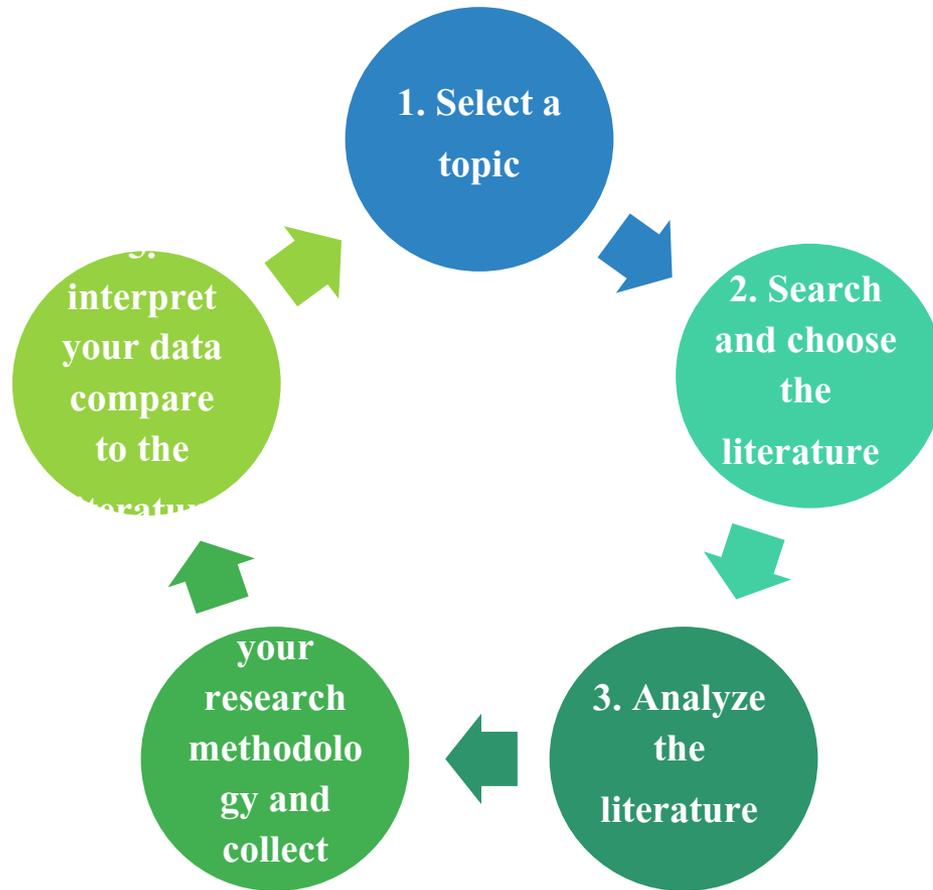


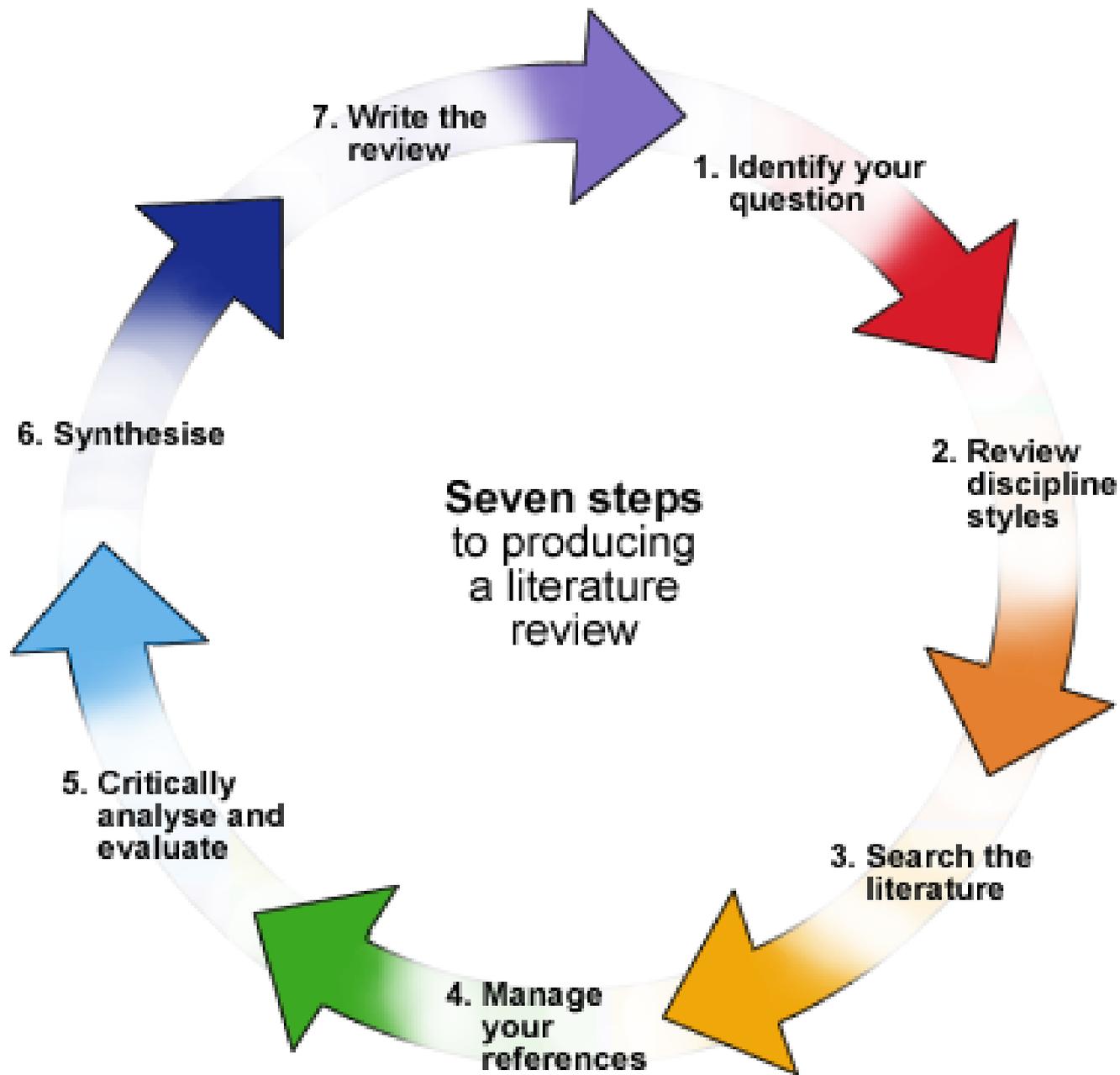
- A good literature review, therefore,
- is critical of what has been done in the field,
 - identifies areas of controversy,
 - raises questions and
 - **identifies areas which need further research.**



Writing a literature review

Step-by-step guide





Planning for literature search

Define the topic

General reading; prepare a list of terms.

Think about the scope

What is the time frame of search (how far back?)

Think about the outcomes

What it is you want to get out of the search?

Think about the management

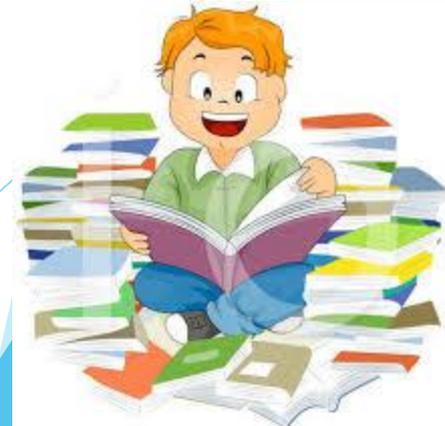
How are you going to manage the search results?

Plan sources to be searched

The list and sequence of sources to be searched

Prewriting Stages (preparation stage)

- ▶ **Formulate problem or primary research question** –which topic or field is being examined and what are its component issues?
- ▶ **Choose literature** –find materials relevant to the subject being explored and determine which literature makes a significant contribution to the understanding of the topic .
- ▶ **Analyze and interpret** –note the findings and conclusions of pertinent literature, how each contributes to your field .



1: *Select a topic*

Identify the question

- ▶ Picking the **topic of research/review** is the first step.
- ▶ Research problems range from simple to complex, depending on the number of variables and the nature of their relationship.
- ▶ (How to select a research topic?)



2-Review KSU guidelines

- ▶ Read through the links provided below on KSU guidelines so that you become familiar with the common core elements of how to write in KSU style:
- ▶ Pay attention to general document guidelines
 - ▶ font, margins, spacing,
 - ▶ title page,
 - ▶ abstract,
 - ▶ body,
 - ▶ text citations,
 - ▶ quotations.

<http://ksu.edu.sa/Deanships/DeanshipofGraduateStudies/Pages/AbstractsThesisGuide.aspx>

3: *Identify the literature to be reviewed*

- ▶ Books, Journals, search engines, articles in magazines, thesis, reports etc
- ▶ Familiarize yourself with **online databases** e.g. Google Scholar, PubMed, Ask, Bing, Aol search, WebCrawler, mywebsearch, PubChem, Academic search, Arts & Humanities Citation Index, arXiv, Association for Computing Machinery Digital Library, BASE: Bielefeld Academic Search Engine, Biological Abstracts, BioOne

https://en.wikipedia.org/wiki/List_of_academic_databases_and_search_engines

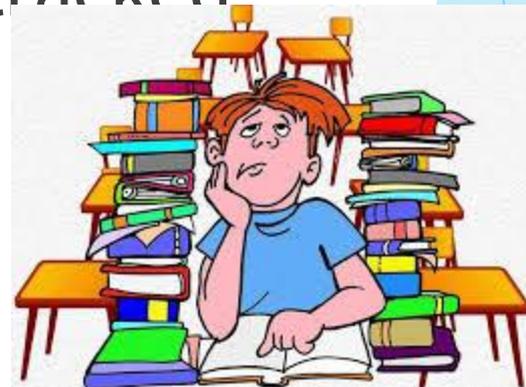
- ▶ Identifying **relevant databases in your field** of study.
- ▶ Using relevant databases, search for literature sources.

Structure of the literature review

- ▶ The overall structure of the review depends largely on the research area.
- ▶ **Similar findings and suggestions** are grouped together.
- ▶ The **varying opinions of different writers on the topics** are compared and contrasted.
- ▶ **Controversial issues** are discussed by questions to which there are varying approaches and theories.
- ▶ Discusses what the **different literature argues**, and links this to the present research.

What to read

- ▶ Before you start reading, it may be useful to compile a list of the main areas and questions involved,
- ▶ Then read with the purpose of finding out about or answering these.
- ▶ Unless something comes up which is particularly important, stick to this list, as it is very easy to get sidetracked particularly on the internet.

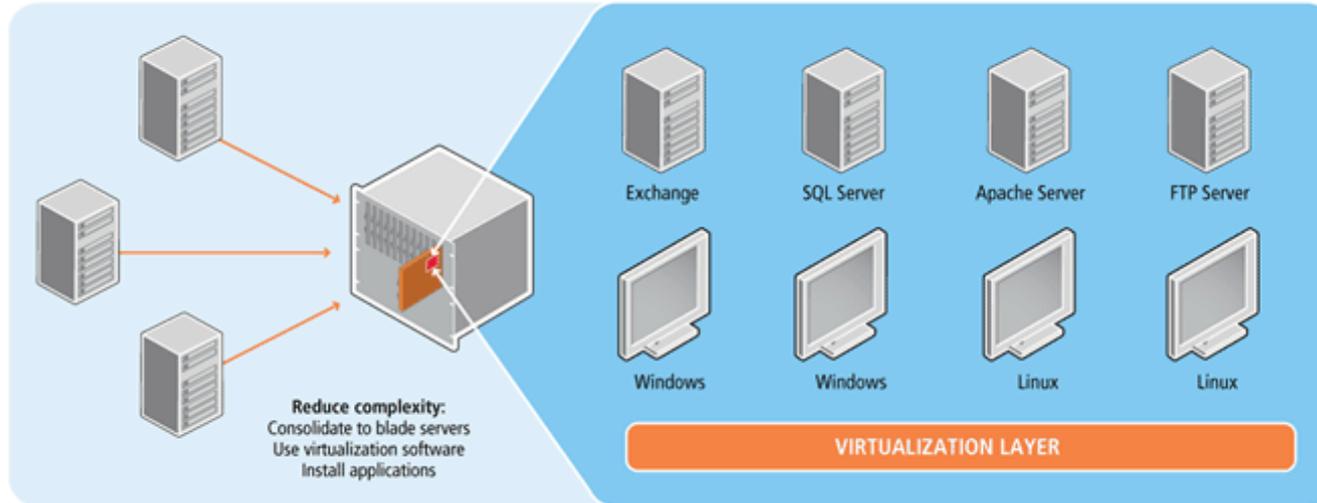


Servers (data bases)

- ▶ A computer (actually connected to a network) located somewhere in the globe and we can access (as website page not as the local hard-disk) it to download (or upload) information.
- ▶ This computer harbor a wealthy information.
- ▶ There are different worldwide servers located in different countries and to serve specific task.

CONSOLIDATE SERVERS AND APPLICATIONS

APPLICATIONS RUN ON VIRTUAL MACHINES



Consolidation and virtualization reduce the number of servers that require management and allow new applications to be deployed faster.

Name	Discipline(s)
Academic Search	Multidisciplinary
Analytical Abstracts	Chemistry
Analytical sciences digital library	Analytical chemistry
Arnetminer	Computer Science
Arts & Humanities Citation Index	Arts Humanitie
arXiv	Physics MathematicsComput science,Nonlinear sciences Quantitative biology andStatistics
Association for Computing Machinery Digital Library	Computer Science,Engineering
Astrophysics Data System	Astrophysics,Geophysics,Physics
ATLA Religion Database	Religious studies
BASE: Bielefeld Academic Search Engine	Multidisciplinary
Beilstein database	Organic chemistry
Biological Abstracts	Biology
BioOne	Biology,Ecology andEnvironmental Science
Bioinformatic Harvester	Biology,Bioinformatics
Book Review Index Online	Book reviews
Books In Print	Books
CAB Abstracts	Applied life sciences
Chemical Abstracts Service	Chemistry
ChemXSeer	Chemistry
Chinese Social Science Citation Index	Social sciences
Cochrane Library	Medicine Healthcare
CINAHL: Cumulative Index to Nursing and Allied Health	Nursing Allied Health

Name	Discipline(s)
Chemical Abstracts Service	Chemistry
ChemXSeer	Chemistry
Chinese Social Science Citation Index	Social sciences
Cochrane Library	Medicine,Healthcare
CINAHL: Cumulative Index to Nursing and Allied Health	Nursing, Allied Health
CiNii	Multidisciplinary
CHBD: Circumpolar Health Bibliographic Database	Medicine
Citebase Search	Mathematics,Computer science,Physics
CiteULike	Computer science
CiteSeer	Computer Science
CiteSeerX	Computer science,Statistics,Mathematics, becoming Multidisciplinary
CogPrints: Cognitive Sciences Eprint Archives	Science(General)
The Collection of Computer Science Bibliographies	Computer science
Compendex	Engineering
Current Index to Statistics	Statistics
Current Contents	Multidisciplinary
Directory of Open Access Journals	Journals
DBLP	Computer science
EconBiz	Economics
EconLit	Economics
EMBASE	Biomedicine,Pharmacology
ERIC: Educational Resource Information Center	Education
Food Science and Technology Abstracts	Food science,Food technology,Nutrition

Before starting the literature search---

- ▶ It is important to try and decide on the parameters of your research.
- ▶ What exactly are your objectives and what do you need to find out?
- ▶ Otherwise there will be major difficulty due to number of references available.

Topic- e.g Cancer—758773

Genetics of cancer- 227429

Genetics of lung cancer- 17300

Genetics of familial lung cancer- 1840 or

Genetics of sporadic lung cancer- 152

Genes involved in sporadic lung cancer-20

For Example: Using PubMed to obtain literature

Pubmed

- ▶ A search engine where you can get literature and knowledge about **scientific topic**.
- ▶ Search PubMed to retrieve literature concerning a **specific topic**.
- ▶ You can transfer references to another Reference Manager software like Endnote, i.e., you can integrate it into Microsoft Word.

Using PubMed

- ▶ <http://www.ncbi.nlm.nih.gov/pubmed>
- ▶ Topic : Obesity in Saudis
- ▶ Use Filters to make your search more specific.
- ▶ Get abstracts/full papers
- ▶ Send to your email or copy on Word or send to Citation Manager
- ▶ Read abstract/full paper
- ▶ Make brief summary
- ▶ Make reference list—learn how to write references

- ▶ Divide what you have read (under review) into categories (e.g. those in support of a particular position, those against, and those offering alternative theses entirely)
- ▶ Explanation of how each work is similar to and how it varies from the others
- ▶ Conclusions as to which pieces are best considered in their argument, are most convincing of their opinions, and make the greatest contribution to the understanding and development of their area of research



A
Author (last name first)
Copyright Date
Book Title
Edition
Publishing City
Publishing Company
Pages Used
Location (where you found book)

Is the literature you have selected relevant?

- ✓ Have you indicated the purpose of the review?
- ✓ Are the parameters of the review reasonable?
- ✓ Why did you include some of the literature and exclude others?
- ✓ Which years did you exclude?
- ✓ Have you emphasised recent developments?
- ✓ Have you focussed on primary sources with only selective use of secondary sources?
- ✓ Is your bibliographic data complete?

4- *Manage your references*

- ▶ Manually
- ▶ Using reference management programs
 - ▶ Endnote
 - ▶ Mendely



Document each reference

- An essential step, which cannot be emphasised more.
- As a reference is read, it must be immediately documented and source cited.
- Bookmark online sources.
- Bookmark “hard copy.” Mark pages with relevant information.
- **“Never say I will do it later”**



Record each reference that you read. How?

Authors



Year



Zheng Z, Chen G, Joshi S, Brutinel ED, Yahr TL, Chen L. 2007. Biochemical characterization of a regulatory cascade controlling transcription of the *Pseudomonas aeruginosa* type III secretion system. *J. Biol. Chem.* 282:6136–6142.

volume



pages



Title



Journal Name

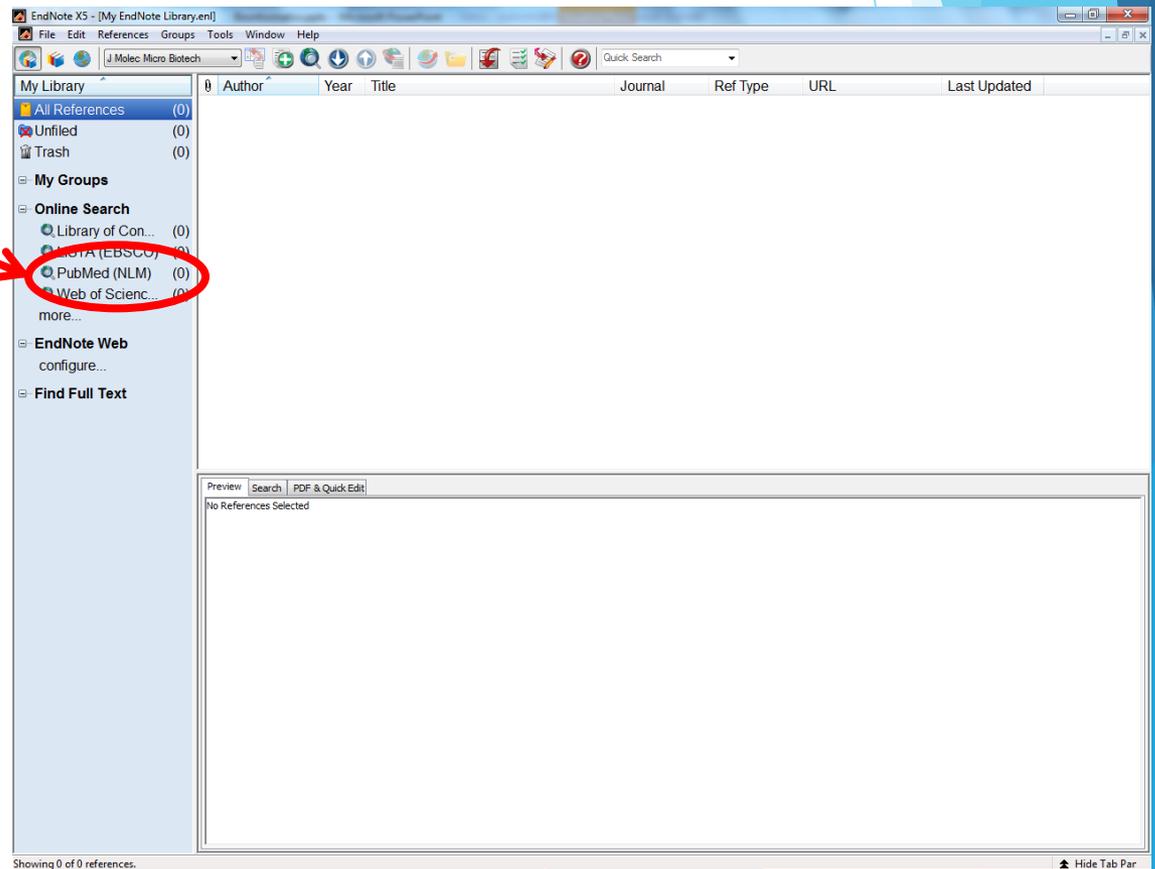


Many journals have different style to write the references.
Check the style required by KSU.

Endnote

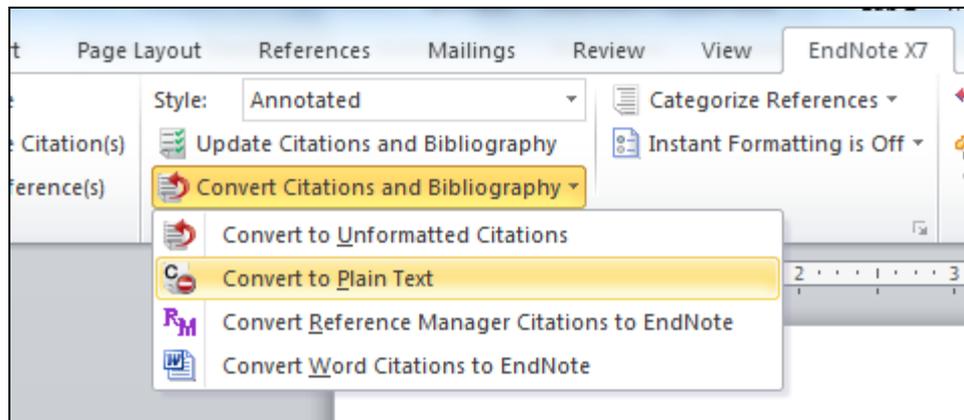
- ▶ Go to swtools.ksu.edu.sa.
- ▶ Download Endnote and install it.

Use it to
search
Pubmed
and create
your own
library



Endnote

- ▶ Could be used to download literatures and archiving them in a library.
- ▶ Open Endnote, make a new library.
- ▶ Insert citations in Word and save the word file as plain text.



- ▶ You can build a reference library from a pdf folder.

Mendeley (free citation manager)

- <http://www.mendeley.com/>



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Mendeley is a free **reference manager** and **academic social network** that can help you organize your research, collaborate with others online, and discover the latest research.

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- Access your papers from **anywhere online**
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Last name

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"Cross-platform Mendeley organizes, indexes, and even stores your documents in the cloud to make document management painless."

The New York Times **BBC** **lifelacker** **S⁹** ScienceBlogs™ **WIRED** **theguardian**

Stuck on a Protocol? A Simple Click Will Do the Trick

Top tweets

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Remember

- ▶ A good literature review needs a clear line of argument.
- ▶ You therefore need to **use the critical notes and comments you made** whilst doing your reading to express an academic opinion.

6 - *Synthesise*

Organizing the Literature Review, to obtain the information you need

- ▶ By subject (if literature review covers more than one subject)
- ▶ Chronologically
- ▶ By theme, idea, trend, theory, or major research studies
- ▶ By author
- ▶ By argumentative stance

In all methods, relationships between elements (e.g., subject, theme, author, etc.) must be shown.

Your literature review is...the backbone of your research

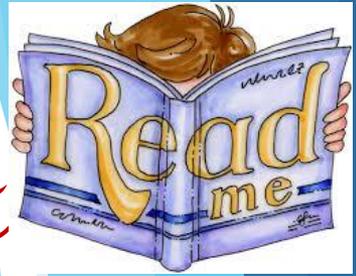
- ▶ Provides **context** -sets the scene
- ▶ Demonstrates **knowledge** -of current theory, definitions, terminology
- ▶ Provides a **rationale** -justifies why you've chosen your project
- ▶ Tells the **story** that leads to your research question/topic



7 - Write the Literature Review

- ▶ Include a clear, short introduction which gives an outline of the review, including the main topics covered and the order of the arguments, with a brief rationale for this.
- ▶ The main body. There is always a clear link between your own arguments and the evidence uncovered in your reading. Include a short summary at the end of each section. Use quotations if appropriate.
- ▶ Link our findings in the literature to the purpose of this study.
- ▶ Always acknowledge opinions which do not agree with your thesis. If you ignore opposing viewpoints, your argument will in fact be weaker.

Introduce Literature Review:



▶ *(Remember reading helps in writing)*

- ▶ Define and explain the primary problem addressed by the thesis
- ▶ Summarize and explain what research has been done on the topic, citing the sources as you mention them.
- ▶ Point out the different ways researchers have treated the topic.
- ▶ Explaining main conflict(s) in the literature
- ▶ Explaining the time frame you will review
- ▶ Offer a rationale for your choice of source material
- ▶ *Use all or some of the points above in the beginning of the literature review.*

Main Body of the literature Review

- ▶ Use **subheadings** if dividing the Literature Review into sub topics.
- ▶ Discuss source's significant contributions.
- ▶ **Put similar findings together**
- ▶ Point out any connections between the sources especially where one source built upon prior study.
- ▶ Explain how this past work fits together to make your research question significant.
- ▶ Be sure to show relationships between sources.
- ▶ Make explicit connections between reviewed sources and thesis.
- ▶ Do not develop ideas or use sources that are irrelevant to your thesis overall.
- ▶ References to prior studies should be in past tense; references to narrative or text other than studies should be in present tense.

Organisation of the Literature Review

Chronological

- Review and Writing LR in the order of the research paper published starting from the very beginning or from the latest article on the research topic.

Thematic

- Literature is organized around a topic or issue, rather on progression of time.
- Focus on the point being made rather than on time and grouping and organizing different research papers review accordingly.

Advancements

- Starting with the first breakthrough or research on the topic
- Further discusses the advancements in the field
- Finally discusses the present situation

Methodological

- focuses on the “methods” of the researcher
- Does not focus on the content but on the method of the research
-

Questions Approach

- Outline and discusses the major questions related to the topic
- These questions are addressed through the review of Literature in an order

Concluding the Literature Review

- ▶ Summarize ideas, conflicts, themes, or historical (or chronological) periods. s
- ▶ Relate (contextualize) your thesis with the work reported in literature.
- ▶ Point out gap(s) in scholarship and, show how your research helps fill the gap(s).
- ▶ Transition to the next chapter, by providing a reason why this work is being done and how.

Length of the Literature reviews

Depending on the purpose:

- ▶ As part of a **Ph.D./M.Sc dissertation**, literature review will be **comprehensive covering all research on the topic**.
- ▶ **As a proposal/project**, it covers the different aspects related to the research project, and is reasonably comprehensive.
- ▶ As part of a **research report/paper**, the literature review covers the major work that has been done on the topic recently, but does not try to identify all research on the subject.

Revising the Literature Review: Questions to Ask Yourself



- ▶ Have I introduced the topic appropriately?
- ▶ Are the author's views represented accurately?
- ▶ Do the references cited provide current and relevant research for the topic?
- ▶ Have I shown relationships between sources?
- ▶ Is there a clear connection between the topic and the Literature Review?
- ▶ Are all sources documented accurately?
- ▶ Have I used effective transitions from idea to idea, source to source, paragraph to paragraph?
- ▶ Have I represented all conflicts or argumentative sides fairly?
- ▶ Have I given a critical view of the work reported.

Be critical?

- ▶ How would you go about critiquing a piece of research?
On what grounds?

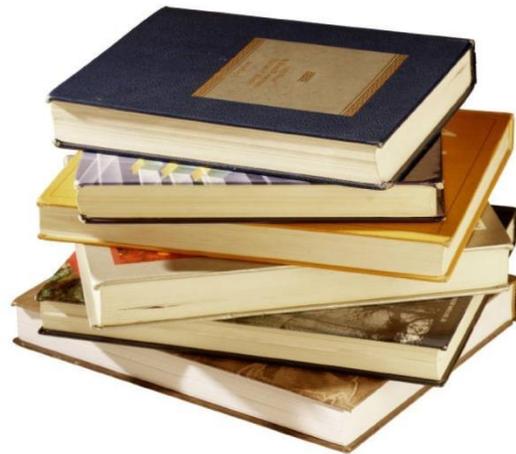


What does it mean to think critically?

- ▶ Does not necessarily mean *criticising*.
- ▶ It can mean identifying strengths and weaknesses, but also simply putting ideas next to each other in an interesting way

Why is it important to be critical?

- ▶ Engaging with debates - being part of the 'academic conversation'
- ▶ *'Doubt is the origin of wisdom.'*
Descartes



Areas for critique

- ▶ Credibility of source (author, publication)
- ▶ Accuracy of underlying assumptions
- ▶ Rigor of study design
- ▶ Appropriateness of methodology /theory/ techniques
- ▶ Interpretation of data (documents, statistics)
- ▶ Interpretation of findings
- ▶ Logic of conclusions drawn

Some points to remember

▶ Literature review must be written in a formal, academic style.

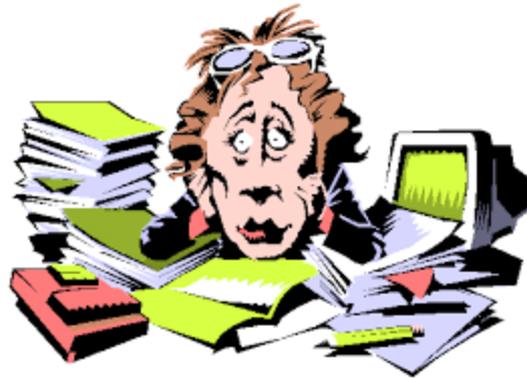
▶ Keep the writing clear and concise, avoiding colloquialisms (go bananas - go insane or be very angry, wanna - want to, gonna - going to, y'all - you all, go nuts - go insane or be very angry, look blue - look sad, buzz off - go away) and personal language.

▶ Always aim to be objective and respectful of others' opinions; this is not the place for emotive language or strong personal opinions. If you thought something was rubbish, use words such as "inconsistent", "lacking in certain areas" or "based on false assumptions"

▶ When introducing someone's opinion, don't use "says", but instead an appropriate verb which more accurately reflects this viewpoint, such as "argues", "claims" or "states".

▶ Use the present tense for general opinions and theories, or the past when referring to specific research or experiments

- ▶ *Your literature review should present your synthesis of previous research and lay the foundation for understanding your research and appreciating its value.*



Avoid plagiarism

- ▶ At all times avoid plagiarising of your sources.
- ▶ Always separate **your source opinions from your own hypothesis**. Making sure you consistently **reference** the literature you are referring to.
- ▶ When you are doing your reading and making notes, it might be an idea to use different colours to distinguish between your ideas and those of others.

An excellent literature review

- ▶ Requires reading extensively
- ▶ Writing again and again
- ▶ Thinking over what you have written
- ▶ Being critical
- ▶ Rewriting
- ▶ Discussing with others

Resources used

Clark, Irene L. *Writing the Successful Thesis and Dissertation: Entering the Conversation*. Upper Saddle River: Prentice Hall, 2007.

Glatthorn, Allan A. and Randy L. Joyner. *Writing the Winning Thesis or Dissertation: a Step by Step Guide* 2nd ed. Thousand Oaks: Corwin, 2005.

Madsen, David. *Successful Dissertations and Theses: a Guide to Graduate Student Research from Proposal to Completion* 2nd ed. San Francisco: Jossey-Bass, 1992.

Purdue OWL. Purdue Online Writing Lab, Purdue U. 19 Mar. 2007
<<http://owl.english.purdue.edu/workshops/hypertext/apa/interact/lit/index.html>>

Thank you for listening