# **Effective Literature Review**

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# What is a literature review?

#### It is

- A discussion of your knowledge about the topic under study, and it is supported by the research literature
- A foundation for your own study

### It is not

- A study-by-study description of studies previously done
- A brief overview of previous studies





# What can a literature review do for me?

## A literature review sets the stage for your own work.









# A good literature review should tell us

- Why does your work need to be conducted?
  - How is it different from other studies?
- Where does your work fit within current knowledge?
- What do you expect to contribute?





#### Two elements in literature review

- You need to show how it relates to your work.
- It should include a critical analysis.

## Two skills needed

- Information seeking
- Critical analysis







As you define your research question you will be able to decide what to read and what to ignore, and as you read more, you may redefine your research question.







Scan all your collected materials to identify material that might be important or relevant to your work.







Read prioritized material and determine their order of importance. Take notes and keep a research log with bibliographic information.



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Writing can help you to understand and find relationships between the work you've read. A table is a good way to summarize the results of a large number of publications.





# **Organizing your ideas**

#### Visualize on one page

- When you have an idea, write it down and draw a circle around it.
- When you have another idea or a reference which supports this idea, do the same, and connect the two circles with a line.
- Get your ideas on one page, so you can see them all at once.

Engineering

arch and Extension

(Credit: Jerry Plotnick. University of Toronto)

**Biological and Agricultural** 



# From reading to writing

- Critical Reading
  - Evaluate others' attempts
  - -Look for answer to your own questions
- Critical Writing
  - -Convince your audience
  - -Provide answer to your audience





## Some traps to avoid

## Don't

- Trying to read everything
- Reading but not writing
- Not keeping bibliographic information

### Do

- Select the most relevant and significant work
- Writing to help you to understand and find relationships between the work you've read
- Keep track of all sources of information



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## **SWISS CHEESE**

Present a picture of current knowledge, identifying gaps or holes in the field, and argues why the current research plugs up one of the holes.



#### (Obenzinger, 2002)





#### Rhetorical patterns of literature review

### **ROAD MAP**

Trace the history of knowledge in this field, one achievement after another, all of which points to one destination which is your work.



#### (Obenzinger, 2002)





#### Rhetorical patterns of literature review

## **DEJA VU ALL OVER AGAIN**

Identify current knowledge or existing methodology, but argues for some kind of replication for verification or variation such as a different sample population.





#### (Obenzinger, 2002)



# **Organization of the review**

#### Do

- Organize into sections that present themes or identify trends, including relevant theory.
- Synthesize it according to the guiding concept.

#### Do not

- Organize around the researchers instead of the research itself (e.g. key concepts).
- Just list all the published material chronologically.





## **From General to Specific**

Overview of key ideas

Division of studies under review into categories

Summarize, compare and contrast the key studies

Narrow down to highlight the most relevant to your work

Indicate the position and contribution of your work





## A Step-by-step guide 1. Overview

- Identify the broad problem area.
- Indicate why the topic being reviewed is important.
- Specify your point of view.
- State explicitly what will and will not be covered.

#### (Adapted from: Galvan, 2006)





# A Step-by-step guide 2. Body

- Indicate why certain studies are important; discuss other literature reviews on your topic.
- If the results of previous studies are inconsistent, cite them separately; justify comments such as, "no studies were found".
- Provide strong "umbrella" sentences at beginnings of paragraphs, and brief "so what" summary sentences at the end to aid in understanding comparisons and analyses.

(Adapted from: Galvan, 2006)



# A Step-by-step guide 3. Conclusion

- Evaluate the current "state of the art" for the body of knowledge reviewed.
  - Point out major methodological flaws or gaps in research, inconsistencies in theory and findings, and areas or issues pertinent to future study.
- Indicate the position and contribution of your work.

(Adapted from: Galvan, 2006)





### **Checklist for your review**

- Does your review start at a more general level?
- Have you summarized each subtopic and made clear connection between the subtopics & the topic?
- Have you covered the key theories of recognized experts in the area?
  - Up to date?
  - References that are counter to your own opinion
- Have you uncovered gaps or inconsistencies in knowledge?
- Are facts and opinions clearly distinguished?
- Have you presented a rationale for your study?





## **Questions a literature review should answer**

- 1. What do we already know in the immediate area concerned?
- 2. What are the characteristics of the key concepts or the main factors or variables?
- 3. What are the relationships between these key concepts, factors or variables?
- 4. What are the existing theories?
- 5. Where are the inconsistencies or other shortcomings in our knowledge and understanding?
- 6. What views need to be (further) tested?
- 7. What evidence is lacking, inconclusive, contradictory or too limited?
- 8. Why study (further) the research topic?
- 9. What contribution can your work be expected to make?
- 10. What research designs or methods seem unsatisfactory?



(Source: Write up Research using the Literature. Asian Institute of Technology)

## **Overview of your research topic**

Please spend 8 minutes to answer the following questions, which are designed to help you to develop an overview of your research topic (the topic of your presentation on literature review).

1. Describe the "critical need" that provides the driving force for you to look for the solution.

2. What are the important known and unknown for your topic?

3. What is the long term goal of your study?

4. What are the specific objectives of your study? How does it match the "critical need"?



