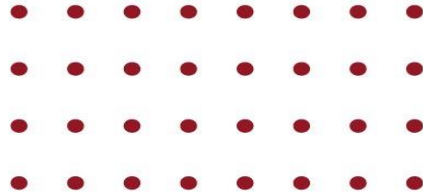


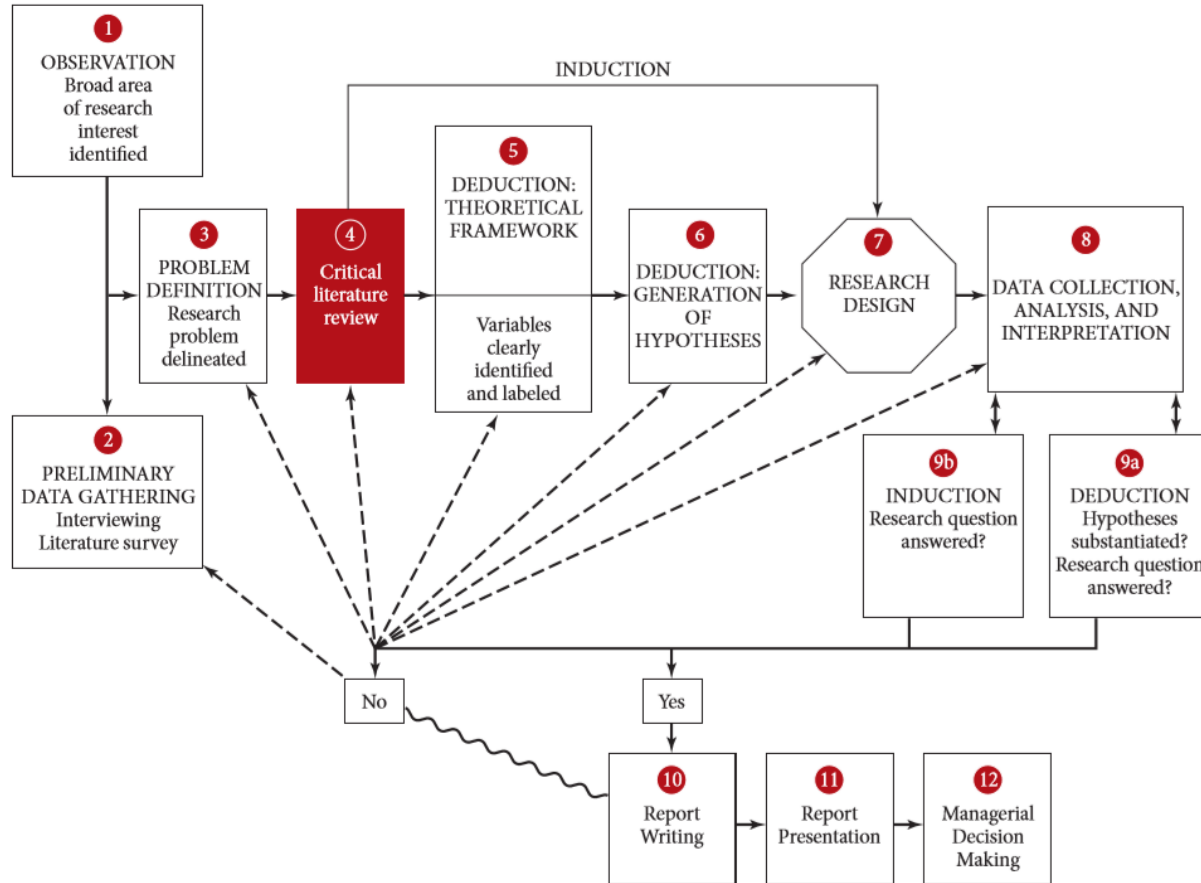
# Research Methodology for PhDs



## Session 5-1 Topics

- literature and background review
  - Prepare an initial annotated bibliography
  - Prepare a brief literature review

# Literature/Background Place in the Project



# REVIEW Objectives

To present and analyse in a critical manner, that part of the published literature which is relevant to the student's research topic and acts as the basis for a fuller understanding of the context in which you are conducting your research, thus helping the reader to come to a more rounded appreciation of the completed work. Remember critical does not mean looking at the negatives but forming a complete evaluation.

To act as a backdrop against what the student has done in the remaining part of the research may be analysed and critically evaluated to give the reader the opportunity to assess the worth of the student's writing, analytical and research skills.

To show that not only has a researcher discovered and reported what he/she has found to be relevant in the literature search, but that they have analysed it in a critical manner.

To show that the student has knowledge of the area of interest, is detailed and able to identify the gaps in the coverage of the topic, thus justifying the reason(s) for the research.

To show that the student knows what the key variables, trends and "actors" are in the environment of study, i.e., the student shows that he/she knows what the important issues are that need to be investigated.

To enable readers to be able to measure the validity of the student's choice(s) of research methodology, the appropriateness of the process by which they analysed the results, and whether their findings are congruent with the accepted research which has already been published.



# Literature/Background Sources

Textbooks

Journals

Theses

Conference proceedings

Unpublished manuscripts

Reports

Newspapers

Internet

Qualitative research questions (How to...)

Electronic journals.

Bibliographic databases. Bibliographic databases display only the bibliographic citations; that is, the name of the author, the title of the article (or book), source of publication, year, volume, and page numbers.

Abstract databases. Abstract databases also provide an abstract or summary of articles. They do not provide the full text of an article or manuscript.

*Examples of researcher's websites:*

- [www.researchgate.net](http://www.researchgate.net)
- [www.academia.edu](http://www.academia.edu)

<https://scholar.google.com>

Here, you can search for articles as well as case law. Either option can be selected from the search results page. Moreover, you can select the time range to search from for the publications, sort results by date or relevance, and create an alert to be notified when new entries on a particular topic somewhere on the web are discovered by Google search robots. You will likely save yourself some additional search time if you click on "Cited by" or "Related articles," as doing so will bring up additional works on your subject. You can store your search results by clicking "Save" or cite them immediately by clicking "Cite," which will automatically convert your article into a number of widely used citation formats (e.g., APA).

©Pan, M. (2017). Preparing Literature Reviews

<https://www.ebsco.com/products/research-databases/eric>

Some of the examples in this chapter are from the ERIC (Education Resources Information Center) database, which is published electronically by the Educational Resources Information Center. At the time of this writing, it contains references to more than one and a half million records that provide citations for journal articles, books, conference papers, and so forth.

©Pan, M. (2017). Preparing Literature Reviews

# Search Strategy

Search (key) words

Logical operators

- And, Or, Not

Filter by area

- Scientific
- Location
- business

Prioritizing by citing index

- Google scholar,
- h-index

Focusing on certain types of sources

- Fundamental
- Recent
- Non-scientific background

Focusing on authors





## Helpful Tips

Design search hierarchy (theory – fundamentals – practice)

Design research funnel

Define types of sources –

- journals, conference papers, books, Internet publications, open statistics, ets

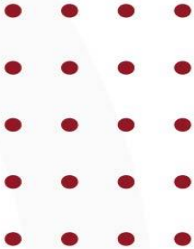
Avoid funnel effect, look around

Evaluate sources based on title and abstract

Search in references of your sources

Search in the works of the most relevant authors

Fix results in your personal knowledge base



# Question Driven Evaluation of Sources

Is the main research question or problem statement presented in a clear and analytical way?

Is the relevance of the research question made transparent?

Does this study build directly upon previous research?

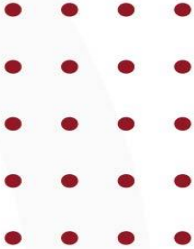
Will the study make a contribution to the field?

Is there a theory that guides the research?

Is the theory described relevant and is it explained in an understandable, structured, and convincing manner?

Are the methods used in the study explained in a clear manner (description of methods)?

Is the choice of certain methods motivated in a convincing way (justification of methods)?



## Helpful Tools and Techniques

Describe the importance of the topic with proofs

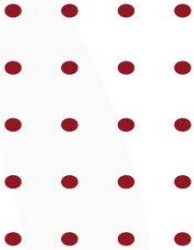
Give key terms and definitions for the specific area

Describe your search strategies

Comment on extent and nature the literature sources

Describe how do they meet research objectives

Start discussing theories



## Basic Principles of the Early Draft

Write an essay

Do not paraphrase literature sources one by one

Give statements and as many supportive references as necessary

Use citing (quotations) appropriately

Point out strong and weak sides of the research

Point out strong and weak sides of the most important sources

Point out limitations of the research

Use tentative language when describe weak sources

Clearly distinguish the results found and your discussion



# Possible Structure of the Review Draft

## I. Introduction

A. Identify the topic

B. Establish the importance of the topic

1. Number of individuals affected

2. Impact on individuals

C. Definitions of key terms

D. Literature search strategies

E. Description of the extent and nature of the literature

F. Overview of the organization of the rest of the review

©Pan, M. (2017). Preparing Literature Reviews

## Session 5-2 Topics

- Finalizing the Review
  - Explore background factors,
  - developing your theoretical model, and generate hypotheses
  - -factors, which imply on a method choice

## Expanding Area of Search

- Web sources
- General search engines
- Government and official websites
  - Statistical data
  - Legal information
- Library of US Congress Reference Shelf ([Research and Reference Services: Access to Library of Congress Collections and Research Tools \(loc.gov\)](#))
- Professional Association Websites and resources
- AI/GPT tools
  - ChatGPT
  - Microsoft Copilot
  - Others

# Challenges and Limitations Check List

Does the Publication have a P2P review?

Who is a sponsor or a shareware of a resource

Are authors known and can they be reached?

Can the objectivity be evaluated?

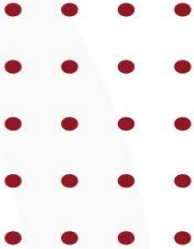
Are published materials primary or secondary?

Do published materials follow ethical principles (citing, emotions, language, etc.)?

Can the given information be verified independently?

Who is the target audience?

Is it a political or commercial product?





# Evaluating Search Results

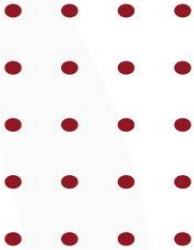
Check for bias

Adopt uncertainty in human's behaviour

Distinguish quantitative and qualitative research

Check for sample relevance

Open questions are preferred



## Question Driven Evaluation of Sources

Is the sample appropriate?

Are the research design and/or the questionnaire appropriate for this study?

Are the measures of the variables valid and reliable?

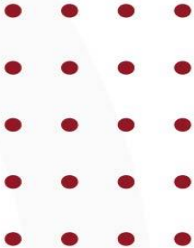
Has the author used the appropriate quantitative and/or qualitative techniques?

Do the conclusions result from the findings of the study?

Do the conclusions give a clear answer to the main research question?

Has the author considered the limitations of the study?

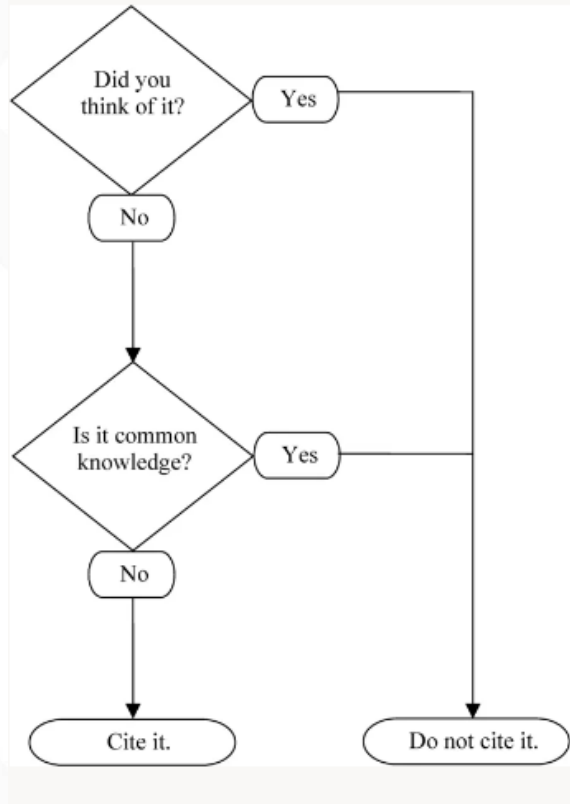
Has the author presented the limitations in the article



## Study Examples

Pan, M. (2017). Preparing Literature Reviews,  
p.133. Model Literature Reviews  
Qualitative Literature Review  
Quantitative Literature Review

# Decide on Citing



©Pan, M. (2017). Preparing Literature Reviews

## Summarize Theories and Approaches Found

Summarize the existing state of knowledge in the research area

Identify major topics and subtopics

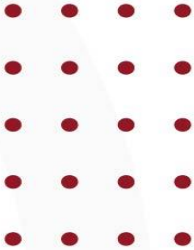
Identify relationships between them

Identify relationships, contradictions between theories

Identify gaps between existing data and theories

Identify gaps between current demand and theories

Give suggestions for future research



## Summarize Applied Tools

Summarize the existing state of applied methods and tools in the research area

Identify major achievements and failures

Give a brief historical note of tools and approaches development

Identify limitations and constraints for the tools and approaches

Identify relationships, contradictions between theories, data and applied tools

Give suggestions for future research



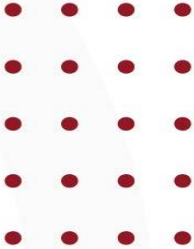
# Align your Hypotheses to the Literature Review Findings

The research hypotheses should flow logically as a result of the Literature and background review.

The research methods selection should be based on the outputs of the Literature and background review.

Define how are you going to synthesize the existing knowledge and Data in your research

Elaborate specific proposals and suggestions as the foundation of your research



## Conclusion/Resume

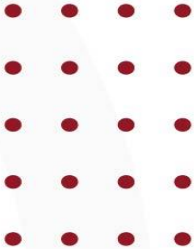
Bring together all parts of the literature review together

Clearly define gaps in the examined sources

Make clear statements which gaps are covered by your research

Define research tools based on the review data

Include a short sub-section on any suggestions for further research







**Thank You!**  
**Read the Recommended Readings**  
**You're welcome with your discussions and**  
**questions in VLE!**

**Please note, that since the recordings are**  
**done, some Readings may become**  
**unavailable. Inform us immediately in**  
**VLE, so we can offer substitutions**