

**IDENTIFYING RESEARCH  
FRONTIER  
OR  
HOW TO DEFINE RESEARCH  
QUESTION**

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# Research question

- ⦿ Where does it come from?
  - An observation
  - A puzzle
  - A demand
- ⦿ Frontier shifting/paradigm changing research question
- ⦿ Research questions taking “small steps” toward uncovering ‘big answer to big question’

# Research question

- ⦿ ‘Research frontier’: existing knowledge we want to expand
- ⦿ Research question defined relative to ‘research frontier’
- ⦿ The importance of research question as measured by its distance to ‘research frontier’
- ⦿ How to identify ‘research frontier’?
  - Critical literature review
  - Identify gaps in knowledge
  - Identify clash between empirics and theory

# What is it about?

1. Literature review – a ‘definition’
2. What is its purpose?
3. Where/how do you start?
4. How do you actually DO IT?
5. What are the readers’ expectations?
6. What are your expectations?

# Literature review

Literature review is a **critical** account of what has been published on a topic by academics in a specific field or across academic fields

# Purpose of literature review (I)

- ◎ It conveys information to the reader who is
  - familiar with research topic or
  - partially unfamiliar with research topic
- ◎ It critically assesses existing literature – evaluates its strengths and weaknesses
- ◎ It is **NOT** a descriptive list of papers and/or their summaries.

# Purpose of literature review (II)

- It is a signalling device for you to demonstrate skills in two areas:

## **Information seeking**

ability to scan the lit. efficiently, and to identify useful articles and books

## **Critical appraisal**

ability to apply principles of analysis to identify unbiased and valid studies

# Purpose of literature review (III)

- ◎ It is also a device to **identify research frontier** by
  - Finding gaps – questions not asked before
  - Finding mistakes in methodology
  - Finding mistakes in data
  - Finding logical loopholes
  - Finding inconsistencies in the arguments
  - Identifying intellectual spillovers



# Sources for literature review

- ⦿ Identify key primary sources (e.g. govt. documents, newspaper articles) and secondary sources (e.g. books, journal articles) relevant to your topic early on
- ⦿ Use relevant search terms on library databases (to identify your sources (see Library tutorials for more on this))
- ⦿ Use resources that are not in the library e.g. Inter-library loans, National Library, blogs.
- ⦿ Remember, there is no target for the number of references you include, but you need to show the marker you have covered the literature that is relevant to your project.

# Where do I start? (I)

- ⊙ Old fashion – go to the library
- ⊙ Usual:
  - [scholar.google.com](http://scholar.google.com)
  - references in the papers/books
  - journals
  - conference proceedings
  - books

# Where do I start? (II)

- ⦿ What is the specific thesis, problem, or research question that my literature review helps to define?
- ⦿ What type of literature review am I conducting?
- ⦿ Am I looking at issues of theory? methodology? policy? quantitative research? qualitative research?

# Where do I start? (III)

- ◎ What is the scope of my literature review? What types of publications am I using (e.g., journals, books, government documents, popular media)?
- ◎ What time period am I interested in? What geographical area? What social setting? What materials?

# How do I do it: critical reading

- Reading critically means being **engaged** with the text:
  - A. Preview: What information does the abstract provide?
  - B. How it is organized?
  - C. What are the different sections in an empirical study?
  - D. What's the purpose of the introduction?

# How do I do it: critical reading

- Read Actively: annotate, highlight
- Develop a note-taking system (note cards; charts; Excel sheets)
- Take notes as you read or after you read
- Know when to stop reading and begin writing your review

From Lourdes Villarreal

<b>Authors</b>	<b>R Q</b>	<b>Purpose</b>	<b>Sample</b>	<b>Method</b>	<b>Findings</b>	<b>Other</b>
<b>Acemoglu et al AER (2002)</b>						
<b>O'Rourke et al IER (1997)</b>						
<b>Bernanke et al QJE (1996)</b>						
<b>Krugman JPE (1991)</b>						

# How do I do it: critical reading

- Read as many literature reviews as you can and look for patterns
- Note the expressions and terminology used
- Look for other terms used to mean “literature review,” like past or previous research

From Lourdes Villarreal



# Critical Thinking Skills

A critical examination involves summarization as well as analysis and evaluation.

**Summary:** Restating key ideas:

What is the issue or problem?

What is the research question and purpose?

Who did what (methodology)?

What was the sample? What were the major findings?

# Critical Thinking Skills

**Analysis:** Examining the parts of the whole:  
How can the data be classified/sorted/categorized?  
What are the trends?  
Similarities/differences in results, variables examined?

**Evaluation:** Making judgments:  
What does it all mean?  
What is missing?  
What was not considered?  
Limitations?  
Contributions?

# Summary, Analysis, & Evaluation

- Summary and Analysis (sorting and comparing)

**X, Y, and Z scholars found that ...**

- Summary and Analysis (sorting and comparing)

**Most studies on developmental education are quantitative.**

- Critique (evaluation of what you found):

**More qualitative studies are needed to understand students' perspectives.**

# Useful questions (I)

## **For each article/book, ask yourself:**

- Has the author formulated a problem/issue?
- Is it clearly defined? Is its significance clearly established?
- Could the problem have been approached more effectively from another perspective?

## Useful questions (II)

### **For each article/book, ask yourself:**

- What is authors' research orientation (e.g. interpretive, criticism ...)
- What is authors' theoretical framework (psychological, developmental ...)
- What is the relationship between theoretical and research perspectives?
- Has the author done lit. review? Are the contrary perspective papers included?

## Useful questions (III)

### **For each article/book, ask yourself:**

- How accurate and valid are the measurements? Is the analysis accurate and relevant? Are the conclusions justified?
- How does the author structure the argument?
- In what way does this article/book contribute to our understanding of the problem?

# Critical Writing (I)

- ⦿ a clear and confident refusal to accept the conclusions of other writers without evaluating the arguments and evidence that they provide
- ⦿ a balanced presentation of reasons why the conclusions of other writers may be accepted or may need to be treated with caution

# Critical Writing (II)

- ⦿ a clear presentation of your own evidence and argument, leading to your conclusion
- ⦿ a recognition of the limitations in your own evidence, argument, and conclusion.



# Finding your academic voice involves

- ⦿ healthy scepticism ... but not cynicism;
- ⦿ confidence ... but not 'cockiness' or arrogance;
- ⦿ judgement which is critical ... but not dismissive;
- ⦿ opinions ... without being opinionated;
- ⦿ careful evaluation of published work ... not serial shooting at random targets;
- ⦿ being 'fair': assessing fairly the strengths and weaknesses of other people's ideas and writing ... without prejudice;
- ⦿ making judgements on the basis of considerable thought and all the available evidence ... as opposed to assertions without reason."

Wellington J., Bathmaker A., Hunt C., McCulloch G. and Sikes P. (2005). *Succeeding with your doctorate*. London: Sage.

# Finding relevant literature

- ⦿ Check **references of references**: it can be a good idea to check through their reference lists to see the range of sources that they referred to.
- ⦿ Hand searching of journals will reveal ideas about focus, research questions, methods, techniques, or interpretations that had not occurred to you
- ⦿ Use software packages such as RefWorks to collect and store details of articles but also read abstracts to make sure they are relevant

# Exercise to help you use the library effectively for your literature review

- ⦿ Identify 2 - 3 key terms relevant to your dissertation (e.g. bilateral matching, growth econometrics) and use these to search the library catalogues for relevant resources.
- ⦿ Try to evaluate the relevance of the resources that you find in the library catalogues by using the title and the abstracts.
- ⦿ Identify a list of resources for your literature review including books, journal articles (databases if relevant to your topic), and other resources that are relevant.

# Writing up your literature review

- ⦿ Write up your review part way through your reading in order to identify gaps/weaknesses
- ⦿ Keep the focus on your study and not the literature
- ⦿ Make sure that the literature review is framed by your research questions
- ⦿ Where possible, use original sources rather than other people's review of literature(s)

# After the first draft (I)

## Ask yourself questions:

- How good was my literature search?
- Has it been wide enough to include relevant and narrow enough to exclude irrelevant materials?
- Have I critically analysed the literature I use?

# After the first draft (II)

- Have I assessed them for their strengths and weaknesses?
- Have I cited studies contrary to my perspective?
- Will the reader find my lit. review relevant, appropriate and useful?