
How to do a critical literature review?

EPFL



Litterature review

■ What is a critical literature review ?

- A literature review is a review of the state of art, summary of previous work in your field.
- It have a logical structure: objectives and purpose need to be clear to the reader with a ADDED dimension = YOUR INTERPRETATION

■ What it means to be critical ?

- To have the capacity to evaluate what you read and to relate what you read to other information
- Assume authors are knowledgeable, while remaining alert for possible flaws in the reasoning
- To find the weaknesses and the strengths ? (date of paper, methods used ...)

Methodology

1. Define the research question
2. Search for literature (See separate file)
 - Google scholar → peer-reviewed articles
3. Critical reading of the paper
 - Is this reading relevant to your study ?
 - Make notes :
 1. What are the authors trying to do writing this ?
 2. Key points of this paper
 3. How convincing is what the authors are saying?
 4. In conclusion, what use can I make of this?
 - Compare with other papers on the same topic

Example

- Title, date, authors, publication editor information

Structure and physical properties of hardened Portland cement paste
- 1958 - T.C. Powers

Journal of the American Ceramic Society, vol41. N°1

- Why am I reading this ?

Information about pore structure in cement paste

- Methods and Materials used ?

Water-vapor adsorption by BET after freezing of water → Can create damages

- Assumptions / Results

Simplified model – Consider only CSH as hydrated products

Linearity in the gel porosity development

- Comparison

In 2013, Muller *et al.* used a non damageable method to track water in pore structure. They can distinguish water in CSH gel and in interlayer and showed a non linear behavior.

Bibliography

- *Critical reading and Writing for Postgraduates* by Wallace and Wray , Sage Publications (2011)
- *Doing your literature review : traditional and systematic techniques* by Jesson, Matheson and Lacey, Sage Publications (2011)