



5-1 Systematic Literature Review

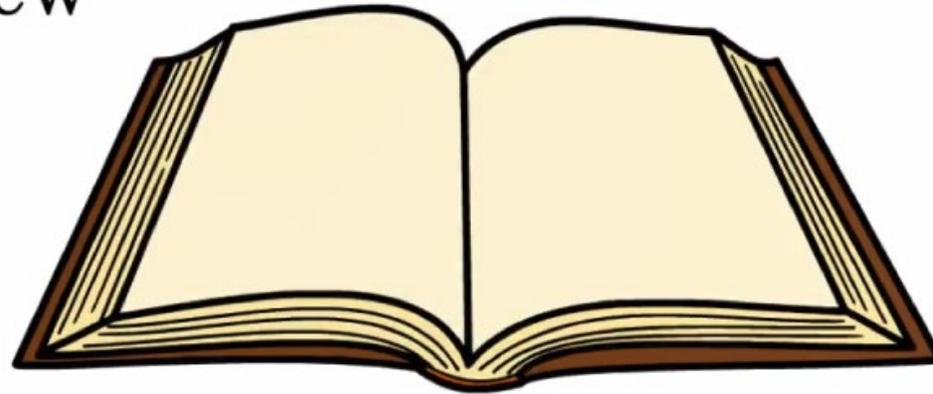
Knut Hinkelmann



A Systematic Literature Review is different from a Literature Review

Systematic
Literature
Review

Literature
Review



Conducting a Systematic Literature Review

<https://www.youtube.com/watch?v=WUErib-fXV0>



A Systematic Literature Review is different from a Literature Review

- A **literature review** provides a *high level summary* of the literature in the field connected to your proposed topic of research.
- It is a *general synthesis* of what has been done in the research area, by *whom*, *highlights what past research* tells us about the topic and *identifies gaps and tensions* in the field
- A **systematic literature review** begins with *an intentional and purposeful collection of data* (literature).
- **Criteria** are used *to ensure inclusion* of potential work such as the *scope* of the review, *types of data* (literature) to be included and *search terms* any other specification such as language

SUMMARY OF RESEARCH

SYNTHESIS

GAPS

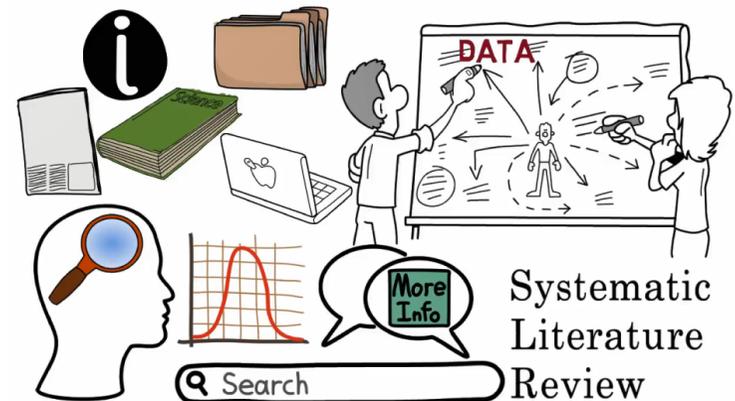
Literature Review



WHAT? WHO?

TOPIC

HIGHLIGHTS



Systematic Literature Review

- A systematic review attempts to collate **all** empirical evidence that fits pre-specified eligibility criteria in order to answer a **specific research question**. The key characteristics of a systematic review are:
 - ◆ a clearly defined question with inclusion & exclusion criteria;
 - ◆ rigorous & systematic search of the literature;
 - ◆ critical appraisal of included studies;
 - ◆ data extraction and management;
 - ◆ analysis & interpretation of results;
 - ◆ and report for publication.

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Stages of a Systematic Literature Review

Stage I–Planning the review

Phase 0 - Identification for the need for a review

Phase 1 - Preparation of a proposal for a review

Phase 2 - Development of a review protocol

Stage II–Conducting a review

Phase 3 - Identification of research

Phase 4 - Selection of studies

Phase 5 - Study quality assessment

Phase 6 - Data extraction and monitoring progress

Phase 7 - Data synthesis

Stage III–Reporting and dissemination

Phase 8 - The report and recommendations

Phase 9 - Getting evidence into practice

Clarke, M. and A. D. Oxman (Eds) (2001). *Cochrane Reviewers' Handbook 4.1.4* [updated October 2001], The Cochrane Library, Oxford.

What does it take to do a systematic review?

- **Time:** On average, systematic reviews require **18 months**.
- **A team:** A systematic review **can't be done alone!** You need subject experts, librarians, reviewers, a statistician
- **A clearly defined question**
- **Comprehensive literature searches:** identify appropriate databases, conduct comprehensive and detailed literature searches that can be duplicated.
- **A written protocol** outlining the study methodology: rationale for the review, key questions, inclusion/exclusion criteria, literature searches, data abstraction/data management, assessment of methodological quality of individual studies, data synthesis, and grading the evidence for each key question.
- **Report**

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Shall I do a Systematic Review?

- The term systematic review is sometimes loosely used. Consider these questions:
 - ◆ Do I have a clearly defined question with established inclusion and exclusion criteria?
 - ◆ Do I have a team of at least three people assembled?
 - ◆ Do I have time to go through as many search results as we might find?
 - ◆ Do I have resources to get foreign language articles appropriately translated?
- If you answered “No” to any of the questions, a traditional literature review will be more appropriate to do.

<https://libguides.brown.edu/Reviews/about>

Traditional vs. Systematic Literature Review

	Traditional Literature Review	Systematic Review
The review question/topic	Topics may be broad in scope; the goal of the review may be to place one's own research within the existing body of knowledge , or to gather information that supports a particular viewpoint.	Starts with a well-defined research question to be answered by the review. Reviews are conducted with the aim of finding all existing evidence in an unbiased, transparent and reproducible way.
Searching for studies	Searches may be ad hoc , and based on what the author is already familiar with. Searches are not exhaustive or fully comprehensive.	Attempts are made to find all existing published and unpublished literature on the research question. The process is well-documented and reported.
Study selection	Often lack clear reasons for why studies were included or excluded from the review.	Reasons for including or excluding studies are explicit and informed by the research question.
Assessing the quality of included studies	Often do not consider study quality or potential biases in study design.	Systematically assess risk of bias of individual studies and overall quality of the evidence, including sources of heterogeneity between study results.
Synthesis of existing research	Conclusions are more qualitative and may not be based on study quality.	Base conclusion on quality of the studies, and provide recommendations for practice or to address knowledge gaps.

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- For deriving the research problem and the knowledge gap, you usually make a traditional literature review
- You can additionally make a systematic literature review and publish it as a paper and write a chapter
 - ◆ Should contribute to your research goal
 - ◆ Effort!