

MIT 7116 RESEARCH METHODOLOGY

Module 03: Reviewing Literature

Dr. John Ngubiri
ngubiri@cit.ac.ug

Makerere University

Introduction to Literature Review

- LR Core in research
- Research is about adding to the body of knowledge

Important to note

You cannot add knowledge to the body of knowledge you don't know. Literature review must prove to the reader that the writer knows the subject matter. Otherwise work is not done!!

- Any "contribution" not backed by a convincing literature review is speculation and only correct by chance

Expectation

- Search for all literature related to your objectives
- Read and understand the results, methods and the reasons behind decisions made
- Report in relation to your objectives. Specifically
 - The state of the art/practice
 - How the problems/objectives come up
 - The choices made where the options existed
 - The gaps that exist
 - The part of gaps you want to fill and how (Research Questions)
- Ensure logical organisation and flow of the narration

Common Challenges

- The mass of knowledge is quite large. Reading it at ago is hard
- Nearly every paper is original. So the core is new. You have to learn it
- The technical language is some times not friendly. You have to endure
- Authors do not write in the way you want. Do not adjust their findings
- Lack of consistence
 - Linkages lost
 - Concepts forgotten
 - Flow disrupteda real mess

Paper Search

- Employ search engines
 - Google Scholar
 - Cite seer
 - Research gate
- For a paper you suspect to be useful
 - Read abstract - does it promise what you want?
 - Read end of Sect 1. - which section has what you want?

Very few papers will require you read cover to cover
- Make follow up or "relevant papers"
 - Papers that are related to it (eg in scholar.google)
 - Papers that cite it
 - (Some) papers by the same author
 - (Some) papers by the same publication avenue
 - Papers by the same research group

Paper Search

- Un available papers
 - Mostly accessible in University intranet
 - Library can get them for you
 - You can mail the author You can check author website

Divide and conquer

- The Block of literature required is normally big
- You cannot search for it at ago
- So search for it in bits
- In iterest of organisation, each bit should be a section

Note

- Having literature review as one block is a sign of lack of organisation and uncomprehended study
- Having one citation per paragraph implies you are just trying to force things together
- Sections in literature review must have logical flow

Sectioning

- Sectioning literature helps in reading and understanding
- Has to be done Carefully
- After understanding the research ambition objectives. Ask your self "what must one know to be able to achieve the objectives"
- The answers, should constitute the core sections
- You may need some 1 – 3 sections to introduce and end the chapter

Example

Topic

Improving Network throughput by router hybridisation

What one has to know

- 1 Computer Networks, roles and types
- 2 Performance evaluation metrics in network
- 3 Routing algorithms
- 4 Relative performance of Routing algorithms
- 5 Simulation Platforms

May add Introduction, Research gaps (in line with objectives) and Conclusions. **Search literature per section**