

RESEARCH PROCESS AND LITERATURE REVIEW

RESEARCH PROCESS

- Background to the study
- Problem statement
- Objectives/Research questions
- Justification and scope
- Study area
- Literature review
- Theoretical/Conceptual framework
- Methodology
- Results and discussion
- Conclusion and recommendations

THE LITERATURE REVIEW

- * Is a critical synthesis of previous research. The evaluation of the literature leads logically to the research question
- * Provides a background to the study being proposed: theoretical background – past, present methodology and research methods previous findings and gives a rationale and relevance of the current study

THE LITERATURE REVIEW cont'd

- * It is a survey of scholarly articles, books and other sources (e.g. dissertations, journal articles, conference proceedings) relevant to a particular issue, area of research, or theory
 - Textbook, magazine, Bulletin are not suggested
- * It is providing a description, summary, and critical evaluation of each work (each research article)
- * The purpose is to offer an overview of significant literatures published on a topic(overview the state-of-the-art).

THE LITERATURE REVIEW

Definition

- * A **Literature review** is a body of text that aims to review the critical points of current knowledge on a particular topic.
- * Most often associated with science-oriented literature, such as a thesis, the literature review usually precedes a research proposal, methodology and results section.
- * Its ultimate goal is to bring the reader up to date with current literature on a topic and forms the basis for another goal, such as the justification for future research in the area.

WHY REVIEW LITERATURE

It enables us:

- Distinguish what has been done from what needs to be done;
- Synthesize and gain a new perspective;
- Establish the context of the topic or problem;
- Rationalize the significance of the problem;
- Identify methodologies and techniques that have been used;
- Place the research in a historical context to show familiarity with current developments.

Importance of literature review survey in a research process

- Review of literature provides an understanding of the current study by critically reviewing existing literature on a topic of interest.
- It also provides an opportunity for revealing the existing research gaps and in establishing the significance of the current study. That is, reviewed literature informs the focus of a study
- Literature review provides a means of linking back the results of the current study to previous findings for confirming and disconfirming existing evidence. It provides a benchmark for linking current research findings to the existing knowledge.



Importance of literature review survey in a research process cont'd

- To avoid reinventing the wheel (at the very least this will save time and it can stop you from making the same mistakes as others)
- To identify methods that could be relevant to your project
- To carry on from where others have already reached (reviewing the field allows you to build on the platform of existing knowledge and ideas)
- To identify other people working in the same fields (a researcher network is a valuable resource)
- To increase your breadth of knowledge of your subject area

Importance of literature review survey in a research process cont'd

- To provide the intellectual context for your own work, enabling you to position your project relative to other work
- To identify similar works in your area
- To identify opposing views
- To put your work into perspective
- To identify similar works in your area
- To demonstrate that you can access previous work in an area
- To identify information and ideas that may be relevant to your project

How to Find Relevant Literatures

- Search with the key-word of the research topic.
 - Use broader keyword (term) if the documents retrieved are few or none.
 - Use narrower key-word if the documents retrieved are too much.
 - Use synonym or related terms to enhance the search
 - Employ Boolean operator: AND, OR, NOT to control the search
- Pick the most recent and related article to start with.
- Start looking for other related articles through:
 - New search terms found in the related articles
 - List of references in the chosen article



Elements of Literature to Review

- An overview of the subject, issue or theory under consideration, along with the objectives of the literature review
- Division of works under review into categories (e.g. those in support of a particular position, those against, and those offering alternative theses entirely)
- Explanation of how each work is similar to and how it varies from the others
- Conclusions as to which pieces are best considered in their argument, are most convincing of their opinions, and make the greatest contribution to the understanding and development of their area of research

HOW TO CARRY OUT A LITERATURE REVIEW

How to Review Literatures

- * **Compare:** try to find the similarities among literatures
 - Explain how each article similar to the others.
- * **Contrast:** try to find the differences among literatures
 - Explain how each article differ to the others
- * **Criticize:** put your own opinion on what is written in the literatures
 - Criticize the strength and weakness of the research
- * **Synthesize:** combine several literatures into an idea
- * **Summarize:** restate the article with your own words in a concise way

HOW TO CARRY OUT A LITERATURE REVIEW cont'd

Examples

- * **Criticize:** According to Hadi (2005), the Executive Information Systems (EIS) can help leaders make decisions more accurate about 90% compared to not using the EIS, but does not explain how much EIS sample surveyed and how the decision category used as a reference.

HOW TO CARRY OUT A LITERATURE REVIEW cont'd

Examples

- * **Synthesize:** According to Hadi (2005) the success of an Executive Information System (EIS) is determined by the accuracy incidence of each Executive's needs while according to Amir (2006), the success of EIS is determined by the clarity of a firm's core business. From these opinions, it can be said that the critical success factors for EIS include: the accuracy with which it captures the needs of leadership, and clarity company's core business

HOW TO CARRY OUT A LITERATURE REVIEW cont'd

Examples

- * **Comparing:** "According to a study conducted by Andrew (1999), the performance of the XYZ is determined by ABC. This is in line with the results of teams of researchers previously performed by the Savoy (1995), Salton (1990), etc. "

HOW TO CARRY OUT A LITERATURE REVIEW cont'd

Examples

- * **Contrasting:** "Results of research conducted by Santoso(2006) suggests that learning style influences the uptake of ICT in education. This is contrary to the results of other teams of researchers who say that the style does not influence the uptake of ICT in education (YYYY,98; XXXX, 20010 “).

Where to Place Your Literature Review

- * Usually it's placed at Chapter 2 of your thesis or dissertation
- * A literature review may constitute an essential chapter of a thesis or dissertation
- * Literature review should logically be connected to research problems, research methodology, analysis and conclusion

HOW TO CARRY OUT A LITERATURE REVIEW

- * Introduction
- * Body
- * Conclusion

INTRODUCTION

- This usually involves reporting what is known about a topic and what is problematic about it. Knowledge deficits are crucial to literature reviews
- Deficits are spoken about in terms of effects on particular populations, gaps in the research, and other contexts where the research could be useful.
- The introduction will also include a statement that outlines what issues within the broader topic (main ideas and subtopics) will be presented and in what order.

BODY OF LITERATURE REVIEW

- Order main ideas from general to specific, deciding which sources have contributions to make to which concepts.
- Present more specific information from the sources, using in-text citation, to discuss the main ideas in more detail
- Point out areas of agreement or debate among sources.
- Body paragraphs should work to not only summarize what sources have said, but to demonstrate relationships between them
- Look for patterns in methods, subjects tested, results, conclusions and assumptions researchers have made about the topic
- Usually themed in line with the objectives of the study

CONCLUSION TO LITERATURE REVIEW

- * Needs to sum up the main findings of your research into the literature. The findings can be related to the aims of the study you are proposing to do.
- * Needs to concisely articulate the gaps found within the literature reviewed

SELECTION OF LITERATURE

- * Be organized around and related directly to the thesis or research question you are developing;
- * Synthesize results into a summary of what is and is not known;
- * Identify areas of controversy in the literature;
- * Formulate questions that need further research.

SELECTION OF LITERATURE

- * Is the purpose of the review clearly identified?
- * Does your writing include clear definitions and identify the limits of the research?
- * Does the review focus on the most recent developments/research for that topic?
- * Does the review make use of the primary sources?

COMMON MISTAKES IN LITERATURE REVIEW

- Simply summarizing information from various sources
- Using words that indicate reporting while failing to integrate findings from different sources
- Not keeping bibliographical information
- Reading and not writing as you read
- Trying to read everything-not narrowing down to your objectives
- Incomplete referencing (paraphrasing and direct quotes)
- Not making intelligent conclusions from the literature reviewed –longwinded and confusing to the reader

SIMPLE WRITING TIPS

- Express one idea in a sentence.
- Group sentences that express and develop one aspect of your topic into a paragraph. A new paragraph for another aspect or another topic. Avoid very short one sentence paragraphs.
- Correct use of punctuation. Incorrect use of punctuation can affect the meaning.
- Use words that link paragraphs and which show contrast and development to your argument e.g. 'hence', 'therefore', 'but', 'thus', 'as a result', 'in contrast'.

CITATION AND REFERENCING STYLES

- * Institute of Electrical and Electronics Engineers (IEEE)
- * APA Style *NB: there are various APA versions/editions-use the specified version*
- * Harvard referencing style
- * CHICAGO style
- * Modern Language Association (MLA)
- * Council of Science Editors (CSE)

IEEE Referencing

Technological advancement like the availability of the internet, social networks, usage of computers, mobile phones and other electronic communication devices have led to massive collection of data. [1] Defines big data as possessing one or more qualities of the 3 V's of Velocity, Variety and volume. Velocity means the pace at which the big data is being generate, Variety meaning the different formats like videos, images, audio and others and volume meaning the mass accumulation of the data. Over the last few year, big data increased immensely with projection that by 2025 big data market will have hit 229.4 billion \$[2].

Big data is expanding exponentially. Data grows up by 10 times for every 5 years [3]. It is anticipated that 2025 will see 100 Billion IoT devices connected to the internet [4] thus impact the global economy by more than 11 Trillion Dollars.

IEEE Referencing

References

- [1] G. Phillips-wren, *Advances in Data Science: Methodologies and Applications*, vol. 189. 2021.
- [2] H. Hassani, X. Huang, and E. Silva, “Banking with blockchain-ed big data,” *J. Manag. Anal.*, vol. 5, no. 4, pp. 256–275, 2018, doi: 10.1080/23270012.2018.1528900.
- [3] “Big data survey, technologies, Opportunities and challenges.pdf.” .
- [4] B. A. Tama, B. J. Kweka, Y. Park, and K. H. Rhee, “A critical review of blockchain and its current applications,” *ICECOS 2017 - Proceeding 2017 Int. Conf. Electr. Eng. Comput. Sci. Sustain. Cult. Herit. Towar. Smart Environ. Better Futur.*, pp. 109–113, 2017, doi: 10.1100/ICECOS.2017.8167115.

PLAGIARISM

- * Plagiarism and what amounts to it in research and scholarly writing
- * own, without attribution in a form appropriate for the medium of presentation, are committing theft of intellectual property and may be guilty of plagiarism and thus of research misconduct.
- * This statement applies to reviews and to methodological and background/historical sections of research papers as well as to original research results or interpretations.



THANK YOU