Literature Review

BT 623 Research Methodology



Prof. Utpal Bora

Department of Biosciences and Bioengineering Indian Institute of Technology Guwahati Kamrup, Assam- 781039, India

Email: ubora@iitg.ac.in



Literature Review: What it is and what it does?

A written document that develops a case to establish a thesis.

This case is based on a comprehensive understanding of the current knowledge of the topic.

A literature review **synthesizes current knowledge** pertaining to the research question.

This synthesis is the foundation that, through the use of **logical** argumentation, allows the researcher to build a convincing thesis case.

Definition

A literature review is a written document that presents a logically argued case founded on a comprehensive understanding of the current state of knowledge about a topic of study. This case establishes a convincing thesis to answer the study's question.

Literature reviews are essential for:

- (a) identifying what has been written on a subject or topic;
- (b) determining the extent to which a specific research area reveals any interpretable trends or patterns;
- (c) aggregating empirical findings related to a narrow research question to support evidence-based practice;
- (d) generating new frameworks and theories; and
- (e) identifying topics or questions requiring more investigation (Paré, Trudel, Jaana, & Kitsiou, 2015).

Simple Literature Review

A written document that critically reviews the relevant literature on a research topic, presenting a logical case that establishes a thesis **delineating what** is currently known about the subject.

Purpose

argue a position about the current state of knowledge

Complex Literature Review

A review that extends the work of the simple review to identify and define an unanswered question requiring new primary research.

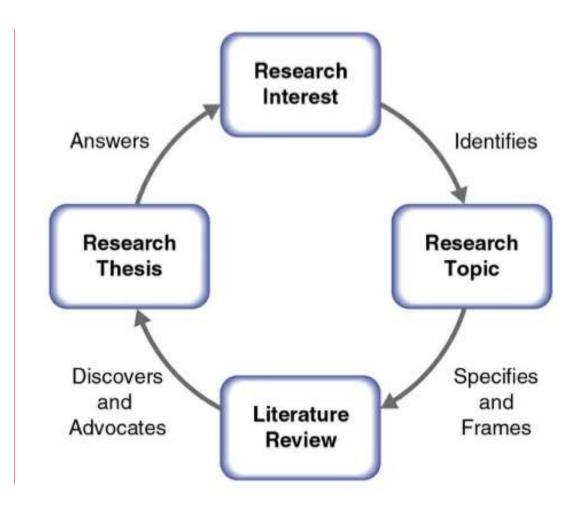
uncover a research problem for further study

Product: Development of a case that argues what is known about the topic.

Conclusion: A thesis statement that answers the question posed by the research interest.

Required for class research assignments and master's degree thesis projects.

Simple Literature Review



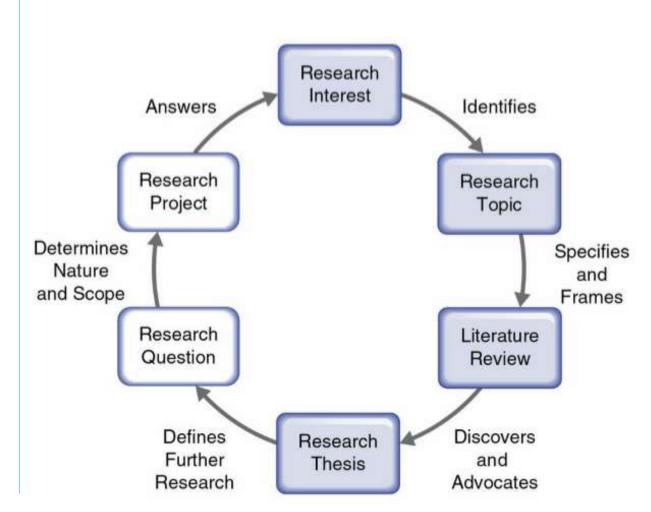
Complex Literature Review

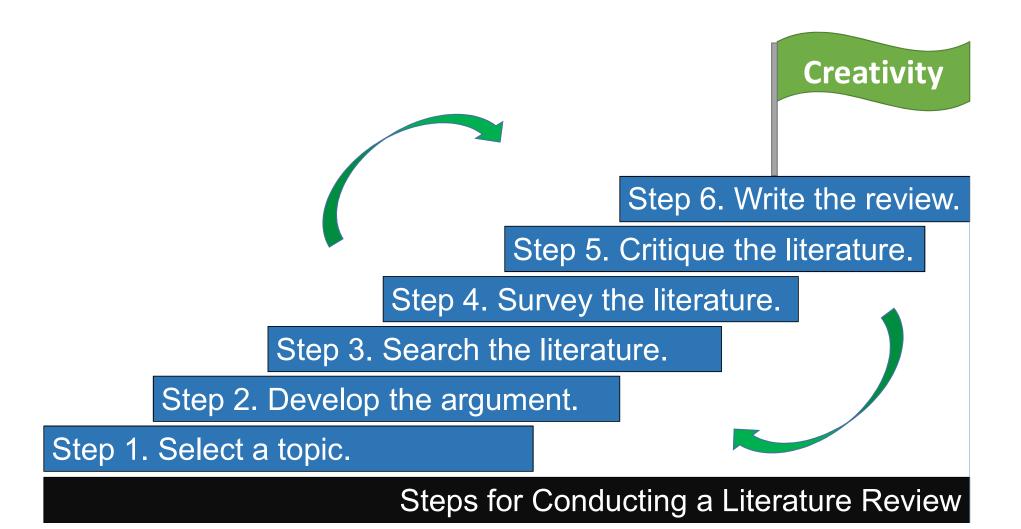
Product

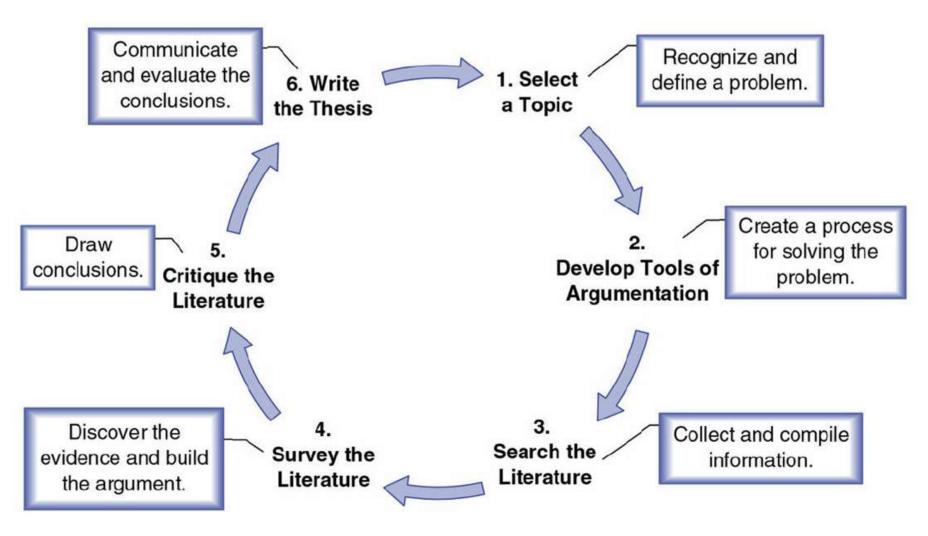
In addition to presenting the current state of knowledge about a topic it must also argue how this knowledge reasonably leads to uncovering a problem or to a question requiring original research.

Conclusions

- i. define the research question
- ii. frame the appropriate methods to be used for conducting the research.







Literature Review Process: A Critical-Thinking Process

Step 1. Select a Topic

- Task 1. Identify a Subject for Study
- Task 2. Translate the Personal Interest or Concern Into a Research Query
 - Activity 1. Focus a Research Interest
 - Activity 2. Limit the Interest
 - Activity 3. Select a Perspective
 - Activity 4. Reflect and Develop the Query Statement

- Task 3. Link the Research Query to the Appropriate Discipline
 - Activity 1. Become Familiar With Academic Terminology Concerning the Study Topic
 - Activity 2. Gain Entry to the Literature Concerning the Topic of the Study
 - Activity 3. Consult With the Research Librarian
- Task 4. Write the Preliminary Research Topic Statement

Step 2. Develop the Tools of Argumentation

- Concept 1. Building the Case for a Literature Review
- Concept 2. Arguments—The Basics
- Concept 3. Evaluating the Basic Parts of an Argument
- Concept 4. Understanding Claims
- Concept 5. Building Evidence
- Concept 6. Warranting: Logically
 Connecting the Evidence to the Claim
- Concept 7. Complex Claims

Step 3. Search the Literature

- Task 1. Select the Literature to Review
- Task 2. Conduct a Literature Search
 - Activity 1. Manage Your Data
 - Activity 2. Scan the Literature
 - Activity 3. Skim the Literature
 - Activity 4. Map Your Reference Contents
 - Activity 5. Create Subject Memoranda
- Task 3. Refine Your Topic

Step 4. Survey the Literature

- Task 1. Assemble the Collected Data
 - Activity 1. Catalog the Data
- Task 2. Organize the Information
 - Activity 1. Arrange Information to Build Evidence
 - Activity 2. Organize the Information and Build Claims
- Task 3. Analyze the Patterns of Data
 - Activity 1. Map the Discovery Argument
 - Activity 2. Analyze the Argument

Step 5. Critique the Literature

- Concept 1. Making the Case for the Literature Review
- Concept 2. Descriptive Argument
 Patterns: Factual Reasoning
- Concept 3. Implicative Argument Patterns: Implicative Reasoning
- Concept 4. The Implicative Argument:
 Nine Basic Patterns
- Concept 5. Backing

- Doing a Critique of the Literature
- Task 1. Determine Logic Pattern Inferred by Study Topic
- Task 2. Reframe Claims to

 Meet Conditions Required
 by Logic Type
- Task 3. Build the Advocacy Argument
- Concept 6. Fallacies
- Concept 7. The Case Is Everything

Step 6. Write the Review

- Task 1. Write to Understand
 - Activity 1. Review Notes and Memoranda
 - Activity 2. Exploratory Write
 - Activity 3. Outline
 - Activity 4. Write Preliminary Draft
- Task 2. Write to Be Understood
 - Activity 1. Write the First Draft
 - Activity 2. Revise Working the Second and Third Drafts
 - Activity 3. Complete the Final Draft
- Submit the Literature Review

Write down the topic of your research in detail

Why do you want to do research in this problem/topic?

- A. Topic offered to you by your guide
- B. Personal interest
- C. Both A & B above
- D. None of the above

thankyou