

Introduction to Research Methods

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MGM333

Introduction to Research Methods

Lecture 2



Introduction to Literature Review

Roles of Literature Reviews

- As a research method in itself
- Preparation for further empirical investigation

Purpose

- Identify what is already known
- Determine what needs to be explored further



The Adventure of Literature Review

Literature Review as a Runway

- Clarifies your own research aims
- Provides depth and breadth of subject knowledge
- Forms the theoretical framework for empirical investigation
- Contributes to research design



The Adventure of Literature Review

Exploration Across Disciplines

- Investigate within and beyond academic discipline

A Cross-Disciplinary Exploration of Entrepreneurship Research

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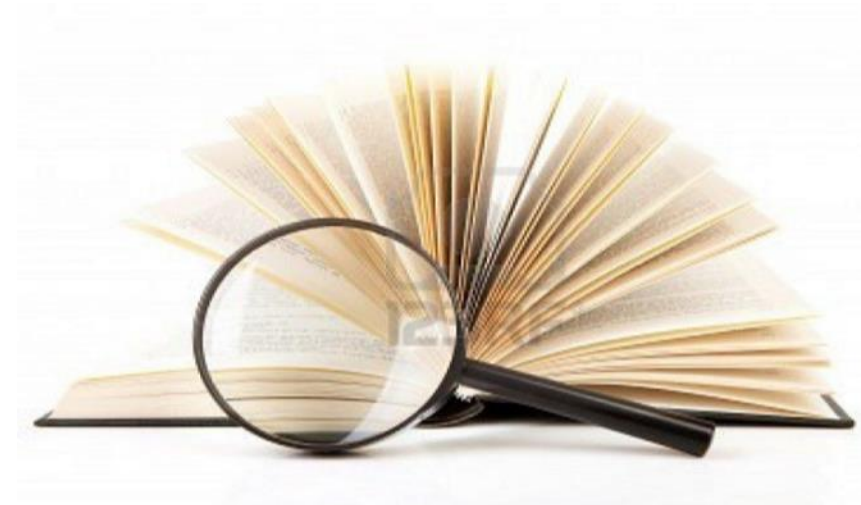
The eclectic and pervasive benefits of entrepreneurship are generating research questions that interest scholars in a variety of disciplines. These questions have been primarily examined within the context of a scholar's home discipline while ignoring insights from other disciplines. This approach has left entrepreneurship research as a widely dispersed, loosely connected domain of issues. In this review, the authors explore entrepreneurship research in accounting, anthropology, economics, finance, management, marketing, operations management, political science, psychology, and sociology. They seek to identify common interests that can serve as a bridge for scholars interested in using a multitheoretic and multimethodological lens to design and complete entrepreneurship studies.

Keywords: entrepreneurship; theory; cross-disciplinary review; survey

The Adventure of Literature Review

Critical Discussion

- Review all significant, publicly available literature
- Ensure no significant work is missed
- Record, appraise, and synthesize literature



Literature Review

The Adventure of Literature Review

Machi and McEvoy's Six Steps

1. Topic selection
2. Literature search
3. Developing an argument
4. Literature survey
5. Critique
6. Write

Literature Review Process Skills

1. Information Seeking and Retrieval

- Ability to search appropriate sources and scan the literature efficiently using manual or online methods

- Identify and obtain a set of useful articles, chapters, and books

2. Evaluation

- Ability to judge a source based on criteria including the source itself, the author, and the subject



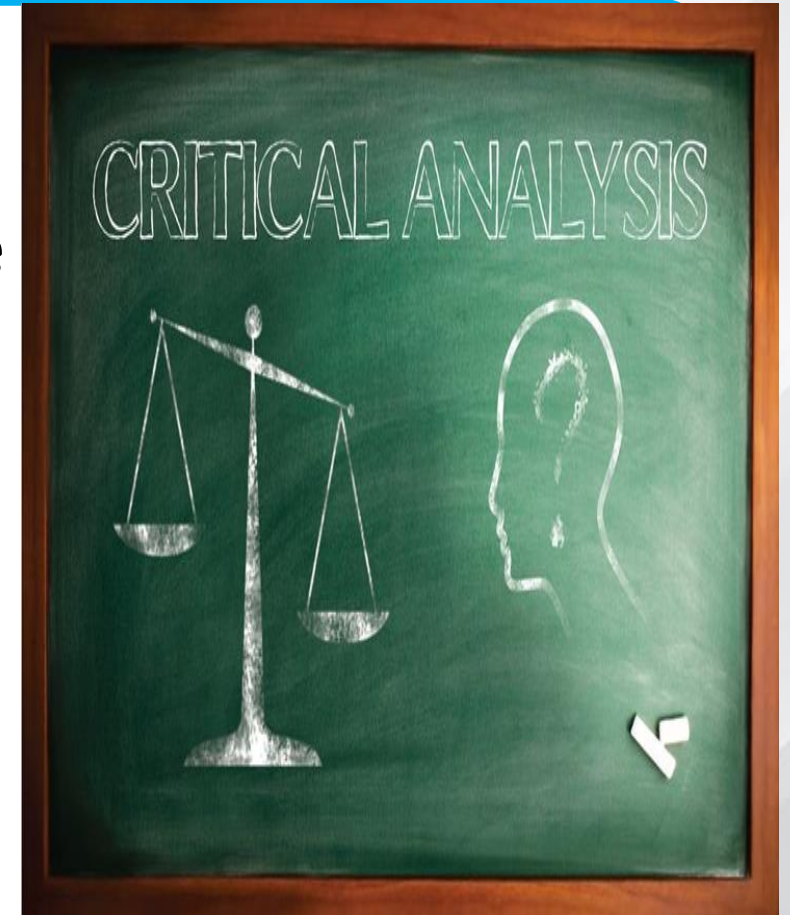
Literature Review Process Skills

3. Critical Analysis

- Ability to examine and analyze the content of the literature systematically

4. Research Synthesis

- Ability to synthesize the various concepts and evidence into a structured piece of discursive prose
- Provides context and background on your topic area



Information Searching and Retrieval

- When planning a search on any topic area, it is important to be familiar with the tertiary sources (bibliographies of bibliographies), which will help you identify the secondary sources (such as bibliographies, indexes, and abstracts), which will then lead you to the primary sources for your review.
- Formulate a strategy for your search, starting with a loose framework or research question, allowing it to guide your initial search.

Formulating a Strategy

- Begin with a loose framework, such as a research question, to guide your initial search.
- As you build up knowledge, a stronger framework will emerge. The process is iterative: adjust your research question as necessary.
- The literature review helps to formulate your research question more precisely.

Defining Search Objectives

- Clearly state the research question(s) and determine why information is needed and how it will be used.
- Establish parameters for your search, such as country of publication, language, date, or type of material.
- Example research question: 'What is the role of Artificial Intelligence in driving business success?'

Analyzing Keywords

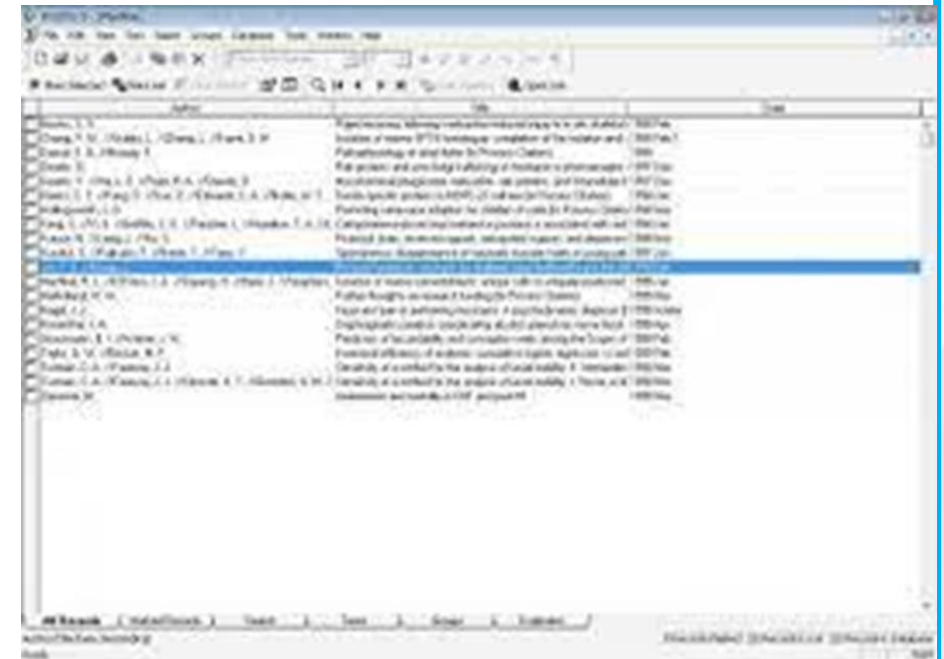
- Analyze the keywords within each topic group to ensure the use of the best possible search terms.
- Examine the first useful items identified for other keywords and concepts, and carry out subsequent searches to locate all relevant items

Chapter

1

Recording Sources

- Maintain a full record of all potentially useful sources, including bibliographic details and search terms used.
- Use dedicated software like Endnotes or ProCite, or design a database to store the data.
- Keep a log of your current search, which can be referred to in subsequent searches.



Evaluation of Retrieved Information

- After retrieving information, it's important to examine the quality of the sources.
- Use criteria to evaluate the quality, especially with the increased availability of published information online.

Authority

- Consider the authority of the creator(s) of the document:
 - Previous research and stature
 - Organizational affiliation and political stance
 - Credibility and reputation among peers
- Internet materials often lack authorship information; treat anonymous documents with caution.
- Check for peer-review and editorial policies.



Artificial intelligence in business: State of the art and future research agenda

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Scope

- Evaluate the scope, aims, objectives, and methods of the work:
 - Reliable research should clearly state these elements.
 - Works that do not provide such information should be regarded with caution.

The role of artificial intelligence in effective business operations during COVID-19

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Abstract

Purpose – The pressure to survive in a highly competitive market by using artificial intelligence (AI) has further demonstrated the need for automation in business operations during a crisis, such as COVID-19. Prior research finds managers' mixed perceptions about the use of technology in business, which underscores the need to better understand their perceptions of adopting AI for automation in business operations during COVID-19. Based on social exchange theory, the authors investigated managers' perceptions of using AI in business for effective operations during the COVID-19 pandemic.

Design/methodology/approach – This study collected data through a survey conducted in China ($N = 429$) and ran structural equation modeling to examine the proposed research model and structural relationships using Smart PLS software.

Findings – The results show that using AI in supply chain management, inventory management, business models, and budgeting are positively associated with managers' satisfaction. Further, the relationship between managers' satisfaction and effective business operations was found to be positively significant. In addition, the findings suggest that top management support and the working environment have moderating effects on the relationship between managers' satisfaction and effective business operations.

Practical implications – The results of this study can guide firms to adopt an AI usage policy and execution strategy, according to managers' perceptions and psychological responses to AI.

Social implications – The study can be used to manage the behavior of managers within organizations. This will ultimately improve society's perception of the employment of AI in business operations.

Originality/value – The study's outcomes provide valuable insights into business management and information systems with AI application as a business response to any crisis in the future.

Keywords Artificial intelligence, Business operations, COVID-19, Managers' satisfaction

Paper type Research paper

Purpose

- Consider why the work was produced
 - The purpose may indicate its reliability.
- Develop an understanding of your topic and become familiar with key researchers and authors.

Chapter

1

Critical Analysis

- Critical analysis involves 'reading with a purpose'.
- Every item read informs your argument and establishes the background and justification for your work.



Chapter

1

Components of an Academic Argument

- An academic argument should have
 - A claim (or conclusion)
 - A reason (interpretation of data)
 - Evidence (data) to support the claim
 - Qualifications of the claim



Identifying a Claim

- A claim is the essence of an argument, the conclusion the writer intends to demonstrate.
- Example: '**Artificial Intelligence is driving business success.**'
- Look for the highest level statement, often found in the title or opening paragraph.

Understanding Reasons

- Reasons are the first building blocks of an argument and are the writer's interpretation of the evidence.
- **Questions to ask**
 1. Is the reason relevant to the claim?
 2. Is the reason effective?
 3. Is the value invoked by the reason universal or selective?
- Example: **'Efficiency and productivity gained from using AI in business are high'**

Evaluating Reasons

- Relevant reasons must have a clear link to the claim.
- Effective reasons must relate to a believable value.
- Subjective reasons are less convincing unless the reader shares the same value judgement.
- Example: **“High tech sector have the highest added revenue through the use of generative AI, between 240 and 460 billion U.S. dollars”**

Chapter

1

Providing Evidence

- Evidence supports the reasons and strengthens the argument.
- Evidence must be accurate, credible, and sufficient.

Questions to ask

1. Is the data credible?
 2. Was the data collected from reliable sources?
 3. How was the data interpreted?
- Example: **"Businesses investing in AI are experiencing a 3-15% revenue increase and a 10-20% uplift in sales ROI (McKinsey, 2023)."**

Chapter

1

Understanding Qualifiers

- Claims can be qualified or unqualified.
- Qualified claims acknowledge potential limitations, making them more reliable.
- Look for qualifiers like usually, many, most, often, and a few.
- Example: '**Many businesses investing in AI gain more revenue growth**'

Drawing Conclusions

- Analyze the text and draw your own conclusions.
- Formulate your own argument based on the synthesis of reviewed articles.
- Ensure your writing can withstand the same level of critical analysis

Marking Up the Text

- Annotate the text to identify components of the argument:
 - **Claim:** Underline
 - **Reason:** Square brackets [...]
 - **Evidence:** Asterisks * ... *
 - **Qualifiers:** Encircle

Using a Template for Analysis

- After reading a text, note what you marked up and keep a reference of the source.
- Use a structured template to make notes after reviewing an article or paper.
- Example: Use a table to list claims, reasons, evidence, and qualifiers for each source.

Full citation			
Scope			
Purpose			
Method			
Claim	Qualifiers	Evidence	Reason

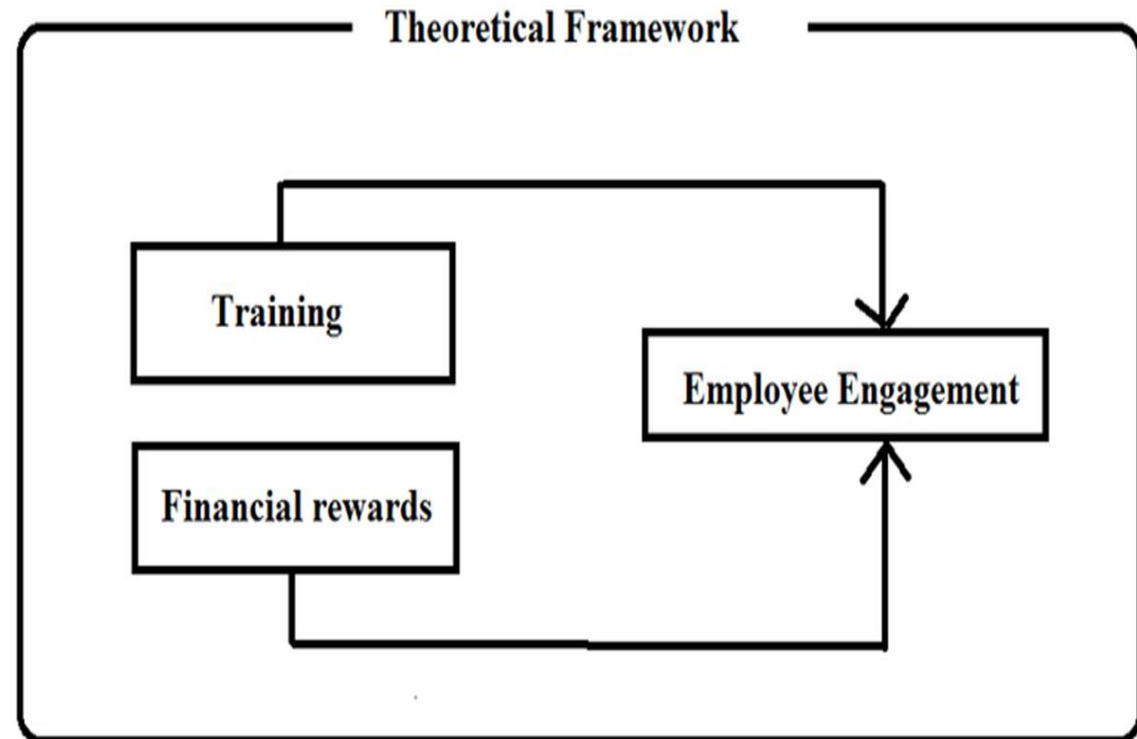
Figure 2.1 Evaluation and critical analysis framework

Chapter

1

Developing a Theoretical Framework

- Formulate a theoretical framework as you analyze each item.
- Innovative frameworks often draw from multiple disciplines.



Building the Framework

- The framework grows incrementally with each analyzed item.
- Draw a 'concept map' to identify various concepts and map connections.
- Example: Concept map for online shop.



Chapter

1

Using the Framework

- The theoretical framework provides context and background for your research.
- It helps refine the research question and guides the investigation.
- Example: Moving from broad theory to a well-defined research question.

Chapter

1

Informing Your Methodology

- Literature review informs the 'state of knowledge' and provides insights into methodology.
- Use published research designs to guide your own investigation.
- Example: Extracting ideas for research design from literature.

Chapter

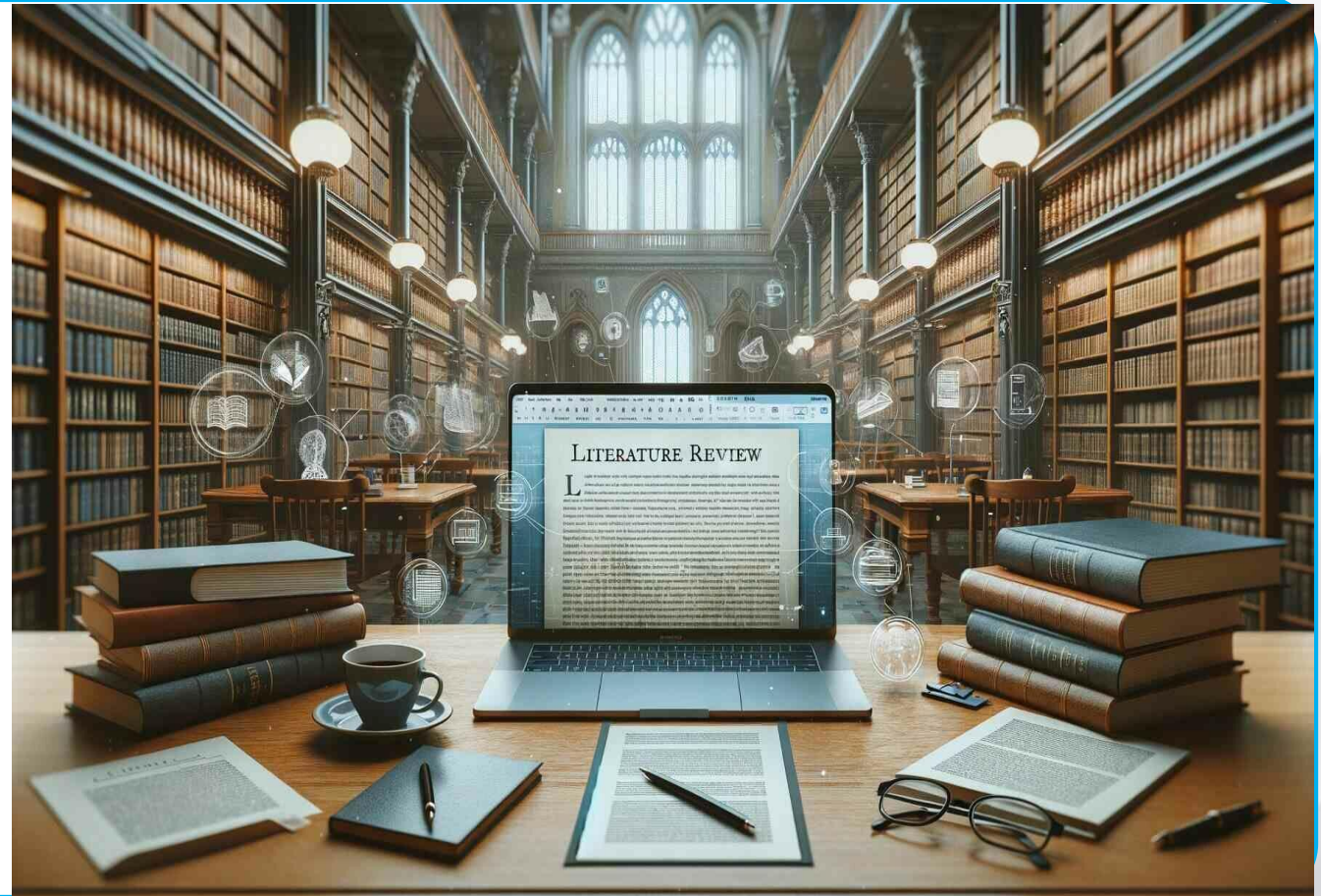
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Writing the Literature Review

- Establish the context of your research, demonstrate knowledge, and identify gaps.

Structure

- Introduction, Methodology, Discussion, Conclusion, References.



Introduction

- Include a clear statement of your purpose.
- Outline the scope and coverage of your review.
- Explain the choices made for inclusion and exclusion of literature

Methodology

- Describe how you conducted the review process.
- Include information on search strategies, criteria for selection, and analysis methods.
- This section is optional depending on the nature of the report.

Discussion

- The main body of the review where you discuss the collection of items reviewed.
- Present your argument and organize the discussion under relevant headings.
- Example: Discussing concepts from the concept map.

Conclusion

- Provide a clear and concise statement of your argument.
- Summarize the evidence from the discussion.
- End with a statement of the problem or research question that remains.

References

- Maintain a high standard of referencing.
- The list of references is an integral part of the review.
- Ensure all sources are accurately and comprehensively cited.



Thank You