

Research Methodology

Chapter 7 : Proposal Writing

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7.1. RESEARCH PROPOSAL

- A **research proposal** is intended to convince others that you have a worthwhile research project and that you have the **competence** and the **work-plan** to **complete** it.
- A research proposal should contain **all the key elements** involved in the **research process** and **include sufficient information** for the readers to **evaluate** the proposed study.
- **Regardless of your research area and the methodology you choose**, all research proposals must address the following questions:.

7.1. RESEARCH PROPOSAL

- **What you plan to accomplish, why you want to do it and how you are going to do it.**
- **The quality of your research proposal depends not only on the quality of your proposed project, but also on the quality of your proposal writing**

7.2. IDENTIFYING A RESEARCH

- Defining the problem is the first step and one of the most difficult in research undertaking.
- Each topic that is proposed for research has to be judged according to certain guidelines or criteria. Before deciding on a topic, each proposed topic must be compared with all other options.

BEFORE START WRITING A RESEARCH PROPOSAL

- Do I have the clear research question?
- Have I read broadly and deeply in that area?
- Have I discussed the topic with peers?
- Do I feel support from faculty?
-

WHAT IT SHOULD CONTAIN?

- What do you want to do?
- Why do you want to do it?
- Why is it important?
- Who has done similar work?
- How are you going to do it?
- How long will it take?
- How much it cost to implement the project ?

EVALUATION OF PROPOSALS

Proposals reviewed based on specific criteria :

- ***How important is the proposed*** activity to advancing knowledge and understanding within its own field or across different fields?
- ***How well qualified is the proposer*** (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.)
- ***The broader impacts of the proposed research***

EVALUATION OF PROPOSALS

- *The research design* must be sound enough to yield the expected knowledge
- *The aims/objectives* are likely to be achievable in the given time period
- The scientific design is described and adequately justified

ISSUES TO REMEMBER

- Know your area of expertise
- What are your strengths and weaknesses ?
- Do not assume that, because you do not understand no one understands it or that there has been no previous research conducted in the area.
- If you want to get into a new area of research, learn something about the area
- Research previous work and be a scholar.
- Before you start writing your research proposal find out whether you're required to produce the proposal in a specific format.

ELEMENTS OF A RESEARCH PROPOSAL

- Title page
- Executive summary
- Introduction
- Problem statement
- Objectives
- Literature review
- Delimitations
- Methodology
- Expected outcome
- Time schedule

ELEMENTS OF A RESEARCH PROPOSAL

- Budget
- References
- Appendix

TITLE PAGE

- The title of your research proposal should state your topic exactly in the smallest possible number of words.
- Titles should almost never contain abbreviations.
- The title page has *no page number* and it is not counted in any page numbering.
- First impressions are strong impressions: make your title an attention grabber.
- Put your name, the name of your department/faculty, the name of your advisor (s) and date.

EXECUTIVE SUMMARY

- A well written summary provides a succinct overview of the research proposal. The summary should clearly indicate why your proposed research is important, what your project aims to address, and how the project will be undertaken.
- **Example :**
- The research teams in are seeking a grant to implement a novel technology to recover energy from plastic wastes with the objective of producing clean liquid fuels from plastic waste by using pyrolysis (thermal depolymerization).

EXECUTIVE SUMMARY

- This innovative plastic-to-liquid fuels technology reduces the amount of waste to be sent to the landfill, recovers energy from plastic waste, helps to generate income from the selling of the produced liquid fuel and solves the energy problems of the society. The first phase of the project will be completed by designing, manufacturing and testing the pilot machine within four months. Funding in the amount of Birr is requested for staffs and to purchase the required materials as well as to manufacture the machine.

Components of executive summary

- Background
- Problem statement
- Objective
- Methodology
- Expected outcome
- Time
- Budget
- Conclusion

INTRODUCTION

The introduction generally covers the following elements :

- State the research problem
- Provide the context and set the stage for your research question in such a way as to show its necessity and importance.
- Clearly indicate why it is worth doing.
- Briefly describe the major issues and sub-problems to be addressed
- State your hypothesis or theory

OBJECTIVES

The objectives of a research project summarize what is to be achieved by the study.

- should be closely related to the statement of the problem
- General objectives states what is expected to be achieved by the study in general terms

DELIMITATIONS

- All research has limitations and thus certain work that will not be performed
- The work that will not be undertaken is described as the delimitations of the research

LITERATURE REVIEW

- “ A Literature Review Surveys scholarly articles, books, and other sources (e.g., dissertations, conference proceedings) relevant to a topic for a thesis or dissertation.

A literature review serves several purposes :

- A good literature review shows that you are aware of what is going on in the field
- How your work fits in with what has already been done
- that your work has significance
- that your work will lead to new knowledge

METHODS FOR ORGANIZING THE LITERATURE REVIEW

- By subject (if lit review covers more than one subject)
- Chronologically
- By theme, idea, trend, theory, or major research studies
- By author
- By argumentative stance



METHODS , MATERIAL AND PROCEDURES

- Method - the specific techniques, tools or procedures applied to achieve a given objective
- The methods section is the heart of the research proposal
- You must decide exactly how you are going to achieve your stated objectives
- It is essential to discuss procedures clearly and completely with considerable amount of details

TIME FRAME & WORK SCHEDULE

- Important planning tool
- The proposal should include the sequence of tasks to be performed, the anticipated length of time required for its completion and the personnel required.
- It can be presented in tabular or graphic form (Gantt chart)
- Flow charts and other diagrams are often useful for highlighting the sequencing and interrelationship of different activities in the study.

BUDGET

- The budget translates project activities into monetary terms
- It is a statement of how much money will be required to accomplish the various tasks

Major items

- Purchase of equipment
- Testing fees
- Personnel cost
- Consultancy
- Institutional overheads

REFERENCES

- Each reference must include the names of all authors (in the same sequence in which they appear in the research proposal or thesis), the article and journal title, book title, volume number, page numbers, and year of publication.
- The exact format for depicting references within the body of the text varies from one discipline to another
- The information you give in the reference list must be enough for readers to find the books and papers in the library or a database.

End of Module 7