

Ministry of Higher Education
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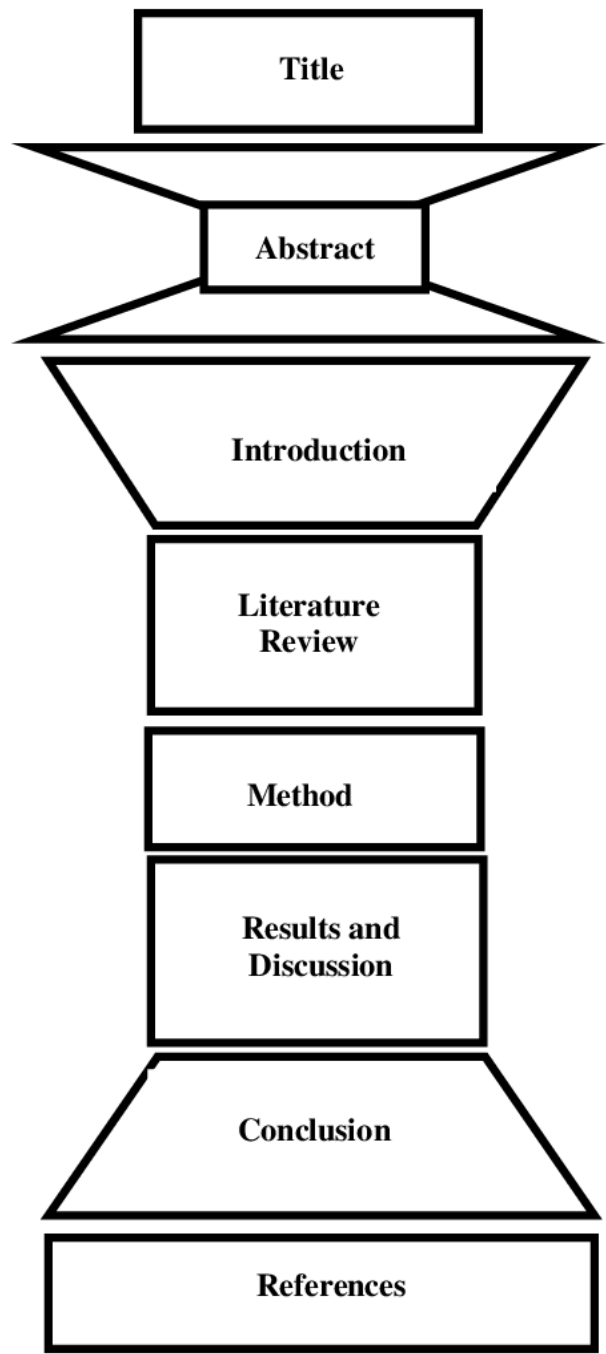
Research paper parts Material and Method

By

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Objectives

- To describe the functions of material and method.
- To emphasize the "dos" and "don'ts" .
- To point out the fine details that demonstrate a well-written material and methods section.



Title

Abstract

Introduction

**Literature
Review**

Method

**Results and
Discussion**

Conclusion

References

Research structure



Abstract

Introduction

Method

Results

Discussion & Conclusion

References

Participants

Design

Apparatus/Materials

Procedure

Functions of material and methods section

- **material and methods section** needs to answer the following questions:



- With **WHAT?** The data collected (Material)
- How the data **Collected?**
Reported?
Analyzed?
(The Method)

Methodology Section

- The methods section is the most important part of a research paper .
- It provides a clear description of :
 - How the research was done.
 - What was done to answer the research question
 - How the results were analysed.

Methodology Section

It must be written with enough information so that:

- (1) The research could be repeated by others to evaluate whether the results are reproducible, and
- (2) The audience can judge whether the results and conclusions are valid.

Methodology Section

- The method starts directly below the introduction.
- It is typically divided into three subsections:
 - **Materials**
 - **Participants or samples**
 - **Procedure**

Methodology: Participants (samples)

- Information on participants includes:
 - Number of participants.
 - Procedures for selecting participants or the sampling method (random, opportunistic etc.).
 - Demographic information (age, gender, occupation, educational level).
 - If some participants did not complete the experiment, state how many and why they did not continue

Example

Method

Participants

20 male and 20 female participants from Tishk International University participated in the current study. No other demographic information was collected.

Methodology: Materials

- Describe materials used and their function in enough detail so others can replicate
- For example: in describing word lists, include the number of words, approximate length of words, were they in capital or lowercase letters, etc.
- A copy of the materials can be included in an appendix at the end of the paper; you would refer your reader to that appendix; (see Appendix for a complete list of the words used in this experiment).

Methodology: Procedure

- The procedure is like the instructions for baking a cake or making something from Lego.
- It describes exactly what was done in the study and the order in which things were done.
- Describe the instructions given to participants
- The procedure should be logical, and contain sufficient information for the reader to follow.



I. Materials

1. What Instruments?
2. What sort of test? What sort of task?

II. Method

A. Participants or sample

1. What? And How many?
2. Characteristics (male/female, proficiency level, native language, etc.)

B. Procedures

1. How was the treatment administered?
2. How/when was the testing conducted?

C. Analysis

How were the results analysed?

Dos and Don'ts

DON'Ts

Create a list

Give Order

Write in present tense

Write in active voice

DOs

Explain your method in detail

Provide the material in sentences

Write in past tense

Write in passive voice

Questions about your Materials and Methods section to ensure that you have included all important information.

1. Is there sufficient detail so that the experiments can be reproduced?
2. Is there excess information that could be removed without affecting the interpretation of the results?
3. Are all the appropriate controls mentioned?
4. Are all appropriate citations included?
5. Is the source of each reagent listed?