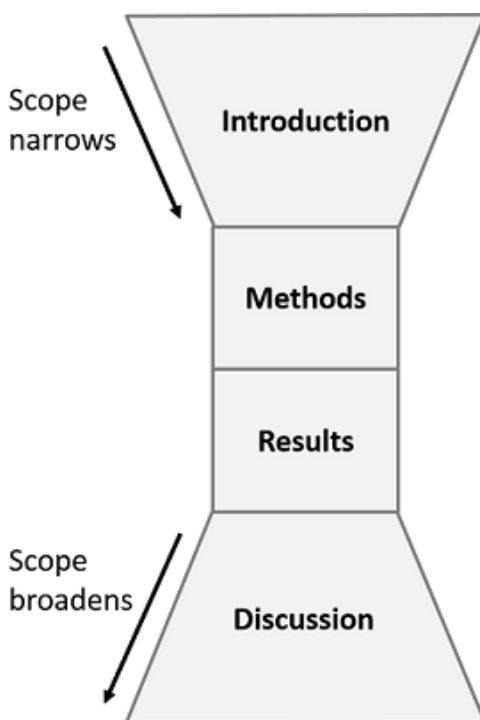


LAB REPORTS

Lab reports are used to convey the findings of scientific research. The structure of a lab report resembles an hourglass. The introduction starts with the broad context of the research and then narrows down to the specific research aim. Next, the methods and results of the study are presented. Finally, specific research findings are discussed before expanding out to the broader implications of the research.



While the exact format of lab reports may vary according to your discipline, most include the following sections:

Title
Abstract
Introduction
Methods
Results
Discussion
References
Appendices

Title

The title of your lab report should be brief and informative, allowing the reader to quickly decide whether the study is relevant to their purposes.

Abstract

The abstract is a concise summary of the entire lab report. It should contain information from each section of the report in the same order that it appears in the report. It may be easier to write the abstract once you have finished the other sections.

Introduction

An effective introduction should clearly identify the context and purpose of the research. It often spans at least two paragraphs.

- Begin with a general statement about the topic and its relevance/importance.
- Introduce background information, define key terms/theories, and briefly review relevant literature. The introduction should show what has already been established, and identify the research gap motivating the study.
- Introduce the research **aim**.
- State the **hypothesis/hypotheses**.

The **research aim** is a statement of the overarching goal of the research.

A **hypothesis** is a testable statement that specifies the key variables being studied and the predicted direction of the effect.

Example aim

“The aim of the study was to investigate the impact of a study partner on student motivation.”

Example hypothesis

“It was hypothesized that students with a study partner would be more motivated to study for exams compared to students without a study partner.”

Methods

The methods should include a description of how the experiment was carried out, details about any subjects or participants in the study, and a description of the materials that were used. Include enough information so the study could be replicated by another researcher. Often you are required to divide the method up using subheadings (e.g. subjects, materials, procedure); check the specific requirements of your unit.

Note: this section is usually written in past tense (e.g. "*Participants were administered 60mg of codeine*").

Results

The results section provides a description of the main findings of the study. It is important that the results are described and *not interpreted*. Make sure you focus on the results that are relevant to your specific aims and hypotheses.

Tables and figures are often used in the results section to succinctly summarise complex information. Every table or figure should be clearly labelled, numbered sequentially, and referred to in the main text of your report (e.g. "*As shown in Figure 1... Descriptive statistics are displayed in Table 2.*")

Discussion

First, state whether the results supported the hypotheses. Remember, in scientific research we never "prove" a hypothesis, it can only be supported or not supported. Next, interpret your results in light of the research aim. You should discuss how the results fit with or differ from the research that you described in the introduction. Finally, discuss the broader theoretical and/or practical implications of the study, key limitations, and suggest possible directions for future research.

References

List the sources you cited in the lab report using the required referencing style.

Appendices

This section is optional. Include information that would distract from the flow of the report but may still be useful to the reader. For example, you may include raw data, measurement tools, calculations, and experimental stimuli.

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