

Scientific research reports

Format of research reports in the faculty of Science

Research reports in the Sciences contain common elements and generally follow the basic format outlined as follows.

Title

Your title should be brief, topic-specific and informative, clearly indicating the purpose and scope of your study. Include **key words** in your title so that search engines can easily access your work. Example:

Measurement of water flows around Station Pier

Abstract

An abstract is a concise summary that enables readers to quickly assess the contents and direction of your paper.

It should be brief (around 5% of the total), written in a single paragraph and should cover the scope and purpose of your paper.

For more information on writing an abstract please refer to the Academic Skills Flyer: Writing an Abstract.

Introduction

The introduction sets the context for your research. It should supply sufficient background to allow the reader to understand and evaluate the present study without needing to refer to previous publications.

After reading the introduction your reader should understand **exactly** what your research is about, what you plan to do, why you are undertaking this research and which methods you have used.

Introductions generally include:

- the **rationale** for the present study. Why are you interested in this topic? Why is this topic worth investigating?
- **key terms and definitions**
- an **outline** of the research questions and hypotheses; the assumptions or propositions that your research will test.

Literature Review

A literature review is a critical survey of recent relevant research in a particular field. Its purpose is both to offer the reader an overview of the current state of research and to situate your paper within that research.

Frequently, the review is part of the introduction

The review should be a selection of carefully organised, focused and relevant literature that develops a narrative 'story' about your topic. Your review should answer key questions about the literature:

- What is the current state of knowledge on the topic?
- What differences in approaches / methodologies are there?
- Where are the strengths and weaknesses of the research?
- What further research is needed?

The review may identify a gap in the literature which provides a rationale for your study and supports your research questions and methodology.

Methodology (Materials and Methods)

The purpose of this section is to detail how you conducted your research so that others can understand and replicate your approach. You need to briefly describe the subjects (if appropriate), any equipment or materials used and the approach taken.

If the research method or method of data analysis is commonly used within your field of study, then simply reference the procedure. If, however, your methods are new or controversial then you need to describe them in more detail and provide a rationale for your approach.

The methodology is always written in the past tense. This section should be written succinctly.

Results

This section is a concise, tabular or graphic summary of your findings, listed under headings appropriate to your research questions.

Present your results in a consistent manner. For example, if you present the first group of results as percentages, it will be confusing for the reader and difficult to make comparisons of data if later results are presented as fractions or as decimal values.

Do not discuss your results here. Any analysis of your results occurs in the Discussion section.

Raw data or details about the method of statistical analysis used should be included in the Appendices.

Scientific Report Writing Format

Julia Schneider



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