

Undergraduate research reports

Format of research reports

Undergraduate students in a number of faculties are required to prepare research reports. While you should always check with your lecturer for the specific requirements of an assessment task, research reports *generally* contain common elements and follow the same basic format as outlined below.

Title

Your title should be brief, specific and informative – if possible, indicating the nature and scope of your study. Include key words in your title so that your work can easily be accessed by electronic methods.

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; an overview of methodology; a summary of the main findings or results; principal conclusions or significance of the findings; and recommendations made. The information in the abstract must be presented in the same order as it is in your paper. The abstract is usually written last when you have developed your arguments and synthesised the results.

Introduction

The introduction is a very important part of your paper as it sets the context for your research. This section of your paper 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. Key terms may also be introduced and defined in this section. Introductions generally include the rationale for the present study (why are you interested in this topic? Why is this topic worth investigating?) along with an outline of the research questions and hypotheses (the assumptions or propositions that your research will test).



Literature Review

Not all research reports have a separate literature review section. In shorter research papers, the review is usually part of the introduction. 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. The review is not simply a summary of all you have read. Rather, it must develop an argument or a point of view that supports your chosen methodology and research questions. For example:

In assessing the benefits of online-learning, Greenbaum (1997) proposes a formula for assessing the efficacy of technology in second language acquisition, but fails to address the issue of feedback inadequacy as outlined by Haversham (1996).

The review therefore is the arena for critically evaluating current approaches and/or literature on the subject. Accordingly, you need to: compare and contrast different approaches; evaluate research methods; highlight gaps in research; look for inconsistencies and ethical issues; assess the form, structure and clarity of the written results and constantly question your sources and their relationship to your study.

Conclude your literature review by linking key findings to your study.

Lit Review Check List

Does your review:

- provide a theoretical framework for your study?
- provide the reader with necessary background information to understand the context of your area of study?
- demonstrate that you are familiar with research in your area?
- establish a link between previous research and your research?

Methodology (Materials and Methods)

The purpose of the methodology 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), along with 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 it is appropriate to simply reference the procedure and not describe it in detail. 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 is a description of how you conducted your research and should be written succinctly.

Results

This section is a concise, factual summary of your findings, listed under headings appropriate to your research questions. **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 also not be included here but should appear in the appendices.

Present your results in a consistent manner. For example, if you present the first group of results as percentages, then present all of your figures in this way. It is confusing for the reader and difficult to make comparisons of data if later results are presented as fractions or as decimal values.

Notes on visual data representation:

- Graphs and tables may be used to reveal trends in your data, but they must be explained and referred to in adjacent accompanying text.
- Figures and tables do not simply repeat information given in the text: they summarize, amplify or complement it.
- Graphs are always referred to as figures, and both axes must be clearly labeled.
- Tables must be numbered in the top left hand corner, and they must be able to stand-alone or make sense, without your reader needing to read all of the accompanying text.

Discussion

The discussion is a major part of a research report and it is expected that you will demonstrate a high level of analysis. The discussion links strongly with the issues identified in the introduction and is of similar importance and length. This section of your paper is where you interpret your results and explain their significance within the context of other research.

Consider the adequacy of your sampling techniques, the scope and longevity of your study, any problems with data collection or analysis and any assumptions on which your study was based. This is the place to discuss any disappointing results, the problems of making meaningful conclusions with limited samples, or the difficulty of conducting the research (for example, it is difficult to conduct interviews with five year old subjects). The discussion may include some statements of conclusion, or you may be asked to present the conclusion separately (see below).

Checklist for the discussion

- To what extent was each hypothesis supported?
- To what extent are your findings validated or supported by other research?
- Were there unexpected variables that affected your results?
- On reflection, was your research method appropriate for the task?
- Can you account for any differences between your results and other studies?

Conclusion

The conclusion is generally fairly short and should follow on naturally from points raised in the discussion. In this section you should discuss the significance of your findings.

To what extent and in what ways are your findings useful or conclusive? Is further research required? If so, based on your research experience, what suggestions could you make about improvements to the scope or methodology of future studies?

Also, consider the practical implications of your results and any recommendations you may be able to make. For example, if your research is on reading strategies in the primary school classroom, what are the implications of your results for the classroom teacher? What recommendations could you make for classroom teachers?

Appendices

Appendices are where you store materials that support your research but which are inappropriate to include in the body of your paper. However, only include selected material that directly supports your report. Examples of such materials include:

- relevant letters to participants and organisations (eg. regarding the ethics or conduct of the project)
- details of questionnaires, surveys or other relevant instruments that were developed for the purpose of the study
- background reports or raw data.

Different data needs to be in separate labeled appendices and must be referred to in the body of the report (for example Appendix A, Appendix B).

Appendices are placed at the end of a report, and the contents are not included in the word count.

References

All departments have different guidelines as to how references are to be presented. It is important to check the preferred format, style of references and presentation requirements in your own department.

Only use secondary references (for example (Bloggs 1990, cited in Smith 1997)) if the original source (in this example, Bloggs 1990) cannot be easily obtained.

Reference lists, where you list only the authors whom you have cited in your paper, are commonly required in disciplines that use in-text referencing. Many lecturers cross-mark the in-text references against the reference list.

For more information on referencing, please refer to the LLSU website: <http://www.services.unimelb.edu.au/lisu/resources/referencing.html>

Further Resources

Bell, J. (1992). *Doing your research project: A guide to first time researchers in Education and Social Science*. Milton Keynes: Open University Press.

Bell, J. (1999). *Doing your research project*. USA: Open University Press.

Evans, D. (1995). *How to write a better thesis or report*. Australia: Melbourne University Press

Denscombe, M. (1998). *The good research guide*. USA: Open University Press.

Stevens, K. & Asmar, C. (1999). *Doing postgraduate research in Australia*. Australia: Melbourne University Press.