16B: Writing a Report: From planning, to drafting, to publishing your report

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"Write with precision, clarity and economy. Every sentence should convey the exact truth as simply as possible." (Instructions to Authors, Ecology 1964)

What is a Report?

A report is a description of a project or a research investigation which follows a clearly defined and standard format, to tell the reader what, why and how something was done and what was found. In addition, a report must specifically address the issues that were requested by the agency or government body that requested the report.

Reports require an objective writing style that conveys information clearly and concisely on a range of issues. They should be organized with the intended readers in mind making sure the major issues are clearly presented. This can become a challenge since the intended readers may have a variety of backgrounds. Thus you must take care to present all issues in a concise but technically accurate manner.

The objectives of this module are to allow you to understand:

- The role of reports in the scientific process.
- Steps in report preparation.
- Some practical issues related to report preparation and publication.

All reports attempt to communicate accurate information and the implications of that information for the future. Reports may be initiated through requests from governments, institutions, agencies or other organizations. They may deal with all manner of issues, but they can always be used as tools to inform decision makers, change opinion, or document historical truths. Whenever you write a report you must keep in mind why you are writing, who you are writing it for and what you have been asked to do.

There are conventions of structure and presentation that are followed for report writing that differ from those of a research manuscript. The conventions are used for reports you write for a university, for the government, for an organization or for a company.

How do Reports and Research Papers Differ?

You write an academic article for print or web publication in a journal listed in the Medical Index to convey new knowledge to your peers. Research that is not published is not complete. Research reports differ from academic articles in many ways. See Table 1.

Table 1: Differences between a report and a research paper

	Report	**Research Paper**
Purpose	document activity	new knowledge
Focus	broad	narrow
Format	specific	specific
Length	++++	+
Copies	specified	not specified
Appendix	included	not usual
Deadline	rigid	open

Why Write a Report?

All reports have an intended reader. Put yourself in their position. What do they need to know? The role of report in science is specific to who has requested it and what they are asking.

1. A Granting Agency may want to know if its money is well spent, or if a program should be continued.

2. A Government may want to assess if a project benefits the local or regional population and if it has changed health policy.

3. A University may ask for a report to determine your qualification for promotion, to decide on budgeting or to determine the best resource allocation.

Steps to Preparing a Successful Report

Reason for the Report

First, address the purpose of report. You have to identify the objective or topic to report on. Here are some key points to remember throughout the process to help you organize your report:

- Read the request for a report carefully; length, format, and questions to be addressed etc.
- If possible, review a similar report.
- Prepare an outline.

- Arrange the sections into their logical order.

Who is the Target Audience?

The more distant the reader is from the source of the problem or project to be evaluated, the more details the reader will need in order to understand the issues involved in the report.

Hence, formal reports are best written as if the reader is outside of the organization, and therefore needs to understand the background. This should be the approach even if the "client", is within the organization, (e.g. your supervisor), or outside the organization (e.g. a government or granting agency, or even be a group of customers)."

It is therefore necessary to identify who will be reading the report and what they want from it (that is, the needs of the reader). Awareness of your audience determines how much background is necessary. In the report you must bridge this gap between the readers' background knowledge and their needs. Understanding the reader will help you determine the language level, the degree of detail, the extent of data, the tone, and the style of report.

Format of a Report:

The format of a report is usually determined by three things: the audience, the information and the purpose. If you have a lot of complex information to include in your report, you will organize it in a different way than if your information is rather straightforward. The reason why you are writing the report and the intended audience also influence the format.

Title Page

This should be short and precise. It should tell the reader of the nature of your research. Omit any unnecessary detail e.g. 'A study of….' is not necessary. Don't forget to include: Author's name and affiliation and contact information.

Acknowledgements

You should acknowledge any help you have received in collecting the information for the report, for example staff in your department, support services or external companies. When you have finished the report recheck that you have acknowledged all sources of help.

Table of Contents

This should list all the major divisions in the report, as well as the headings and sub-headings within each major division, in the order in which they appear in the text.

Recheck this at the end. Have you listed all the main sections in sequence? Have you included a list of illustrations?

Executive Summary

The executive summary is a summary of the report often written in less technical language than the main report as it is usually aimed at a wider audience. It should accommodate the needs of someone with interest in the report's findings, but with a limited technical background. Thus the executive summary is a critical part of the report. Everyone will read it, while only a few will read the whole report. The executive summary is always written after the rest of the report is completed and summarizes the purpose, major findings, and recommendations discussed in the body of the report. The executive summery should only discuss findings and conclusions presented in detail in other sections. Nothing that isn't already present in the report should be included in the summary. The executive summary usually starts with why the report is being done and how your objectives, findings, and conclusions relate to the research questions you listed at the beginning of the report. A step-by-step development of the conclusions should be given. There should be a conclusion for each study objective or problem. Readers should be able to read the objectives, and find specific conclusions relative to each objective.

After you finished this section, check to be sure of the following. Does it state:
The main task? The methods used? The conclusions reached? And the recommendations made?

Introduction and Background

The introduction should clarify: What the report is addressing, what will be covered and what is not covered. Also, it should indicate what the problem is and what we know (and don't know) about it. The introduction should not include any description of results or conclusions. Tailor this to meet the needs of the target audience for the report.

Check these questions; Does the introduction include: Your terms of reference? The limits of the report? An outline of the method? And a brief background to the subject matter?

Methods

Each chapter starts with a brief introduction of what question/topic will be covered followed by methods and results: Methods and results are usually concise, not in detail of an academic article for publication and do refer to your papers published and abstracts presented in the area.

Check these questions: Does the method show the form your investigation took? … The way you collected your data?

Results

Make the order of results report logical. Present your findings in as simple a way as possible. The more complicated the information looks, the more difficult it will be to interpret. Be concise; include only most important observations in the text and tables, figures and graphs. Here are some does and don'ts to remember:

Table 2: Does and Don'ts of Results

- **Do:**
  Use the past tense.
  Use active verb form rather than the passive form.
  Check and recheck …
  - Have you identified key issues?
  - Have you provided explanations for your findings?
  - Are the tables, figures and graphs simple and clearly labeled?
  - Do they relate closely to the text?
- **Don't:**
  Repeat information in figures or tables in the text.

Implications and Recommendations

This is the most difficult section to write, but it is critical for a government requested report.

Each chapter should end with statements on implications of the issues and references for further reading. Implications are the second last component of each chapter and may include a recommendations section. References are usually included in each chapter, not all at the end of the report. Follow the instructions for the report. Make sure each chapter addresses only the component stated in its introduction. Subsequent chapters of the report should not repeat the information of earlier chapters- but can refer to other chapters. Recommendations should be number by chapter, for example, chapter 1- recommendation 1.1, 1.2 etc.

The next-to-last chapter describes the overall implications of the report and identifies the next steps that should be taken. Provide a brief summary of the importance of the work to date, how this could be "translated" and what the next steps maybe. This chapter MUST be specific to purpose of the report. Thus it is crucial to understand the audience for the report and the context in which they will review the data from the report. For example: Are there health policy implications (government)? New research opportunities (granting agency)? Health care implications (government, health care institution, regional public health)?

Tips:

- Outlined problems encountered.
- Present a balanced view. Discuss limitations of study.
- Explain findings, comparing and contrasting to existing literature.
- Draw together all of your main ideas.
- Avoid inserting new information in this section.
- Make implications and recommendations clear and concise.
- List references at the end of each chapter.
- Include all the necessary information for locating each reference.
- Check that your references are all accurate.

Compilation of recommendations

The last chapter lists all recommendations. These should be collected in an individual chapter at the end. Ensure by "numbering" that the reader has the ability to find data to support each of the recommendation. E.g. Recommendation 1.1, 1.2, 2.1 etc.

Appendices

Include more data and copies of your pertinent papers and summary in the appendices. The purpose of the appendix is to provide a place for those report items which do not fit in the research report proper because they are either too detailed or are too specialized. For example, the appendix may contain a detailed statement of the sample design, the formulas used to determine the sampling error, detailed statistical tables, and the various research forms used, such as the questionnaire. Check the appendices to be sure they are appropriate with these questions in mind: Have you only included supporting information? Does the reader need to read these sections?

How to use your Time to Write

First Draft

Preparing a report is a challenge; if you know early on that one will be required –get started early- no excuses! Draft the report, writing key ideas from your plan into sentences. Don't worry about style and "wordsmithing" in the first draft. Just do it!

We recommend proceeding in the order described above. There is no need to worry about the title or the executive summery in this early stage. These will come later when the text is nearly completed. Once you have written the first draft, check it through. Rework your data to present it forcefully and clearly. It is probably sensible to leave it on your desk for a day or so to give a clear break from the intensive writing period. This will allow you to see the work more objectively. Assess your work by re-reading particularly focusing on: structure, order, content and style.

Content Revisions

In the first draft, ask your co-authors and mentors to provide you with content editing: Are the messages clear? Have you addressed all of the requests of the granting agency or government etc? Is there flow? Is there repetition? Are all statements and recommendations correct? Then fine tune the report based on the feedback you receive.

Copyediting Revisions

In detailed editing (copyediting), check for the spelling and grammar and double-check facts and figures. Check references to be sure they are accurate and make sure the appendices contain all relevant materials referred to in the main report. Be sure you follow "report instructions" everywhere.

Finishing Touches

Eventually, you will be ready to check the text. Have you used clear and concise language? Are your sentences short and jargon free? Are your paragraphs tightly focused? Have you used the active or the passive voice?

Once the text of the report is complete, you may write the preface (to orientate the readers on why the report is important and who it is directed to), and the acknowledgement (who did the work, who funded it, when it was done, the time frame etc.).

The executive summary is a critical part of your report. Everyone will read it, while only a few will read the whole report. Write the executive summary when you have finished and polished the other sections. Finally, write the title page with authors, funders and indicate to whom this report is directed. The title of the report should be a concise and specific "label" for its contents and usually is from 6 to 12 words long. Read titles of other reports of the organization you are writing for to see how they commonly do it. Make sure your report flows logically from the evidence. Also, ensure your final conclusions fit your audience e.g. for government - if there are policy implications say so. When you write the final copy, eliminate any repetitions and recast any sentences/sections where the meaning is unclear.

Read what you have written to yourself and others aloud. If anything is unclear at this stage it would be unclear to the intended reader. Never ever submit a sloppily written report.

Key Points

- Report should be organized for the convenience of the intended reader.
- Keep it simple and avoid sentences that are too long,
- Eliminate unnecessary jargon,
- Don't worry about style in the first draft. Just do it.
- Be sure all authors agree on their inclusion and order.
- Information belonging in one section should never be repeated in another.
- During revisions, focus on high-level content before the micro issues.
- Never submit a poorly written report; revise, revise, revise until it is perfect.

Links and References

- Canadian Health Services Research Foundation: The CHSRF offers tools and aids for report writers, decision makers, policy makers etc.
- Keenan Research Centre. St. Michael's Hospital University of Toronto. Knowledge transfer aids for researchers.
- University Library. Loughborough University. How to Write a Report.
- Blicq, Ron S. Communicating in a Technological Era. How to Write a Report: The Four Basic Parts.
- Prof. Jim Cox. Written Research Final Report.
- Monash University. Report writing: Planning to Write a Report.
- Columbia University. Written Report Guidelines.
- Huron University College .T. Hyland. How to Write a Report.
- Alan Lee. How to Write a Good Report.

- [K. Marsh, Glen forest Library. How to Write a Research Report for Science.](#)

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