
TECHNOLOGICAL REPORTS



A technological report: is concerned with the application of practical or mechanical sciences in order to achieve a desired aim.

What points should I bear in mind?

A good technological report should combine and follow these qualities:

- ◆ planning
- ◆ communication
- ◆ ability to reason
- ◆ ability to evaluate
- ◆ a logical and realistic solution.

What would be a suitable format?

Here are three formats. As always, select the one that best suits your needs:

Format A

1. Contents page.
2. Brief (what you were going to do).
3. Analysis (your analysis of the problem – include the research material you have gathered).
4. Thinking (your initial thinking and your evaluation of it).
5. Solution (explain how you developed your solution).
6. Evidence (include drawings, photographs and other evidence of your solution – the artefact)
7. Evaluation (an objective evaluation of your solution).

Format B

1. Contents page

2. Purpose

– why was the work undertaken?

3. Methods Used

– the apparatus and equipment used (with illustrations).

– a step-by-step account of the procedure.

– observations taken (tabulated) – use appendices, if necessary.

– calculations necessary to give meaning to the observations.

4. **Results:** use tables and illustrations (and appendices, if necessary)

5. **Conclusions**

— a survey of the work undertaken:

- * compare actual results with theoretical results.
- * compare actual results with others obtained elsewhere.
- * give reasons for such discrepancies or variations.
- * evaluate the relevance of the methods used.
- * evaluate the efficiency of the equipment used.
- * discuss any human errors and/or any relevant environmental factors.

6. Recommendations

- flowing naturally from your conclusions.

7. Appendices

- to support sections 3 and/or 4, if necessary.

Format C

1. Contents page

2. Summary

- concentrate on your findings.

3. Object

- a brief statement of your aim.

4. Introduction

- why was the work undertaken?

- provide any relevant background information.

- discuss any limitations/conditions you faced (for example: cost, time, or environmental).

5. Apparatus

- describe it (with illustrations)
- why was it chosen?

6. Procedures

- a step-by-step account of what was done.

7. Observations

- give details of components, specimens, equipment or machinery during and after the test.
- record the readings made during the investigation in tables and/or illustrations – use appendices, if necessary.

8. Calculations

- based on your observations.
- based on theoretical considerations.
- analyze errors.
- summarize your results.

9. Results

- use a separate section or appendix, if necessary

10. Comments

- discuss the degree of accuracy achieved.
- compare your results with those from other sources.
- comment on quality of the materials and workmanship of the item tested.
- what alternative method(s) of presenting your findings could you have used?
- why did you present your findings as you have?
- make your acknowledgements.

11. Conclusions

- flowing from your results and, where appropriate, your comments.

12. Recommendations

- flowing from your conclusions.

13. Appendices

- to support sections 7 and/or 9, if necessary

14. Index

- in larger reports only.

Formats **B** and **C** are suitable for technological tests or investigations, perhaps assessing the suitability of two or more items for a defined purpose. Format **C** is particularly useful for a long report.

TROUBLE-SHOOTING REPORTS

These reports aim to locate the cause of some problem, and then suggest ways to remove or treat it. In the main they deal with people, organizations or hardware.

What points should I bear in mind?

These reports highlight problems. When they are caused by people you must be especially careful to word the report thoughtfully. Be honest but be fair. Most of all, be accurate.

When you are discussing problems caused by the structure of an organization, you must expect to meet the objection: 'But we've always done it this way'.

People are generally not keen on change.

Reports on hardware are less complicated and often less contentious.

What would be a suitable format?

Here are four possible structures. Choose the one that best suits your needs:

Format A

1. Contents page.
2. Present situation (the major points).
3. Options for Change (the pros. and cons. of each option).
4. Recommendations (well-argued, clear, unambiguous and brief).
5. References, or Bibliography, or Resources (if required).

Format B

1. Contents page.
2. Introduction (purpose and scope).
3. Evidence (brief, balanced and unambiguous – use appendices, if necessary).
4. Arguments for (present all the pros. logically and objectively and respond positively to weaknesses in your case).
5. Arguments against (list them and refute them in turn).
6. Recommendation (be clear, unambiguous and focused)
7. Appendices (to support section 3, if necessary)
8. References, or Bibliography, or Resources (if required).

Format C

1. Contents page.
2. Introduction (your purpose).
3. Summary of Recommendations (clear, unambiguous and focused).
4. Present Position (the major points).
5. Scope (what work was done, and possibly what was not).
6. Observations on Recommendations (the main body – repeat each recommendation and give the main pros. and cons. for each).
7. Conclusion (keep it focused).
8. Appendices (if required).
9. References, or Bibliography, or Resources (if required).

Format D

1. Contents page.
2. The Problem:
 - nature and cause.
 - extent.
 - effects (perhaps on safety or production).
3. The Need for Change.
 - reasons (perhaps labour problems or competition).

4. Proposed Solution:

- options available.
- details of proposed solution.
- previous experience of this scheme (perhaps elsewhere).
- advantages.
- disadvantages (and how they can be overcome).
- effects (perhaps improved efficiency or sales prospects).

5. Time Factors:

- when can it be implemented?

6. Costs:

- for each option:
- implementation costs.
- running costs.
- estimated savings, if applicable.

7. Conclusion: for the chosen option:

- overall effects.
- overall benefits.

8. Recommendations:

- item by item, clear and unambiguous.

9. Appendices – if required.

10. References, or Bibliography, or Resources
– if required.