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Technical Writing

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Including previous material by Geoff Merrett, Su White, Hugh Davis, Christine Shadle, and Peter Gregson, Simon Cox, and the University of Toronto's Centre for Engineering Communication

What is technical writing?

"Technical writing, purely and simply, is **writing about subjects in technical disciplines**. Whether agriculture, economics, engineering, or zoology, a technical discipline will have its *technics* – that is, its theories, principles, arts, and skills. It will generate reports and correspondence. The hallmark of such reports and correspondence is that they **present objective data to *convince***, rather than using emotion to *persuade*."

[T. E. Pearsall, *The Elements of Technical Writing*, 3rd ed., New York: Pearson Higher Education, 2010]

What is technical writing?

This set of lectures is therefore **not** about the process of doing technical work.

This is about the process of **presenting** the process of doing your technical work.

You could regard technical writing in relation to the following:

If a tree falls in the wood and there's nobody around to hear it, does it make a sound?

You can do the best piece of work, technically and analytically, but if you don't present it, did you actually do it? It exists in your memory but how is the **evidence** of your work recorded? How are the results of the work presented so that somebody else can see them, understand them and be convinced of their value.

Overview of lectures

This series of short lectures covers several areas:

- Report Structure, in summary and detail
- Writing Style
- Formatting and Layout
- Figures, Graphs, Tables and Equations
- Referencing
- Revision and Proofreading

Follow on material:

- There are some references included in the lecture – use this as a guide to finding and researching more in depth, there is a lot of material out there
- Work out your own strengths and weaknesses, and be proactive!
- You will not get taught how to write reports, but you will be marked on your ability

Technical Writing

What are you likely to be asked for?

- Technical reports
- Technical letters
- Conference papers
- Journal papers
- Project reports
- Websites

What Difficulties Might You Face?

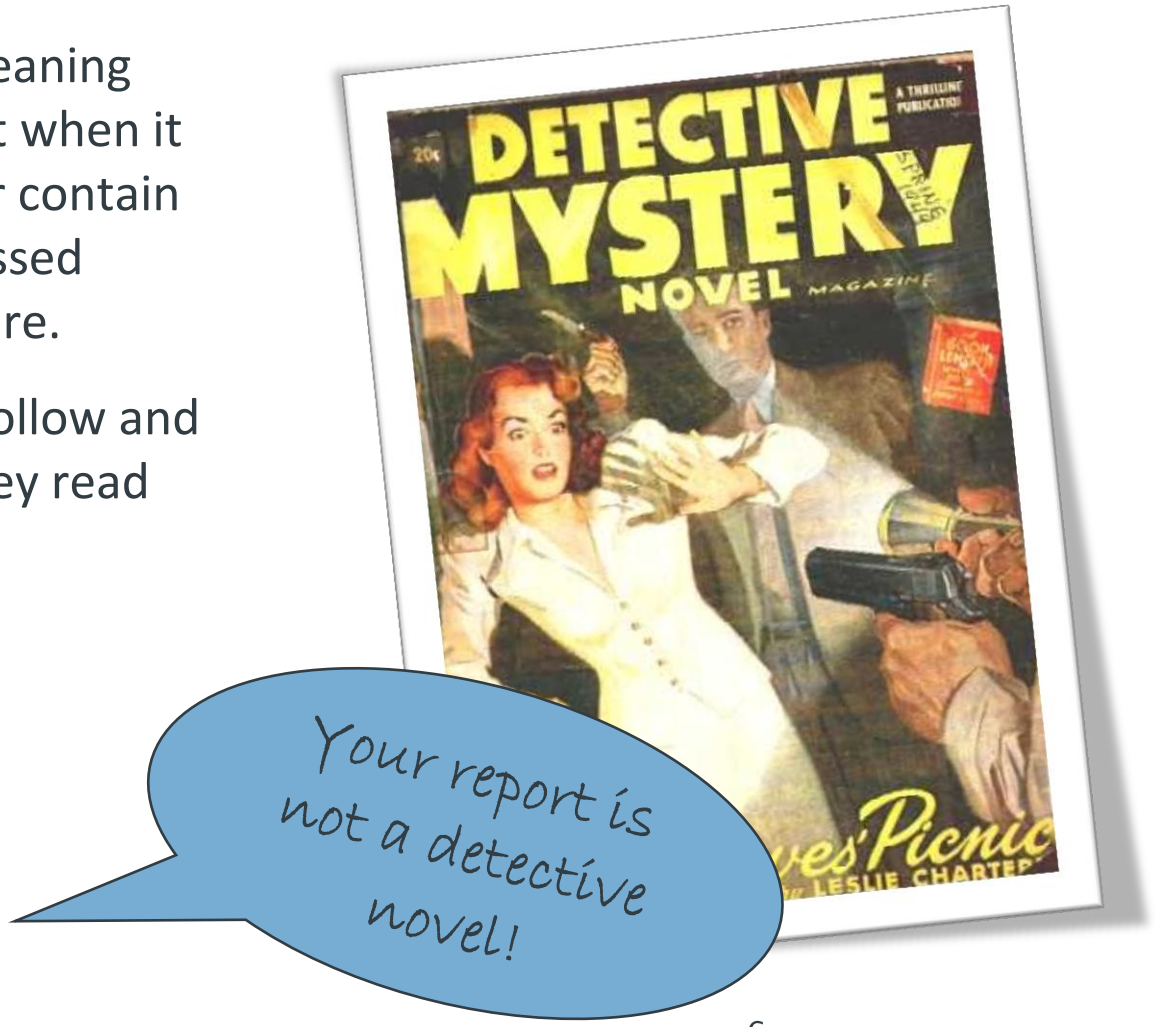
- Difficulty in explaining yourself
- Lack of time
- Foreign language
- Dyslexia
- Lack of experience
- Can’t spell
- Don’t understand grammar /rules
- Formulating technical arguments

Key aspects of technical writing?

A report should be clear and concise.

It should clearly explain the meaning and significance of each aspect when it is introduced and discussed, or contain references to where it is discussed either in the report or elsewhere.

The reader should be able to follow and understand every aspect as they read the report.



Key aspects of technical writing?

Reports are NOT personal…

Source:
nataliedee.com

Key aspects of technical writing?

Reports are NOT a BLOG:

You will keep a log book of work carried out in a project or during laboratory sessions.

The report is not a transcript of your log book, it is a logical presentation of the same information, the structure of which is discussed in the next lecture.

Material is presented in the order that best explains your work, NOT in chronological order.

24th October

I built this amplifier circuit from designs suggested by my supervisor.

24th October

I didn't work! I don't know why.

25th October

I have read some papers which explain the problem. I don't think my supervisor really understands this.

25th October

I have fixed the setup. Device now operates but signal amplitude too low.

26th October

I have a model from a textbook which indicates that the components in the circuit are not correct .

27th October

Changed the components Gain increased to within 10% of the intended value.

Use technical journals as models

Use good technical writing as a model.

Technical journals contain good (and occasionally bad) examples of technical writing. Reading a variety will give you some ideas and examples to take inspiration from.

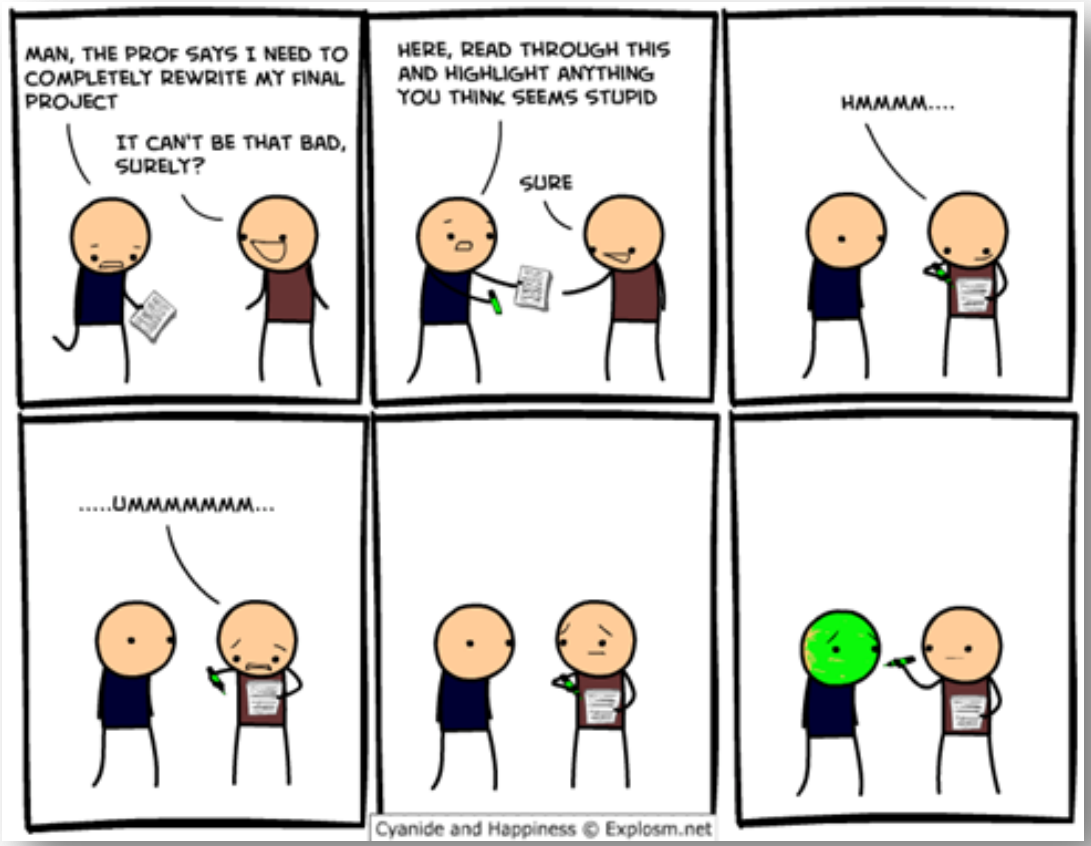
They will also provide examples of formatting templates and requirements. This is discussed in more detail in the third lecture.

Revision and Proofreading

Proofreading

- Read your document imagining yourself as the reader (don't skim)
  - Does the information come in the right order?
  - Are all parts present?
- Check systematically for errors in the document
  - Read through more than once, each time checking for a different type of error

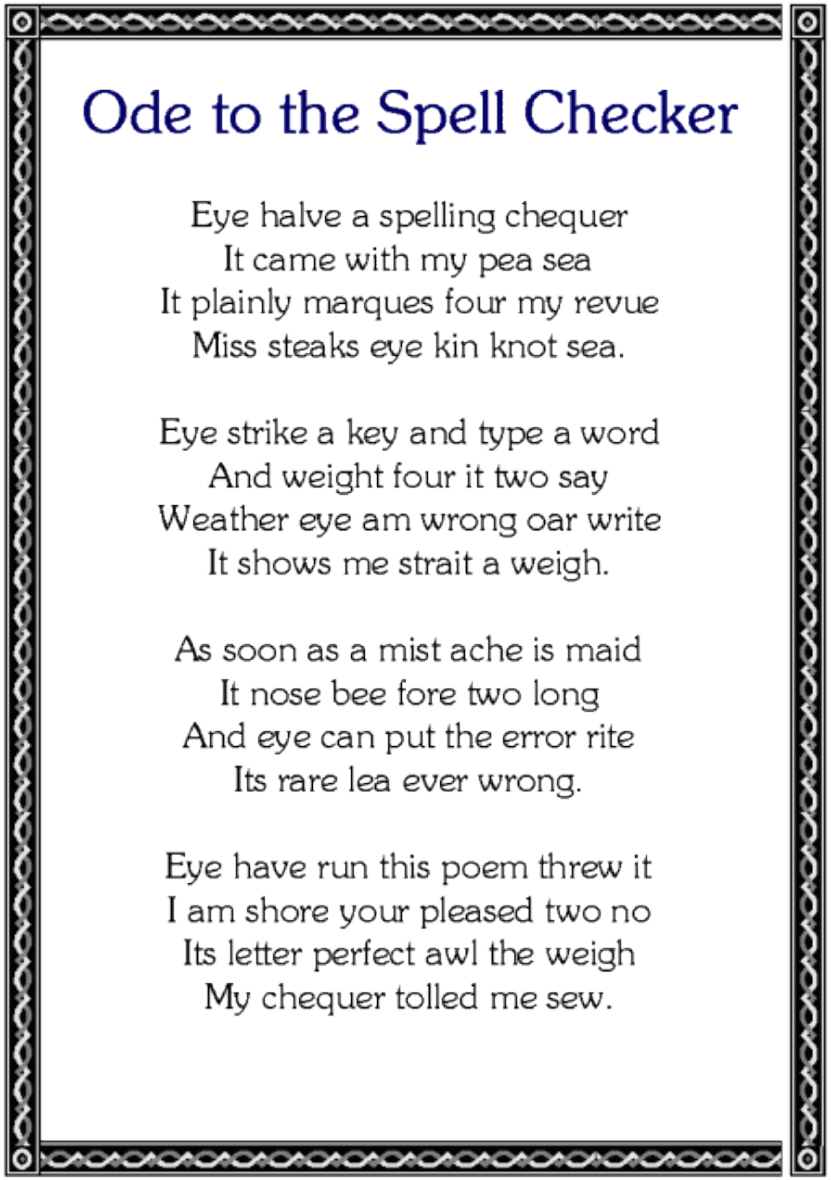
Ask (politely) a third party to read it over:



Source: www.explosm.net

Spell checking

Spell checking should be done with care.



Ode to the Spell Checker

Eye halve a spelling chequer
It came with my pea sea
It plainly marques four my revue
Miss steaks eye kin knot sea.

Eye strike a key and type a word
And weight four it two say
Weather eye am wrong oar write
It shows me strait a weigh.

As soon as a mist ache is maid
It nose bee fore two long
And eye can put the error rite
Its rare lea ever wrong.

Eye have run this poem threw it
I am shore your pleased two no
Its letter perfect awl the weigh
My chequer tolled me sew.

A Checklist…

Checklist for report writing

1. Keep your sentence length under control (maximum 35–40 words in a sentence)
2. Keep your paragraph length under control (not more than half a page in a paragraph)
3. Use logical connections, such as 'therefore' and 'moreover' accurately
4. Follow the conventions of your subject for abbreviations, signs, symbols and so on
5. Don't become personal, emotional or chatty in a report
6. Don't address the reader directly as 'you'
7. Avoid referring to yourself, especially in the singular 'I'; 'we' may sometimes be acceptable
8. Don't use abbreviations such as can't, it's, don't
9. Use formal, precise language rather than expressions such as 'fairly slow', 'a lot of equipment', 'the write up in the lab book'
10. Write as concisely as possible, and avoid waffle
11. Use clearly identified diagrams, acknowledging the source as appropriate
12. Check all you write, including any corrections you have made

Source:
Figure reproduced from J. v. Emden, *Effective Communication for Science and Technology*, Basingstoke, UK: Palgrave, 2001.

Further Information

General University Notes for Academic Skills

- Topics include: reading academically, writing effectively, search strategies, bibliographic software, referencing your work, giving a talk
- http://www.academic-skills.soton.ac.uk

SUSSED has links to library, academic skills and student resource network

- http://sussed.soton.ac.uk/

Electronic Journals and other online academic resources via the Library

- http://www.soton.ac.uk/library/

Engineering Communication Centre, University of Toronto it offers a range of interactive tutorials

- http://www.ecf.utoronto.ca/~writing/interactive.html
- specifically on lab reports: http://www.ecf.utoronto.ca/~writing/handbook-lab.html

Also the Writing Centre (University of North Carolina)

- http://writingcenter.unc.edu/handouts/abstracts/

Guidelines on spelling and punctuation, with exercises (the Aries project)

- http://www.arts.gla.ac.uk/SESLL/STELLA/ARIES/

See also the accompanying notes on the ECS notes pages.