

Technical Writing

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What we will cover...

- Background
- The Process of Technical Writing
- Clear Expression

Technical Writing...

- ...informs
- ...instructs
- ...records
- ...reports
- ...explains
- ...discusses
- ...recommends

The Reader

Requirements?

Expectations?

Motivation?

Behaviour?

Active Reading

- Making annotations
- Note taking
- Choosing reading order
- Deciding *not* to read some parts
- Frequent re-reading
- Making judgements

Communication Barriers

Unclear language

Poor graphics

Difficult navigation

Visual inaccessibility

Navigation

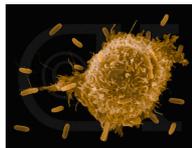
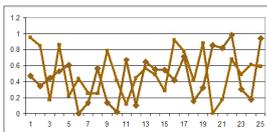
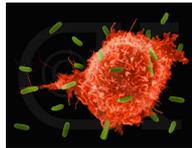
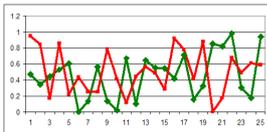
- Anticipate reader's behaviour
- Heading hierarchy
- Heading styles

1. Heading 1
1.1. Heading 2
1.1.1. Heading 3
2. Heading
2.1. Heading
2.1.1. Heading

Visual Accessibility

- “Inclusive design”
 - font issues
 - text alignment
 - colour and contrast
 - standard layout

Colour deficiency



www.vischeck.com

Applying Standards

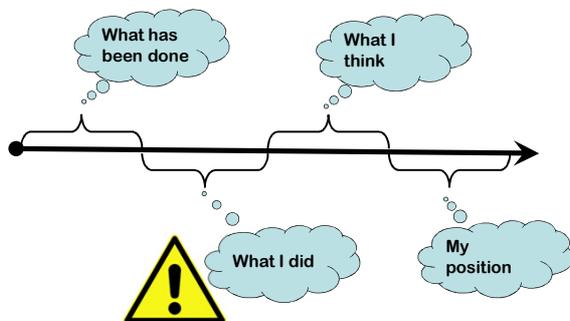
- SI Units
- “In-house” style guides and standards
- References & Citations

The Process of Technical Writing

- Focus on the purpose
- Consider the readers
- Build the document:

Framework	Filling
Outline & headings	Words & pictures

Structure & Content



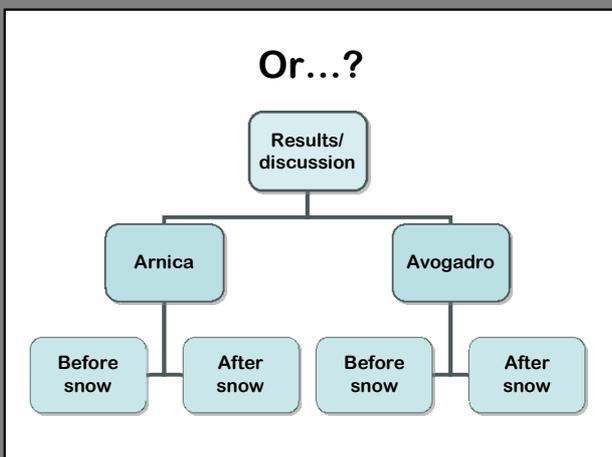
What you did...



Writing about it



Or...?



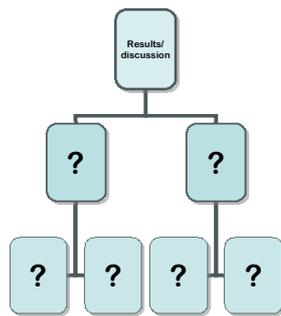
Here I'm going to describe the way I spread the Arnica...

Here I will explain what was measured and why...

Here I will talk about why I think timing is more important than material used...

Task deliverables:

1. A statement of research problem or question
2. A conclusion
3. A structure which links the aims and the conclusion in the most elegant and logical way



The 3-part trick!



What?



How?



Check!

The Rough Draft



- A nice room
- Get everything you'll need
 - Data
 - Records
 - Outline
- Write one section in a sitting
- Walk away!

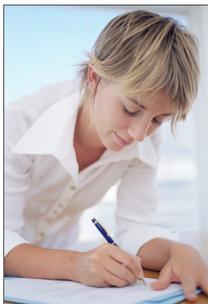


The First Drafts



- Proofing
- Add figures
- Shorter?
- Clearer?
- Complete?

The Final Draft



- Check as hardcopy, not on screen!
- Finalise and **Back Up!**

Clear Expression

- Clear English
- Effective figures

Better Writing



Clear
Concise
Precise

To the point?



Visitors to these premises should be aware that an interactive live security device has been installed. Activation may take place if unauthorised ingress is attempted. The management will not consider itself responsible for any loss or injury which may be deemed to result from any such unauthorised or unaccompanied entry.

Beware of the Dog!



How to be confusing!



1. I am late for work because the train before mine broke down.
2. The sample analyses took longer than planned because of calibration problems.
3. These results differ from those reported by Wild and Lye (2001).
4. Beware of the dog!

Horrible Words & Phrases

due to the fact that at this point in time
penetrate into large numbers of
subsequent to utilize
two equal halves

Use with care!

“not present” “always”
“prove(n)” “never”
“generally”

The “spellchecker”

I have a spelling checker,
It came with my PC.
It plane lee marks four my revue
Miss steaks aye can knot sea.

Eye ran this poem threw it,
Your sure reel glad two no.
Its vary polished in it's weigh.
My checker tolled me sew.

From: “Candidate for a Pullet Surprise”
by Mark Eckman and Jerrold H. Zar

Editing on Paper

- Essential at some stage
- Only way to judge how figures will look when printed
- For the final check, read it backwards!

Questions to ask

- Does this fulfil my Statement of Intent?
- Are all the facts correctly stated?
- Are there any dangerous words or phrases?
- Is everything *there*?

Review

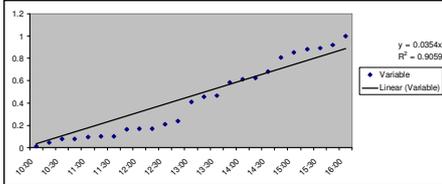
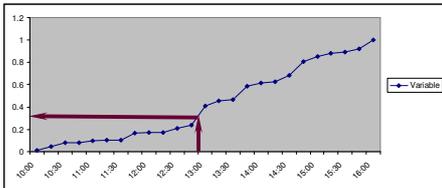
- This is the only job you must not do
- Specialist reviewers
- “Lay” reviewers

Effective figures...

- ...are integrated with the text
- ...make sense on their own
- ...are there for a reason!

Graphs

- Right choice of graph type
- Use colour to clarify *not* beautify
- Avoid fancy display options!



Raster -v- vector

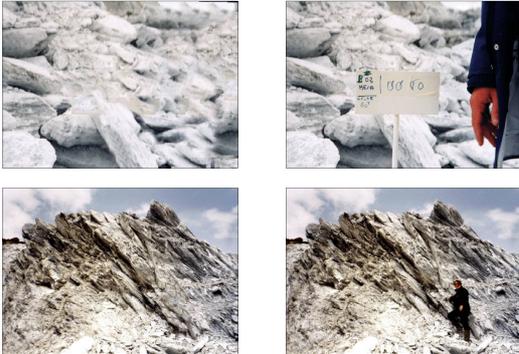
Vector

Table layout

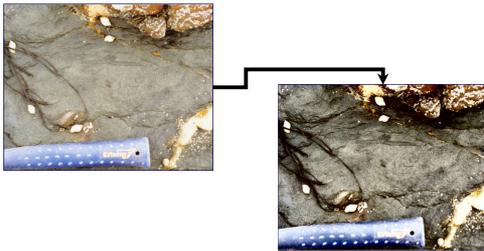
Discipline	No. of Candidates	age of candidate		
		20-25	26-35	>35
Life Sciences	310	250	45	15
Engineering	450	415	25	10
Chemistry	360	320	35	5
Mathematics	210	185	20	5
Physics	135	95	30	10



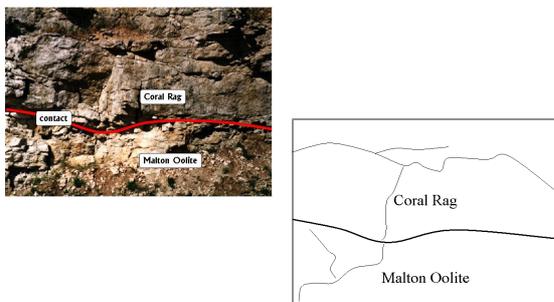
Scale Indicators



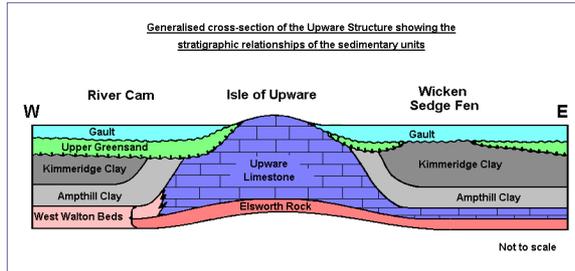
Digital Enhancement?



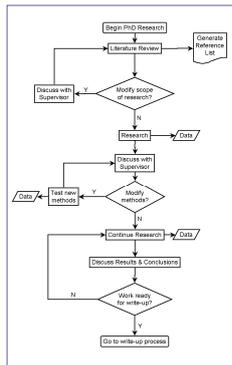
Annotating Photographs



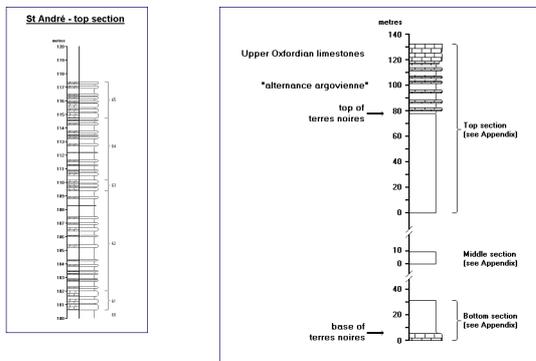
Good idea, bad figure!



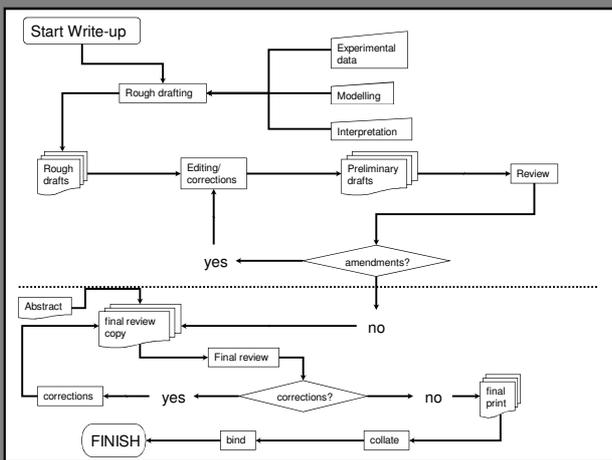
Flowcharts



Appendix -v- Text







Talk about...

1. Conference poster
 2. Journal paper
 3. Article for general readership
 4. Research web site
 5. Progress report
- Readers?
 - Style?
 - Content?
