

Technical writing

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Two questions

- What are the qualities of technical writing?
- What does a piece of technical writing look like?



Qualities

- Author demonstrates topic knowledge
- A high reliance on cohesion in writing
- Technical terms explained well
- Use of 'logical' devices to indicate cause and effect
- Quantitative data e.g. tables diagrams and figures tell the story
- Numbered headings and subheadings
- Distance between the writer and the writing
- A tendency toward information prominence (Duff 2007)
- Clear and succinct
- Parallel structure

Fundamentals of technical writing

(Woolever, 2007)

- Front-load paragraphs with the most important information
- Follow the important information with the detail
- A report often involves description (which is external to people's actions) or a 'summary of actions' (which is a narrative of what was done)
 - Descriptions and Summaries are persuasive
- Do not provide too much information, too many lists or use terminology inconsistently

Three types of technical writing

(Woolever, 2008)

- Describing a mechanism
- Describing a process
- Summarising what *has* or *will* be done

Describing a process

(Woolever, 2007 p. 248)

- A description of the actions, not the static parts

As shown in Figure 2, the process begins when the filament attaches to the graphite plate with a drop of epoxy. Then the main shaft turns the plate and winds the filament, and the guide system guides the windings across the plate and back to the filament's original position. Once the filament reaches that position, the plate is flipped along its diagonal axis. As the plate is flipped, the filament catches onto the stop built into the plate and the windings are reorientated 90 degrees. At this point, the plate is ready to begin its next layer.

Describing a process

As shown in Figure 2, the process **begins** when the filament attaches to the graphite plate with a drop of epoxy. **Then** the main shaft turns the plate and winds the filament, and the guide system guides the windings across the plate and back to the filament's original position. **Once** the filament reaches that position, the plate is flipped along its diagonal axis. **As the plate** is flipped, the filament catches onto the stop built into the plate and the windings are reorientated 90 degrees. **At this point**, the plate is ready to begin its next layer.

Exercise

- Describe and illustrate the process of one of the following things:
 - The lifts in this building
 - The sliding doors in this building
 - Andrea's metronome
 - The air conditioning and lighting panel
 - Andrea's egg beater

Another two questions

- How much specialist knowledge should we expect of our readers?
- What is the optimum length of a sentence?



Graphic elements

- Make sure diagrams are explained properly and in depth
- Diagrams require numbers too
 - Figure 1.1
 - Table 2

Analyse the following table and determine the hierarchical criteria used in its design...

Table 1 Yearly Production (in'000 tons) of saw-logs from 7 forest leases

<i>Lease</i>	<i>Year</i>						
	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>		
Cedar Junction			137.63	129.17	149.38	117.21	183.40
Dead Dog Hill			29.70	30.79	33.53	27.41	34.64
Heartbreak Hill			16.54	19.38	19.88	16.59	21.62
Millstream			142.63	137.60	171.79	162.40	194.26
Paradise			206.48	274.56	275.98	213.78	303.35
Queen's Ridge			47.32	51.83	53.73	49.10	60.23
Rapid Falls			63.54	77.82	81.76	54.20	89.49

Sourced from Lindsay, 1995 *A Guide to Scientific Writing*, 2nd ed.

The information presented

- Lists sites logically (in alphabetical order)
- Presents data faithfully (to two decimal places)
- How can the presentation of the table be improved to facilitate an understanding of trends or other vital facts?

How does this table present the information better?

Table 2 Yearly production (in '000 tons) of saw-logs from 7 forest leases

<i>Lease</i>	<i>Year</i>					<i>Average</i>	
	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>		
Paradise		206	275	276	214	303	255
Millstream		143	138	172	162	194	162
Cedar Junction		138	129	149	117	183	143
Rapid Falls		64	78	82	54	89	73
Queen's Ridge		47	52	54	49	60	52
Dog Head Hill		30	31	34	27	35	31
Heartbreak Hill		17	19	20	17	22	19
Average		92	103	112	91	127	105

In the design of this table...

1. The writer has streamlined the information (two decimal places removed) as the precision is superfluous
2. The visual impact of productivity of sites is emphasised by placing sites in decreasing order of productivity
3. A small gap has been added to emphasise the differences between the top three sites and the remaining four
4. Row and column averages have been inserted to provide better orientation for the reader
 - A visual gap also helps readers distinguish these

Technical writing is highly structured and concise

- Under each main heading, there should be brief introduction to the upcoming sections
- Sections and sub-sections are used as necessary
 - Both types are numbered
- The author aims to explain ideas succinctly and clearly using minimum words

Preliminary pages

- Preliminary pages precede the introduction and body and have numbers that look like this:

i

ii

iii

iv

Keep numbering simple

3.3.1.1 Numbering can be a bit cluttered once you have four levels

3.3.1.1.2 Now I'm losing track of my numbering system.
The report needs to be re-structured

3.3.1.1.2.1 This is totally ridiculous!!

- Also, you would never use a whole sentence as a heading