

Characteristics of Technical Writing

Characteristics of Technical Writing	Description of Characteristic
Understanding Why You are Writing (Purpose)	<p>Is the purpose of writing...</p> <ul style="list-style-type: none"> • To inform: to provide information without expecting any action on the part of the reader? • To instruct: to give information in the form of directions, instructions, procedures, so that readers will be able to do something? • To propose: to respond to a request for proposals (RFP) or to suggest a plan of action for a specific problem? • To recommend: to suggest an action or series of actions based on alternative possibilities that have been evaluated? • To persuade: to convince readers to take action, to change their attitudes or behaviors based on valid opinions and evidence?
Writing for the Audience	<p>Since the goal of technical writing is <i>information transfer</i> (sending a clear, noise-free message), what you say and how you say it depends on the audience. The nature of the audience determines the level of technical detail, the amount of “context/background” information you provide, and the organization of the document. It is important to understand who is reading the document so that the information you convey is transferred effectively. As a writer, it is crucial to have an awareness of the reader’s knowledge, ability level, and interest in the information being conveyed.</p>
Satisfying Document Specifications (Genre/Type of Document)	<p>Document specifications include...</p> <ul style="list-style-type: none"> • Adherence to document type (genre)--understanding what is expected in an email vs. a memo, knowing the difference between a proposal and a recommendation report, and understanding how to write up the results of an experiment vs. the conclusions; • Format--many document types specify a specific format be followed, for example, various professional journals and government documents require specified <ul style="list-style-type: none"> --font --margins --labeling for figures and graphics --line and paragraph spacing --number of words per document or per section --section headings and subheadings
Providing Accurate Information	<p>Being truthful and accurate are the cornerstones of technical writing. Technical writing is rarely about opinion. Technical and scientific writing is grounded in fact. It is always wrong and unethical to falsify information and data, and that is particularly true in technical writing. Providing inaccurate or wrong information causes readers to question your credibility and reliability. It is important to always report the facts about a particular experiment, even if those facts are not what were expected or desired.</p>

<p>Organizing Information Logically and Linearly</p>	<p>In general, technical writing is organized in a direct, linear format. ALL technical documents have a clear</p> <ul style="list-style-type: none"> • Introduction: this is where you provide motivation and context/background for the topic/material/information being presented in the document; always provide the “big picture” before jumping into the technical details • Body: this is where the information is expounded upon and where technical details are given • Conclusion: this is where the main points are reemphasized and where the “big picture” is once again discussed 																						
<p>Expressing Information Clearly</p>	<p>While you may be able to say the same thing in a variety of ways, being clear and direct are the most important characteristics of technical writing. Expressing information clearly is crucial; you NEVER want to make your reader work harder than necessary to understand the message/idea/information you are conveying. Sentences must have a single meaning with no room for ambiguity. Technical writing should be direct, not suspenseful. Technical writing is not the place for poetic language and innuendo.</p>																						
<p>Using Efficient Wording</p>	<p>Economy is the name of the game when it comes to technical writing. Technical documents should be clear and concise, never wordy and flowery. Always choose words and phrases that are simple and straightforward.</p> <table border="0"> <tr> <td>Verbiage</td> <td>Efficient</td> </tr> <tr> <td>commence</td> <td>start</td> </tr> <tr> <td>endeavor</td> <td>try</td> </tr> <tr> <td>a large number of</td> <td>many</td> </tr> <tr> <td>in the majority of instances</td> <td>usually</td> </tr> <tr> <td>the reason why is that</td> <td>because</td> </tr> <tr> <td>alternate choices</td> <td>alternatives</td> </tr> <tr> <td>completely eliminate</td> <td>eliminate</td> </tr> <tr> <td>connected together</td> <td>connected</td> </tr> <tr> <td>an analysis of the data will be made</td> <td>data will be analyzed</td> </tr> <tr> <td>made a selection</td> <td>selected</td> </tr> </table>	Verbiage	Efficient	commence	start	endeavor	try	a large number of	many	in the majority of instances	usually	the reason why is that	because	alternate choices	alternatives	completely eliminate	eliminate	connected together	connected	an analysis of the data will be made	data will be analyzed	made a selection	selected
Verbiage	Efficient																						
commence	start																						
endeavor	try																						
a large number of	many																						
in the majority of instances	usually																						
the reason why is that	because																						
alternate choices	alternatives																						
completely eliminate	eliminate																						
connected together	connected																						
an analysis of the data will be made	data will be analyzed																						
made a selection	selected																						
<p>Making Ideas/Information Accessible</p>	<p>One of the first things you will notice about technical documents is the page layout and organizational structure. Technical writing is known for its use of headings and subheadings and for the way information is made easily accessible by grouping material into “chunks.” Paragraphs are usually much shorter in technical writing than in other types of writing. Pages full of text only and long paragraphs are discouraging to readers. Readers want to be able to quickly access information, and the best way to help them find the info they need is to provide them with visual cues such as descriptive headings, and to make use of numbered lists and bulleted items. Anytime you can make information visual by creating figures and graphics, try to do so. Figures and tables provide visual relief from all of the text on the page and help the reader to access important data.</p>																						
<p>Eliminating “Noise”</p>	<p>Nothing is more irritating to a reader than sorting through misspellings, poorly written sentences, typos, and punctuation problems. Errors such as these make the writer look uneducated and unprofessional. Careful editing and proofreading are essential steps in the writing process!</p> <p>Be sure you know the basic rules for using</p> <ul style="list-style-type: none"> • Commas • Colons • Semicolons • Hyphens • Acronyms (RAM, NASA, GPA) • Numbers (writing the word vs. using the numeral) • Equations (use symbols) • Units of Measure (70 ns, 100 dB)—use abbreviations and symbols 																						

Using Appropriate Writing Style

Technical writing tends to be rather “dry.” This is because, compared to other types of writing, the purpose of technical writing is to inform rather than to entertain. Engineers and scientists are called upon to record and document information in an objective manner, and in doing so, the style of writing reflects this objective approach.

- **Avoid Personal Pronouns:** for most documents, it is unnecessary to use “I,” “we,” “us,” and especially “you.” Instead of saying, “I (or we) took measurements,” it is acceptable to say, “Measurements were taken.”

- **Passive Voice is OK:** while active voice is preferred in most cases, it is completely acceptable to use passive voice in technical writing.

--**Passive** Control of the flow is provided by a DJ-12 valve.

--**Active** A DJ-12 valve controls the flow.

--**Passive** An ASM chart is shown in Figure 3.

--**Active** Figure 3 shows an ASM chart.

- **Avoid Conversational Tone:** technical documents (including most emails) should employ a formal writing style. Conversational language and phrasing should be avoided.

--**Conversational** This lab gave us a good feel for state machines.

--**Formal** This exercise provided a good background on state machine design.

--**Conversational** The D-flip flop was hooked up to the board.

--**Formal** The D-flip flop was connected to the board for testing.