

## 2.0 INTRODUCTION TO TECHNICAL WRITING

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X 60 ETC.

### 2.1 WHAT IS A TECHNICAL WRITING

Technical writing refers to a type of writing where the author outlines the details and operations of administrative, technical, mechanical, or scientific systems. It is basically a recording of facts and activities associated with a particular technical subject. They are a type of writing that engineers, scientists and technical personnel come into contact quite often. The main goal of technical writing is to educate, direct, and give others the ability to use a certain system.

### 2.2 FEATURES DISTINGUISHING TECHNICAL WRITINGS FROM OTHER TYPES

- They contain subject material that is basically engineering or scientifically oriented
- They are directed toward a specific subject
- They are a record rather than a narrative or forecast. ie, they are historical in nature
- They are factual not speculative
- They carry the sanction of a responsible and cognizant individual, company, organization or company.

### 2.3 TYPES OF TECHNICAL WRITING

There are three main types of technical writing:

- End-user documentation: This type of writing includes documents in which the writer explains a topic to a beginner so that he can understand technical terms and apply them in a real-life situation.
- Traditional technical writing: This is writing that is geared to an audience already at least somewhat familiar with a technical field such as engineering or scientific, or technological.
- Technological marketing communications: This is writing used in promotional marketing such as fliers and promotional brochures that would entice a person to purchase a certain technical product or service

## 2.4 PURPOSE OF TECHNICAL WRITING

1. Documentation of results of research, development design, testing and operational activities associated with a specific material, process or product
2. Recording of technical progress, description, of a specific technical achievement or failures
3. Day to day communication associated with technical programs(both,large and small)
4. To influence the reader to make a particular decision and initiate the corresponding

## 2.5 EFFECTIVE TECHNICAL WRITINGS

When carrying out a technical writing assignment, you must remember to follow what is known as the three 'Cs' and ask yourself the following questions:

Is it clear?

Is it concise?

Is it complete?

Because technical writing is so often aimed towards those who may be unfamiliar with technical jargon and terminology, it is important that a technical writer uses clear and unambiguous language in their assigned piece.

If the writing is too full of technical language, the message may not come across as intended.

If the information being written about is provided in a convoluted and round-about way, the message is likely to be lost entirely. Straight forward and to the point is always best.

If a technical writer's information is incomplete, it inhibits the audience's understanding of the topic and can, in some cases such as instruction and safety manuals, prove dangerous. Above all, technical writing needs to be very clear and concise to be successful. Below are important features that all effective technical writings have.

## 2.6 Effective technical writings have the following characteristics

- o **Accuracy:** The information must be objective, correct and exact in content and all its details. Inconsistencies in data presentation, incorrect or incomplete data, erroneous curves, mistakes on drawings, or incorrect part numbering, erroneous descriptions, etc are not allowed

- **Clarity:** Technical writings including technical reports, memos, letters, technical papers etc are effective if they contain sentences that are clear to understand with the right choice of words and sentence structure to suit imparting meaning.

Clarity involves exactness in vocabulary, logical development, of thought, sentence structure, format, correct use of abbreviations, and special jargon, etc. All the thoughts must be directed to the topic to ensure unity. Unnecessary thoughts should be eliminated

- **Brevity;** Technical writings should contain sentences which are brief. That is they should express everything in the shortest possible way.

**Note that:** Clarity and brevity require that you *write in short sentences because long ones help to produce confusion*. Among the following sentences which ones are clear and brief and therefore easy to understand?

- It is expressly specified that in entering into the agreement to perform the work herein specified, the contractor admits that he has read each and every clause of these specifications and the circular of instructions, fully understands the meaning of the same, and that he will comply with all the requirements herein set forth
- The contractor agrees to comply with all specifications and terms of this agreement.

When writing, try to use grips of concise language.

- **Conciseness;** This means that, the message written in technical writing, should be compact, short and free of wordiness. Someone obtaining information from technical writings, he should obtain it in the shortest possible way. That is, write in such a way that *only important information should be obtained quickly and easily*
- **Preciseness;** That is information should be exact in terms of choice of words, sentence structure, but also details included in the message. For example don't say "Some people"-say "10 persons" or "10% of people".



- **Style and Good physical appearance;** Technical writings including reports, instructions, descriptions, etc, should be characterized with good style of presentation, right formatting, presence of visuals; e.g. charts, figure, drawings, scientific formulae, etc

*Style:* the report must have **good physical appearance and readability** that reflects communicative effectiveness

You may achieve the above characteristics by the followings techniques;

- Using summary type presentation where details are not presented,
- Using transitional paragraphs effectively
- Elimination of unnecessary details
- Avoid wordy phrases and complicated sentences, prudent use of acronyms
- Use quite appropriately tables, graphs, and other visual aids
- Use paragraph headings and notations to aid text referencing, running heads to flag paragraph contents, logical illustrations, references and captions

Pleasing physical style includes *careful handling of white space and type areas*, by arrangement of details in such away that they contribute to *ease reading and understanding*.

The following exercises are designed to assist a prospective technical writer or a scientist master various mechanical and stylistic aspects of technical writing including the ability to write briefly, but clearly and concisely

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**Exercise 1: Rewrite the following sentences *concisely***

1. He was the author not only of the novels but also of textbooks as well
2. The money resources will not be adequate enough to pay for the cost of reconstruction.
3. As you know, a house rarely depreciates in value.
4. Finally and in conclusion I should like to finish by thanking the ladies for their helping preparing the teas and by expressing my gratitude to them for performing this task.
5. In the nineteenth century many very young babies died in infancy
6. Sir Alec and the Soviet Foreign Minister have had their first face-to-face confrontation since the expulsion of the hundred Russians, but it is clearly obvious that neither wishes to escalate or exacerbate the situation
7. I shall consult with my executive committee

8. The necessity for modernization of plant is plainly obvious and is indeed essential
9. Thank you for your letter of July 27<sup>th</sup>, which we hereby acknowledge
10. The amount of tax paid usually amounts in total more often not to round about 40% of gross income

**Exercise 2:** To become a concise engineering writer you need to avoid wordy expressions. For each of the wordy expressions listed below, write a single word or phrase that would convey the same meaning

Expression	Revised Word/phrase
Due to the fact that	
In the near future	
With regard to	
In the event that	
At the present time	
On a regular basis	
Prior to the start of	
In some cases	
In view of the fact that	
Reach a conclusion	

**Exercise 3:** Revise, edit, or punctuate each of the following sentences so that each one has a good pattern and clear meaning. Notice that some sentences will produce more than one meaning, depending upon the punctuation selected.

1. Having completed the tour of the Engineering Museum, our bus left for the AGGREGCO Corporation
2. These cards are to be return in sets. With each set clearly identified
3. 25 members of the class were present absent were Barstow Danielson Gerdeen and Nordeng
4. John said Fred had drop out of mechanics before the Holidays (two possibilities)
5. Transceivers been bought by young ladies with but one tuning knob

6. Until the 1920s-1930s when mining cos. Were forced by law to pay accidentpensions to injured minors were mining cos. serious about safety
7. The lives of the miners while underground was rested solely upon theirawareness and judgments of safety
8. He was standing waste deep in the cold rushing waters of the trout stream when he felt a fish nibbling at his fly
9. Upstairs in our laboratory, it is also accessible by to elevators
10. The plans of a laboratory, should be very compact and not to roomy

**Exercise 4:**

Re-write the following sentences accurately, precisely andconcisely following the number of words suggested in parenthesis

1. He was the technician of not only the lathe machines but also civil engineering works as wel
2. The money resources will not be adequate enough to pay for the cost of reconstruction.
3. Finally and in conclusion I should like to finish by thanking the ladies for their helpi preparing the teas and by expressing my gratitude to them for performing this task.
4. In the nineteenth century many very young babies died in infancy
5. The necessity for modernization of plant is plainly obvious and is indeed essential
6. Thank you for your letter of July 27<sup>th</sup>, which we hereby acknowledge
7. The amount of tax paid usually amounts in total to about 40% of gross income
8. I am enclosing within, a photocopy of the agreement
9. He was the author not only of the novels but also of textbooks as well
10. I am a student, an undergraduate in civil engineering , with 22 years as well as a Tanzanian