**Technical Writing and Presentation Skills**

**What does writing clearly and concisely mean?**  
Writing clearly and concisely means choosing your words deliberately, constructing your sentences carefully, and using grammar properly. By writing clearly and concisely, you will get straight to your point in a way your audience can easily comprehend.

**Why should I write clearly and concisely?**  
In order to succeed in your communication task, you need to keep your audience’s attention. Writing clearly and concisely is one way to capture and retain their interest. Rambling on, conversely, may lose your audience’s attention.

**How do I write clearly and concisely?**

Several techniques can help you learn to write clearly and concisely in order to motivate your audience to read and respond favorably to your communication.

**Choose your words deliberately**

The words you choose can either enhance or interfere with your meaning and your audience’s comprehension. Follow these guidelines to develop a strategy for choosing the most effective words for your communication task.

**Use simple words**

Paul Anderson, in his book *Technical Communication: A Reader-Centered Approach,* points to studies that show users comprehend simple words more quickly, even when they’re familiar with a more elaborate counterpart [1].

This table shows some commonly-used elaborate words and their simple alternatives [1]:

|  |  |
| --- | --- |
| **Elaborate word** | **Simple word** |
| ascertain commence constitute fabricate initiate terminate transmit utilize | find out begin make up build begin end send use |

This guideline doesn’t mean you should eliminate all elaborate terms.

You may be familiar with technical processes and their related terms. If your entire audience will understand technical terms, use them. If not, either substitute with simple terms instead, or if there are no substitutes, explain the meaning of the technical term using one of these methods [1]:

* ***Use a synonym:*** “memory” instead of “RAM.”
* ***Describe the term:*** “RAM allows your computer to run more quickly and efficiently.”
* ***Compare the term with a common concept:*** “RAM is like having a large desk with numerous drawers for storage. You can quickly and efficiently access your files at a moment’s notice” [2].
* ***Define the term:*** “RAM, or random access memory, is one type of computer data storage systems. It allows your computer to quickly and efficiently access files” [3].

**Replace vague words with specific ones**

Vague words tend to be abstract and can conceal your meaning. Specific words, on the other hand, precisely and shortly convey your meaning.

For instance, suppose you are describing a new product your company is developing:

* **Vague:**The Acme Corporation is developing **a new consumer device that allows users to communicate vocally in real time.**
* **Specific:**The Acme Corporation is developing **a new cell phone.**

Readers may not immediately understand what the first sentence describes. Is this a brand new kind of device? Or a device they’ve never heard of? The second sentence, on the other hand, says exactly what the product is, leaving little room for doubt.

**Eliminate unnecessary words**

Unnecessary words come in many forms. Like vague words, they can conceal instead of reveal your meaning [4].

* ***Excessive detail***
  + **Before:** I received and read the email **you sent yesterday** about the report **you’re writing for** the project. I agree it needs **a thorough, close** edit **from someone familiar with your audience.**
  + **After:**I received your email about the project report and agree it needs an expert edit.
* ***Extra determiners and modifiers***
  + **Before: Basically,** the first widget **pretty much** surpassed the second one in **overall**performance.
  + **After:**The first widget performed better than the second.
* ***Repetitive words***
  + **Before:**The engineer considered the second monitor an **unneeded luxury.**
  + **After:**The engineer considered the second monitor a luxury.
* ***Redundant words***
  + **Before:** The test revealed conduction activity that was **peculiar in nature.**
  + **After:** The test revealed peculiar conduction activity.

**Replace multiple negatives with affirmatives**

Multiple negatives require your readers to interpret your meaning. Affirmatives, instead, convey concise meaning that needs no interpretation.

* **Before:**Your audience **will not appreciate**the **details that lack relevance.**
* **After:** Your audience will appreciate relevant details.

**Avoid noun strings**

Noun strings can confuse readers, as they are difficult to understand.

* **Before:** The Acme Corporation continues to work on the **cell phone case configuration revision project.**
* **After:**The Acme Corporation is developing a redesigned cell phone case.

Sentences express and connect the meaning of your ideas. Follow these guidelines to write clear and concise sentences that your audience can comprehend quickly and easily.

**Pay attention to sentence length**

In his book, *Technical Communication: A Reader-Centered Approach*, Paul Anderson recommends varying the lengths of sentences. Use short sentences to emphasize a point; use longer sentences to connect ideas [1]:

This report provides operational information about the electrical equipment the Acme Corporation recently installed at their headquarters in Los Angeles **(long sentence)**. The equipment will increase energy efficiency by 25% **(short sentence)**.

**Use the known-new contract**

Martha Kolln and Loretta Gray, in their book *Rhetorical Grammar*, define the known-new contract as a reader’s expectation “that a sentence will have both known, or old, information as well as new and that the known information will precede the new” [2].

This contract allows users to easily connect what they already know to the new information you’re offering them [6].

* **Before:**Support higher data rates for non-voice communication **(new information)** with third-generation (3G) cell phone technology **(known information)**.
* **After:** Third-generation (3G) cell phone technology **(known information)** supports higher data rates for non-voice communications **(new information)**.

**Use the appropriate voice**

In the active voice, the subject performs the action of the verb. The focus of an active sentence is the subject:

* Gary (subject) threw (verb) the ball (object).

In the passive voice, the subject receives the action of the verb. The focus of a passive sentence is the action:

* The ball (object) was thrown (verb) by Gary (subject).

Each type of voice has its place in writing clearly and concisely. Use active voice by default; research shows readers comprehend it more quickly than passive voice [1]. But use passive voice when

* the action is more important than the subject, such as when you’re describing research or testing you’ve done: The results generated from the test were telling.
* the subject is unknown: Every year, hundreds of people are diagnosed with hearing problems caused by excessive cell phone use; or
* you don’t want to identify the subject, such as instances in which identifying the subject would cause unnecessary embarrassment: The lights in the lab were left on for three nights in a row and the bulb burned out as a result.

However, don’t use passive voice to conceal serious responsibility:

* Mistakes *were made* that delayed the testing for weeks.

Use active voice instead:

* The team *made* mistakes that delayed the testing for weeks.

**Use transitions**

Transitions are words and phrases that indicate connections between sentences. You should use them at the beginning of sentences to connect ideas by [1]

* time: before, after, during, while, until
* space: above, below, inside
* cause and effect: as a result, because, since
* similarity: as, likewise, similarly
* contrast: although, however, on the other hand

**Monitor nominalizations**

Nominalizations occur when a verb is used as a noun:

* occur—occurrence,
* evaluate—evaluation,
* execute—execution.

 Nominalizations work well as sentence transitions:

* Electrical signals **occur** naturally between devices. These **occurrences** happen only when the device is turned on.

However, nominalizations should be avoided when they hide the action of a sentence:

* **Before:**Employee achievement led to the **creation** of the Engineer of the Year award.
* **After:** The Acme Corporation **created** the Engineer of the Year award to recognize employee achievement.

**Avoid using forms of the verb “be”**

Forms of the verb “be” (is, am, are, were, was) indicate a state of being rather than an action. They can weaken an active sentence  and, in some instances, may indicate passive voice. Use active verbs instead whenever possible.

* **Before:**The report **is waiting** for your approval.
* **After:** The report **awaits** your approval.

**Reduce prepositional phrases**

Prepositional phrases help establish relationships between people and things in a sentence:

* Frank drove his car **to work**.
* The lab closes **at 7:00 pm**.
* Joy had to revise her presentation **for the conference**.

Unnecessary use of prepositional phrases interferes with the clarity of a sentence [7]:

* **Before:** The opinion of the manager.
* **After:** The manager’s opinion.
* **Before:** It is a matter **of** the gravest importance **to** the health **of** anyone who uses a microwave and has a heart condition to avoid standing **in front of** the microwave **while** it is running.
* **After:** Anyone **with** a heart condition should avoid standing **in front of** an operating microwave oven.

**Revise your sentences using the paramedic method**

While you may not use it for everything you write, the paramedic method, developed by Richard Lanham, a professor of English at the University of California, is a set of steps for revising sentences. When the situation is appropriate, use this popular method to make your writing clear and concise  (adapted from the Purdue Online Writing Lab [8]).

The first step is to concretely identify problems in your sentences:

* Underline prepositions (of, about, to, in, across, etc.)
* Circle forms of the verb “be” (is, am, are, were, was)
* Put boxes around action words (verbs like test, result, change; as well as nominalizations like testing, resulting, changing).
* Highlight the person or thing performing the action.
* Bracket wind-up explanations.
* Cross out redundancies.

The next step is to revise the problem areas you have identified:

* Rewrite or delete unnecessary prepositional phrases
* Replace forms of “be” with action verbs.
* Put the action in the verb.
* Put the person or thing performing the action into the subject.
* Delete unnecessary wind-up explanations.
* Eliminate redundancies.

The primary goal of technical writing is to make the complex language sound simple. With this type of writing, you're assuming the reader has no knowledge of the subject or only a basic understanding of it. For example, everyone understands what a camera is and most people know how to use the basics, like point and click. However, operating a specific model with its own set of features necessitates more than just knowing how to turn it on and off and take pictures in auto mode. In this article, we will look in detail at what the ultimate goal of technical writing is, what technical writers do, how much they make, and how you become one.

Technical writing is a type of writing which focuses on a specific topic that requires direction, instruction, or explanation. This writing style serves a specific purpose and thus differs greatly from other types of writing, such as creative writing, academic writing, or business writing.

Design documentation, user guides, reference and installation manuals, help desk sheets, tutorials, online documentation, and similar technical content are all examples of technical writing.

As a result, technical writing is essential in a wide range of businesses and industries. Without it, complex topics and procedures would be difficult – if not impossible – to comprehend and carry out by common people.

To recognize the significance of technical writing in your own business or industry, you must first understand what technical writing is, as well as its unique characteristics, different types, basic principles, and more.

In this comprehensive guide to learning everything there is to know about the subject, we ask the question: what is technical writing and what are its goals? Going through our guide you'll be an expert on the subject in no time.

**What is the goal of technical writing?**

Technical writing is a multifaceted skill. It can be used in a variety of ways. Many industries rely on Technical Writers to market their products and services. There are also different types and applications of Technical Writing in various fields of operation.

As we discussed earlier, every type of writing serves a purpose. Some forms of writing are designed to tell a story, while others are designed to express opinions. Technical writing is not intended to serve either of these functions.

***The primary goal of technical writing is to convey complex information to readers in a way that they can understand and apply, even if they have no prior knowledge of the subject.***

Technical writing explains how to use a specific object or how to complete a task or project. It is intended for readers seeking information on a specific topic, such as how to use a smartphone, or to provide detailed specifications on how to write this blog effectively.

Technical writing must be clear, concise, and simple for the target audience to follow, understand, and act on. These are essential elements of effective technical writing.

What is your role as a technical writer?

A [technical writer's role](https://money.usnews.com/careers/best-jobs/technical-writer#:~:text=Technical%20writing%20is%20the%20art,the%20sciences%20to%20information%20technology.) is determined by their area of expertise and whether they work for a company or as an independent freelancer. Technical writers essentially act as a liaison between a company's technical staff and the end user.

***They usually have to interact with multiple teams in order to understand the project well enough to write about it. This necessitates that technical writers become accomplished communicators.***

In a way, they work as translators, ensuring that difficult technical information is accessible to the intended end user in an easily understandable form. It is frequently their responsibility to bring together multiple stakeholders on a project.

Other than writing, they spend a lot of time researching, preparing, and reviewing their work.

What helps to distinguish technical writing from other types of writing?

***The tone and purpose of technical writing are distinct. It differs from other types of writing such as journalism, creative writing, academic writing, and business writing in tone and purpose.***

Technical writing is frequently compared to and confused with business writing. This is due to the fact that it covers many of the same topics. While the two have some similarities, business writing is a broader category. Technical writing is a subset of business writing, or rather a specific type of business writing.

The goal of both business and technical writing is to be easily understood. Technical writing, however, is solely concerned with conveying information, whereas business writing can vary in style and tone.

Business writing, for example, can be persuasive, such as when attempting to sway someone toward your point of view. The goal of technical writing is always to be objective.

Technical writers do not attempt to persuade you to buy a specific laptop, for example. Instead, they focus on teaching you how to use one.

**You may also want to read this blog that focuses on explaining the**[**difference between technical writing and business writing.**](https://unmudl.com/blog/technical-vs-business-writing)

What are the characteristics of technical writing?

If you are confused don’t worry, this section will highlight key characteristics of a technical written document so you can clearly identify it when you see one.

Technical writing has some distinguishing features that set it apart from all other types of writing and they are:

**1. Problem-solving**

Because the primary goal of technical writing is to solve problems, each document is written with this goal in mind. These texts are used by readers to learn how to complete specific tasks or to obtain technical information.

As a result, they are organized in such a way that they can be easily referred to when problems arise. For example, a how-to guide for troubleshooting problems with your printer.

**2. Precise**

**‍**Technical writing terminology is always very specific in order to precisely describe objects and processes.

**3. Clearly written**

Technical writing conveys information in a clear and concise manner, with little room for interpretation. As a result, it employs concise and unambiguous language.

**4.Well structured**

**‍**This writing style must have a clear structure that allows readers to easily follow along. This is due to the fact that readers rely on technical documents for step-by-step instructions.

**5. Simple to understand**

Effective technical writers avoid using complicated words, jargon, and slang that readers may not understand and instead choose to write in a simple, understandable tone.

**6. Straightforward**

It conveys information in a straightforward and to-the-point manner, without the use of creative writing techniques.

**7. Denotative**

This simply means that the literal definition of words is central to technical writing. It helps to avoid misunderstandings caused by the many different connotations—or suggestions—of words.

**8. Elaborate**

**‍**Technical writing is extremely detailed and informative, with no room for interpretation. A textbook is an excellent example of technical writing because textbooks often provide the most complete and factual overview of a topic.

**9. Skimmability**

**‍**Technical documents are written with 'Skimmability' in mind, so audiences can simply scan the entire text to obtain the information they require. Technical writers include descriptive headings as well as a detailed table of contents and/or index.

**What are some examples of technical writing**?

Depending on the kind of documentation being written, there are different types of technical writing that can take place. We have put together a list and a short explanation of each important example. For an exhaustive list of all types of technical documents you can visit [TechWhirl](https://techwhirl.com/what-is-technical-writing/):

1. End-user instructions

When you purchase software, install a computer component, or purchase a digital device or consumer appliance, it comes with an instruction manual that explains how to use it.

These are known as end-user instructions, but they also include documents such as troubleshooting guides, assembly instructions, "dos and don'ts" lists, warranty details, and legal disclaimers.

The writers must analyze this highly technical information and convey it in a user-friendly language that a wide audience can understand.

Because this type of technical writing is intended for a specific audience, the writer must be aware of the reader's level of expertise as well as have extensive knowledge of the subject matter.

Examples include the user manual for your home theater system or the assembly instructions for a modular cabinet.

2. Technical papers

In addition to instructions and advice, many products provide information on the product's origin, development, or structural or operational modifications.

Technical writers organize and edit information to ensure clarity and accuracy in these documents.

3. Corporate reports and feasibility studies

A writer conducts extensive research for feasibility studies and corporate reports, such as a company's financial reports. This information must then be presented in such a way that it is easily understood by every level of employee, executive, or shareholder.

As a result, visual aids such as graphs or charts are frequently included within these reports and studies — particularly when discussing finance, timelines, and social or business practicality.

4. Case studies

Case studies are in-depth written analyses of real-world events. They may focus on individuals, groups, organizations, medical studies, business decisions, or the long-term study of a specific organization or individual subject.

They seek patterns in data about the subject, which they then use to make assumptions and detect trends. Case studies are common in scientific publications, but they can also be found in business and industry.

5. Research findings

Documents detailing relevant laboratory findings or other types of studies like surveys are frequently included in medical, pharmaceutical, and political research reports and documents.

Because this type of technical writing typically includes information on medication combinations, side effects, policy making, and other critical issues that directly impact human life or impact key decision making, extreme care must be taken.

6. Procedures and policies

To manage their organization, businesses of all sizes require guidelines outlining their policies and procedures.

A good example is an organization’s employee handbook which helps protect the company from lawsuits from employees who claim they were unaware of certain rules and regulations.

7. White papers

White papers are documents created by a company for an external audience to assist them in making decisions and solving relevant problems.

They are used in a variety of industries and businesses to discuss a problem and recommend a specific solution, product, technology, or procedure. For example, I recently read an excellent white paper on renewable energy sources, their application, and their benefits.

8. Proposals

Proposals are written with the intention of informing an individual or a group to take effective action. A proposal is commonly required when applying for grants, undertaking projects, or purchasing products.

Proposals are also required when considering improvements to an organization, product, process, or service.

Because a proposal must be extremely persuasive, it must be written with the intended audience in mind. The writer must also identify the situation and outline the recommended course of action while still being completely objective.

9. Business strategies and plans

Financial institutions require a detailed business plan before granting loans to new or established businesses.

These documents necessitate extensive technical research and comprehension of a company's finances and operations, including spending forecasts, potential losses, and profit margins, as well as competitive analysis, marketing practices, and detailed background information on the owner's professional history and financial health.

10. Literature reviews

A literature review can be used separately or as part of a larger report. It's a type of technical writing that summarizes what's known about a particular subject.

Literature reviews summarize and explain prior research and discoveries on a topic, highlighting research milestones, contradictory results, and what more research is needed to advance knowledge on the issue.