

Write Clearly and Concisely (Adapted from <http://sites.ieee.org/pcs/communication-resources-for-engineers/style/write-clearly-and-concisely>)

What does writing clearly and concisely mean? Writing clearly and concisely means choosing your words deliberately and precisely, constructing your sentences carefully to eliminate deadwood, 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? To succeed in your communication, you need to keep your audience's attention, and your audience needs to read through documents effortlessly and with understanding. If your writing is difficult to follow, your readers may lose interest (and patience).

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.

Avoid unnecessary "fancy" words; use straightforward words

Paul Anderson, in his book *Technical Communication: A Reader-Centered Approach*, points to studies that show users comprehend straightforward words more quickly, even when they're familiar with a more elaborate counterpart. Below are some commonly-used elaborate words and their simple alternatives:

Fancy word	Straightforward word
ascertain	find out
commence	begin
constitute	make up
fabricate	build
initiate	begin
terminate	end
utilize	use

NOTE: The above guideline *doesn't mean you should eliminate all specialized technical 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 more common, straightforward terms instead, or if there are no substitutes, explain the meaning of the technical term using one of these methods:

- **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."
- **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."

Eliminate vague pronoun references!

Many papers are riddled with vague or ambiguous uses of “this” or “it.” When the referent **may not be clear to the reader**, you should follow “this” with a noun or noun phrase, or to replace “it” with a noun/noun phrase.

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.

- **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 or unnecessary words**
 - **Before:** The test revealed conduction activity that was **peculiar in nature.**
 - **After:** The test revealed peculiar conduction activity.
 - **Before:** We redid the experiment **due to the fact that** our initial method was incorrect.
 - **After:** We redid the experiment **because** our initial method was incorrect.

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 and emphasis

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 more elegantly and for better emphasis. Use subordination and coordination to connect ideas.

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 information to new information” technique for better cohesion

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.**”

This contract allows users to easily connect what they already know to the new information you’re offering them. In other words, lead *from* known info in sentences to create a more logical flow of ideas.

- **Before:** X has developed fourth-generation (4G) cell phone technology (**new info**). To support higher data rates for non-voice communication (**new info**), Y is using 4G cell phone technology (**known info**).
- **After:** X has developed fourth-generation (4G) cell phone technology (**new info**). Y is using this (4G) technology (**known info**) to support higher data rates for non-voice communications (**new information**).

Use active voice constructions when appropriate

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

- We (*subject*) completed (*active verb form*) the design (*object*). In the passive voice, the subject receives the action of the verb. The focus of a passive sentence is the action:
- The design (*object*) was completed (*passive verb form*) by us (*subject*).

Each type of voice has its place in clear and concise writing. However, use active voice by default; research shows readers comprehend it more quickly than passive voice. 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"—or for much of the methods section when it is clear that you completed the actions—"The sample was heated to X"--; or
- 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.

Note: Do not use passive voice to conceal serious responsibility:

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

Use active voice instead:

- The XYZ 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 or in the middle of sentences to connect ideas by

- 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 and reduce nominalizations

Nominalizations occur when a verb is used as a noun. Try to avoid the unnecessary use of these! They sap your prose of energy and make writing less clear:

- occur—occurrence
- evaluate—evaluation
- execute—execution

Nominalizations should be avoided when they hide the action of a sentence; ground your sentences in someone/something (the agent) doing something (the action). Sometimes you may need to add a word that expresses logical connection, often a causal or conditional relationship, to your revision. Your writing will be clearer and more concise, and readers will grasp information more quickly:

- **Before:** Our **lack** of data prevented **evaluation** of the areas in most **need** of assistance.
- **After:** **Because** we **lacked** data, we could not **evaluate** the areas that most **needed** assistance.
- **Before:** The **discovery** of a method for the **manufacture** of artificial skin will have the **result** of an **increase** in the **survival** of patients with radical burns
- **After:** **If** researchers **discover** how **to manufacture** artificial skin, more patients will **survive** radical burns.

Related to the above: Avoid unnecessarily using forms of the verb “be.”

Forms of the verb “be” (e.g., is, am, are, were, was) indicate a state of being rather than an action. They can replace what could be a descriptive verb and lead to unnecessary nominalization and verbosity. These often appear in “there is” constructions:

- **Before:** The outcome **is** dependent on the data.
- **After:** The outcome **depends** on the data.
- **Before:** There **is** the possibility of approval of the study ahead of time.
- **After:** Robin may **approve** of the study ahead of time.

Reduce unnecessary prepositional phrases

Prepositional phrases help establish relationships between people and things in a sentence. However, unnecessary use of prepositional phrases interferes with clarity, and can be a sign of verbose prose that lacks clear, descriptive verbs!

- **Before:** The lack **of** any knowledge **on** the part **of** the investigators **about** local conditions precluded determination **of** committee action effectiveness **in** fund allocation **to** those areas **in** greatest need **of** assistance. (7 prepositions, 1 verb!)
- **After:** Because the investigators **did not know** anything about local conditions, they **could not determine** how effectively the committee **had allocated funds** to the areas that most **needed assistance**.

A tool for revising: the paramedic method

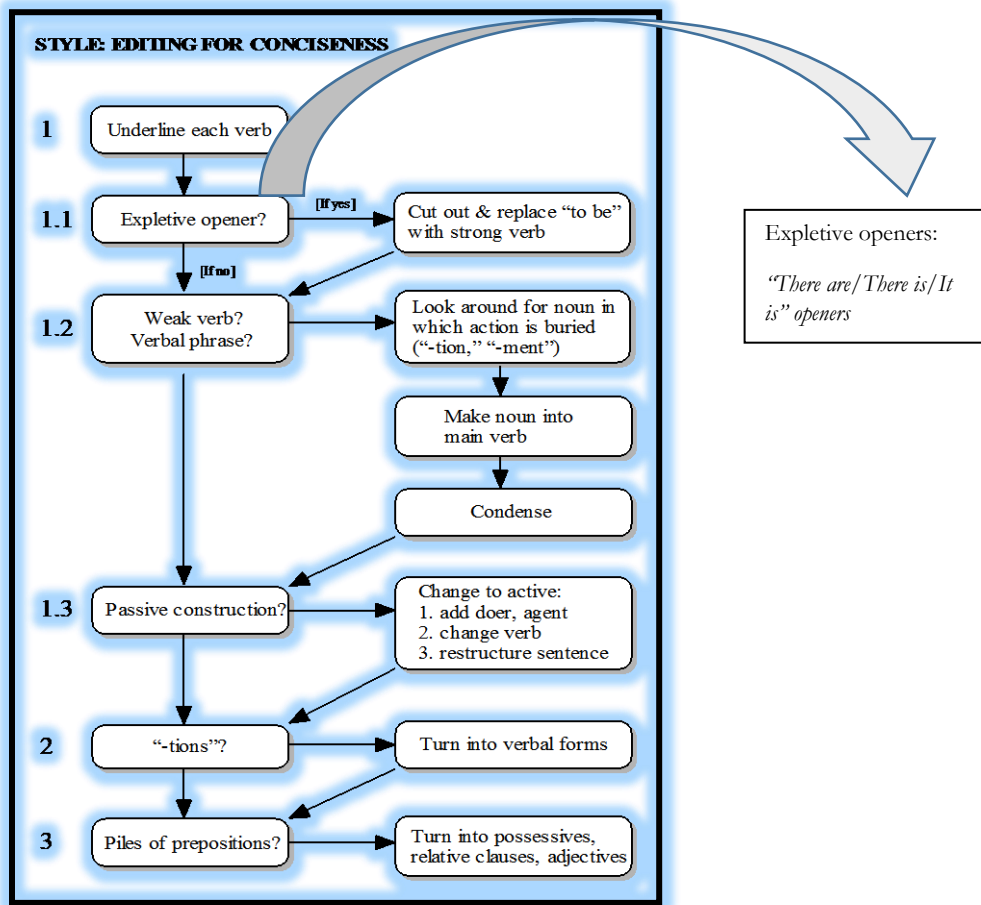
The paramedic method, developed by Richard Lanham, a professor of English at the University of California, is a set of steps for revising sentences. When the situation is appropriate, use this method to make your writing clear and concise.

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) and expletive constructions (“there is”; “there were”; “it is”) and put boxes around nominalizations (e.g., *analysis, evaluation, discovery, dependency, resistance*)
- Highlight the person or thing performing the action.
- Cross out redundancies and deadwood (e.g., “large in size” instead of “large”; “due to the fact that” that” instead of “because”; “in the event that” instead of “if”)

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 where possible (*Z analyzed; X evaluated; researchers discovered; Y depends on; the community resisted efforts to. . .*)
- Put the person or thing performing the action into the subject.
- Eliminate redundancies and deadwood.



Aim for a more verb-based style. Increase verb ratio!

