Pre-Class material
Introduction (3 min)
Just enough grammar (optional) (10 min)
Words (10 min)
Active voice (15 min)
Clear sentences (10 min)
Short sentences (20 min)
Lists and tables (15 min)
Paragraphs (10 min)
Audience (10 min)
Documents (10 min)
Punctuation (optional) (5 min)
Markdown (variable)
Summary (1 min)

Paragraphs

On this page
Write a great opening sentence
Exercise
Focus each paragraph on a single topic
Exercise
Don't make paragraphs too long or too short
Answer what, why, and how

Estimated Time: 10 minutes

This unit provides some guidelines on building cohesive paragraphs. But first, here is an inspirational message:

> The work of writing is *simply* this: untangling the dependencies among the parts of a topic, and presenting those parts in a logical stream that enables the reader to understand you.

Write a great opening sentence

The opening sentence is the most important sentence of any paragraph. Busy readers focus on opening sentences and sometimes skip over subsequent sentences. Therefore, focus your writing energy on opening sentences.

Good opening sentences establish the paragraph's central point. For example, the following paragraph features an effective opening sentence:

> A loop runs the same block of code multiple times. For example, suppose you wrote a block of code that detected whether an input line ended with a period. To evaluate a million input lines, create a loop that runs a million times.

The preceding opening sentence establishes the theme of the paragraph as an introduction to loops. By contrast, the following opening sentence sends readers in the wrong direction:

> A block of code is any set of contiguous code within the same function. For example, suppose you wrote a block of code that detected whether an input line ended with a period. To evaluate a million input lines, create a loop that runs a million times.

Exercise

Is the opening sentence of the following paragraph effective or defective?

> The Pythagorean Theorem states that the sum of the squares of both legs of a right triangle is equal to the square of the hypotenuse. The k-means clustering algorithm relies on the Pythagorean Theorem to measure distances. By contrast, the k-median clustering algorithm relies on the Manhattan Distance.

Click the icon to see the answer.

This opening sentence is **defective** because it implies that the paragraph will focus on the Pythagorean Theorem. In fact, the paragraph's focus is actually clustering algorithms. The following would be a more effective opening sentence:

> Different clustering algorithms measure distances differently.

Note: Effective opening sentences can take many forms. That is, not all great paragraphs start with a sentence that states the theme. Starting a paragraph with a rhetorical question, for example, can engage readers.

Focus each paragraph on a single topic

A paragraph should represent an independent unit of logic. Restrict each paragraph to the current topic. Don't describe what will happen in a future topic or what happened in a past topic. When revising, ruthlessly delete (or move to another paragraph) any sentence that doesn't directly relate to the current topic.

For example, assume that the opening sentence of the following paragraph does focus on the correct topic. Can you spot the sentences that should be removed from the following paragraph?

> The Pythagorean Theorem states that the sum of the squares of both legs of a right triangle is equal to the square of the hypotenuse. The perimeter of a triangle is equal to the sum of the three sides. You can use the Pythagorean Theorem to measure diagonal distances. For example, if you know the length and width of a ping-pong table, you can use the Pythagorean Theorem to determine the diagonal distance. To calculate the perimeter of the ping-pong table, sum the length and the width, and then multiply that sum by 2.

We've crossed out the second and fifth sentences to yield a paragraph focused exclusively on the Pythagorean Theorem:

> The Pythagorean Theorem states that the sum of the squares of both legs of a right triangle is equal to the square of the hypotenuse. ~~The perimeter of a triangle is equal to the sum of the three sides.~~ You can use the Pythagorean Theorem to measure diagonal distances. For example, if you know the length and width of a ping-pong table, you can use the Pythagorean Theorem to determine the diagonal distance. ~~To calculate the perimeter of the ping-pong table, sum the length and the width, and then multiply that sum by 2.~~

Exercise

Remove the extraneous sentence(s) from the following paragraph. Assume that the opening sentence does establish the desired theme for the paragraph:

> **Spreadsheets** provide a great way to organize data. Think of a spreadsheet as a table with rows and columns. Spreadsheets also provide mathematical functions, such as means and standard deviations. Each row holds details about one entity. Each column holds details about a particular parameter. For example, you can create a spreadsheet to organize data about different trees. Each row would represent a different type of tree. Each column would represent a different characteristic, such as the tree's height or the tree's spread.

Click the icon to see the answer.

The paragraph focuses on spreadsheets as a way of organizing data. The third sentence distracts from that theme. Move the third sentence to another paragraph about mathematical operations in spreadsheets.

> **Spreadsheets** provide a great way to organize data. Think of a spreadsheet as a table with rows and columns. ~~Spreadsheets also provide mathematical functions, such as means and standard deviations.~~ Each row holds details about one entity. Each column holds details about a particular parameter. For example, you can create a spreadsheet to organize data about different trees. Each row would represent a different type of tree. Each column would represent a different characteristic, such as the tree's height or the tree's spread.

Don't make paragraphs too long or too short

Long paragraphs are visually intimidating. *Very* long paragraphs form a dreaded "wall of text" that readers ignore. Readers generally welcome paragraphs containing three to five sentences, but will avoid paragraphs containing more than about seven sentences. When revising, consider dividing very long paragraphs into two separate paragraphs.

Conversely, don't make paragraphs too short. If your document contains plenty of one-sentence paragraphs, your organization is faulty. Seek ways to combine those one-sentence paragraphs into cohesive multi-sentence paragraphs or possibly into lists.

Answer what, why, and how

Good paragraphs answer the following three questions:

1. **What** are you trying to tell your reader?
2. **Why** is it important for the reader to know this?
3. **How** should the reader use this knowledge? Alternatively, how should the reader know your point to be true?

For example, the following paragraph answers what, why, and how:

> **<Start of What>** The `garp()` function returns the delta between a dataset's mean and median. **<End of What>** **<Start of Why>** Many people believe unquestioningly that a mean always holds the truth. However, a mean is easily influenced by a few very large or very small data points. **<End of Why>** **<Start of How>** Call `garp()` to help determine whether a few very large or very small data points are influencing the mean too much. A relatively small `garp()` value suggests that the mean is more meaningful than when the `garp()` value is relatively high. **<End of How>**

Next unit: Audience

Based on this session

Documents
Educational resources about technical writing.
Updated Nov 6, 2021

Technical writing resources
Educational resources about technical writing.
Updated Oct 12, 2021

Audience
Educational resources about technical writing.
Updated Apr 12, 2021

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