# Chapter 0: Introduction to Technical Writing

## Objectives

Upon completion of this chapter, readers will be able to:

1. Define technical writing and technical communication and explain how they apply to real-world workplace scenarios.
2. Identify and describe the six key characteristics of technical writing, including audience focus, purposefulness, professionalism, ethical standards, design, and research orientation.
3. Evaluate examples of workplace documents to determine whether they meet the standards of good technical writing, including clarity, accuracy, completeness, conciseness, and correctness.
4. Analyze the legibility, readability, and comprehension of a technical document and explain how these factors affect usability for different audiences.
5. Apply strategies for creating usable documents, including audience analysis, plain language principles, visual aids, and feedback tools (such as peer review or AI-based readability checkers).

## The Nature of Technical Writing

Did you know that you probably read or create technical writing every day without even realizing it? If you noticed signs on your way to work, checked the calories on the cereal box, emailed your professor to request a recommendation, or followed instructions to make a withdrawal from an ATM; you have been involved with technical, workplace, or professional communication.

Today, writing is a more important skill for professionals than ever before. The National Commission on Writing for Americas Families, Schools, and Colleges (2004) declares that writing today is not a frill for the few, but an essential skill for the many and goes on to state that much of what is important in public and economic life depends on strong written and oral communication skills. A survey by the Workforce Solutions group at St. Louis Community College asserts many employers are concerned at the large number of college graduates applying for jobs who lack communication and interpersonal skills (White, 2013).

In this text, “technical writing” and “technical communication” are used interchangeably to signify that all writing is communication and all communication involves a writing process, regardless of whether the result is words on a page.

Good communication skills, particularly in writing, are essential to succeed in the workplace. In the modern workplace, written communication is critical, as almost every action is documented in writing. Various forms of writing such as correspondence, visual presentations (e.g., PowerPoints), technical reports, and formal reports are commonplace. No matter the format, the writing must be good, clearly stated, accurate, and grammatically correct. Kyle Wiens (2012) writes in an article in the *Harvard Business Review*: "If you think an apostrophe was one of the 12 disciples of Jesus, you will never work for me. If you scatter commas into a sentence with all the discrimination of a shotgun, you might make it to the foyer before we politely escort you from the building. I have a zero tolerance to grammar mistakes that make people look stupid."

Check out this video for more ideas about the kinds of writing that will be expected of you, especially if you are in a STEAM (Science, Technology, Engineering, Arts, and Mathematics) field.

[Writing in the Workplace pt. 1](https://youtu.be/JvAiE7owmeI)

## Defining Technical Writing

Technical communication is the process of sharing ideas and information in the workplace. It includes applications such as letters, emails, instructions, reports, proposals, websites, and blogs that comprise your written documents. The Society for Technical Communication (STC) defined technical communication as a broad field that encompasses any form of communication about technical or specialized topics utilizing technology. Some examples include web pages, help files, or instructional documentation (Society for Technical Communication, n.d.).

In this text, the word "document" refers to any of the many forms of technical writing, whether it be a web page, an instruction manual, a lab report, or a travel brochure.

Technical writing involves communicating complex information to a specific audience to accomplish a goal or task in an accurate, useful, and clear manner. Whether you write an email to your professor or supervisor, write a presentation or report, design a flyer, or create a webpage, you are a technical writer.

**Where does it come from?** According to the STC, the origins of technical communications are attributed to various eras dating back to Ancient Greece (think Rhetoric!) and during the Renaissance period. However, the professional field of technical writing we recognize today began during World War I as the need for technology-based documentation for military and manufacturing industries grew. As technology improved, and organizations globalized, the need for technical communication emerged, and in 2009, the U.S. Bureau of Labor Statistics (2024) recognized Technical Writer as a profession (Society for Technical Communication, n.d.).

**What does technical communication or workplace writing look like?** Check out [this page from the U.S. Environmental Protection Agency about climate change](https://www.epa.gov/climatechange-science/basics-climate-change). Who is the target audience? What information does this document provide its readers? What task or goal will it help to accomplish? What elements of this document make it useful? Does it solve a problem? Examine the writing style in this government webpage. Is it concise and accurate? This example is just one of the many kinds of technical documents you will examine in this course.

## Characteristics of Technical Writing

Mike Markell (2015), Sidney Dobrin (2010), Elizabeth Tebeaux (2012), Sam Dragga (2012), and others all identify similar characteristics of technical writing and emphasize that it must adhere to the highest standards.

**Focused on audience:** Technical and workplace documents address a specific audience. The intended audience may be an individual or a group with the caveat that the intended audience may not be known to the writer. Additionally, there may be a secondary intended audience. Therefore, a clear understanding of the intended audience a technical document is important.

**Rhetorical, persuasive, purposeful, and problem-oriented:** Technical communication is all about helping readers or users of a document solve problems or compel others to action. For example, the syllabus of **a** class informs students what is expected of them; the university's website **informs** potential students **on the application process** or **provides** current students **information on** where to seek assistance. Identification of a document’s specific purpose and **its primary** audience are the first two steps **in** technical writing.

**Professional:** An organization’s values, goals, and culture are reflected within its technical communications, thereby creating and maintaining its public image. Examine your university's website; consider what image it conveys.

Consider the United States Government: On October 13, 2010, President Obama signed the Plain Writing Act of 2010 into law, designed to promote clear government communication that the public can understand and use. The Plain Writing Act calls for language that is clear, concise, and well-organized. Check out this resource on [Plain Language](https://plainlanguage.gov/law/).

**Design centered:** Technical communication uses document design elements like visuals, graphics, typography, color, and spacing to make a document interesting, attractive, usable, and comprehensible. Many documents use charts, photographs, and illustrations to enhance readability, understanding, and to simplify complex information.

**Research and technology oriented:** To fulfill workplace demands, technical and workplace writing is often created collaboratively through a network of experts and designers. Its outcome depends on sound research practices to ensure correct, accurate, and complete information.

**Ethical:** Lastly, technical communication carries ethical considerations. All workplace writers must consider ethical and legal obligations. These include liability laws, copyright laws, contract laws, and trademark laws. You'll learn more about these in a later chapter on ethics.

## Successful Technical Writing Standards

As a member of an organization or team should desire to produce the best writing possible. Here are the standards you must follow and some tips to help you succeed. By adopting these practices early, you will have a tremendous advantage in the workplace.

* Your writing must be **honest**. Your communication reflects both you and your organization’s trustworthiness.
* Your writing must be **clear.** This clarity allows readers to extract the information with ease. Strive to ensure that your ideas are clearly expressed, leaving no room for incorrect interpretations.
* Good writing is **accurate**. You have an obligation to ensure your facts are accurate. There is no excuse for presenting incorrect or misleading information.
* Your writing must be **complete**. Strive to have all the facts before beginning your document. Have you included all facts that your reader needs?
* Good writing is always **concise**. Audiences lack patience for excessive or unnecessary verbiage or clutter.
* Your document should be **attractive,** visually appealing, and appear professionally designed. Just as you wouldn't eat a meal on a dirty plate, your reader will not be moved to action by a document that is poorly designed.

Without exception, grammar, spelling, punctuation, and sentence structure must be **correct**. Even a single grammatical or spelling error can seriously affect your credibility, causing your reader to dismiss you as unprofessional or aloof. Poor writing reflects negatively on your organization as well. Unfortunately, most companies can't mandate good writing by law!

## Making Useful Technical Documents

How can you ensure that your document will be useful to your readers? Make sure that it adheres to the standards of excellence in this chapter. Let’s practice some strategies to help make your writing accessible, useful, and excellent!

Here are a few simple things to practice right now. Jakob Nielsen (1997) observes that readers, or users, won't read content unless it is clear, simple, and easy to understand. The late William Zinsser (2006), author of On Writing Well, emphasizes the same points when he states, "Good writing has an aliveness that keeps the reader reading from one paragraph to the next, and it's not a question of gimmick to personalize the author. It’s a question of using the English language in a way that will achieve the greatest clarity and strength." (p.5).

First, make sure your writing is **legible**. Is the font large enough to be read by a variety of audiences? Is the typeface appropriate for your document type? Consider what medium you’re writing this for: different considerations need to be made for the internet vs other documents. If your document is illegible or not accessible, it will be of little use to your reader.

Next, make sure your writing is **readable**. Readable means that your document can be easily understood by your target audience; words, sentence length, and sentence complexity determine how difficult or easy your sentences are to read. If your readability is complex for the audience, they will either take more time getting what they need from your writing, or it won’t be useful. If the complexity is too low, you may come across as condescending, or a poor writer.

Finally, your writing must be well comprehended or understood by your audience. Is the reader able to use the document in the manner in which you meant? To enhance the reader’s **comprehension**, use language and terminology familiar to them, limiting paragraphs to one main idea. Brevity is important if your users will be reading on tablets or mobile devices. Use visuals like charts or diagrams to present a lot of information.

Microsoft Word has a readability tool built into the program that will give you a good sense of what your audience may experience. It is located under the Review heading, but do not rely completely on the tool to assess the ease or difficulty of your writing. Have a trusted colleague take a look and provide feedback. You can also ask your favorite artificial intelligence (AI) assistant (such as ChatGPT or Claude) to analyze your document for its readability and comprehension based on a defined audience.

## Exercises

**Exercise 1:** Locate some examples technical writing. These may include correspondence, journal articles, lab reports, web pages, or advertisements. In small groups, discuss how the documents reflect the characteristics of technical writing. After your group has analyzed the document, present it to the entire class and explain how it meets the characteristics of a technical document.

**Exercise 2:** Navigate to an AI assistant such as ChatGPT or Claude and ask it to analyze a particular website or document for reading level based on a specifically defined audience. Compare its analysis to your opinion of the ideal readability level for that document. In a memo to your instructor, discuss the importance of readability measures in creating useful technical documents.

**Exercise 3:** Locate an instruction manual for a product you own. Analyze it against the standards listed in the chapter for good technical writing. Submit your analysis in a memo to your instructor.

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## Attribution

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## AI Assistance Notice

Some parts of this chapter were brainstormed, drafted, and/or revised in conversation with ChatGPT 4o and Google Gemini 2.5 Flash. All AI-generated content was reviewed and revised as needed by a human author.