

Technical Communication

Technical communication is a part of almost every job. This video provides the definition and purpose of technical communication, and explains why technical communication is important for businesses and consumers.

Writing in the Workplace

If you are currently employed, chances are you have already written a technical document. According to one study, the average employee spends 20% of his or her work time writing, managers spend 50% of their jobs writing, and CEOs as much as 90% of their time writing. Most likely, you are writing about your business, the products you help create, and the services your company offers - how to develop, advertise, distribute, or use your goods. Maybe without even realizing it, you have been a part of technical communication.

Technical Communication

But, what is technical communication? **Technical communication** uses a number of media platforms to provide information to a target audience. Sometimes, to really understand what something is, it's best to define what something is not. Technical communication is not journalistic writing, expressive writing, or creative literature. It does not use symbolism or vague literary references. Its purpose is not to entertain. Instead, technical writing is designed to inform or instruct an audience with a specific goal in mind.

Technical communication is clear, concise, and objective. Technical communication encompasses an expansive group of documents. It is not limited to information about computer systems or programming. Even companies that create products that are not necessarily 'technical' still employ technical communication to develop, manufacture, market, and explain consumer goods and services.

Take, for example, a child's play set. In order to manufacture the play set, developers must create design specifications explaining the length and width of each beam, the materials to use for each

part, and the colors to paint each piece. The company must then create TV commercials and store displays to advertise the play set. Finally, the play set must include clear instructions so that the consumer can safely and accurately assemble the structure. Without the technical communication of the design specifications, the advertisements, and the end-user documents, the play set would not exist.

Purpose of Technical Communication

The purpose of technical communication is to make information clear and understandable in order to make business more productive and consumer goods more convenient. Technical communication helps to advance our economy by ensuring viable research and development, safeguarding design and manufacturing, and protecting consumers through accurate and informative documents. Good technical writing will:

- Help employers understand and complete job tasks more successfully.
- Provide backgrounds on which new ideas can be built without repetition.
- Prevent problems with the development and manufacturing of products.
- Inform consumers how to assemble, or use a product.

Subjects of Technical Communication

To get a better understanding of the differences between the characteristics of technical communication and other forms of writing, let's look at a comparison of technical writing and creative writing. Both are forms of communication. However, that's really about all that is similar between the two types of writing. The subject for creative writing can be just about anything - from daffodils to rainbows - but the subject for technical writing is much more specific.

That subject will be based on the products and services related to a business. The subject might be about a new medicine and how it will be developed, a new toy and how it will be manufactured or a new cell phone and how it should be used. The subject of technical communications is always focused on a product. Why it's needed, how it should be created and what it should be used for.

Audiences of Technical Communication

Often, writers of creative literature focus so much on the subject of their writing that they forget about their audiences' altogether. This is not the case for technical communication. While the audience for creative writing can be a general group around the same age, the audience for technical writing is a specific, targeted audience. In technical communication, the audience is the most important focus of the writing. After all, technical communicators are writing to help their audience understand what is needed to perform a task. Therefore, the technical communicator must know and understand their audience.

What if you purchased a new bookshelf, and when you took out the directions to assemble the bookshelf, the document was written for the manufacturer instead of the user? The directions might provide instructions for what length to cut each piece or what color to paint the wood, but it wouldn't contain easy-to-understand instructions on how to put the bookshelf together because the writing would be directed at the wrong audience. Understanding who you're writing the document for will determine what you say, making the audience just as important as your subject in technical communication.

Purposes of Technical Communication

In creative writing, the purpose of the document is usually to entertain. Often the writer wants to express his or her feelings on a subject, and the information presented is subjective, or based on the writer's personal experiences. Technical writing is not meant to be subjective at all. In technical communication, the purpose of the writing is always to inform or persuade. Despite the type of technical document you are creating, technical communication always has the same goal: to help people accomplish a task by explaining what they need to do and how to do it.

Style of Technical Communication

What really distinguishes technical communication from other forms of writing is the style of the writing. Creative writing often uses long sentences and connotative words to develop an emotional meaning through the language. It can sound beautiful, but it may take the reader a while to figure out what is being said. Since the purpose of technical communication is to help

the target audience understand the subject quickly and complete a task correctly, the style of writing must be simple and easy to understand.

To accomplish this goal, I believe we need to get back to the basics and learn the ABCs of technical communication.

Technical Communication must be:

- Attractive
- Brief
- Clear

Let's start with the characteristic of attractiveness. This doesn't mean the document has to look pretty. What it does mean is that the layout of the document must be attractive to the reader. In one glance, the reader must be able to know what's important.

You can make a technical document 'attractive' by including headings that are larger and bolder than the other text to bring attention to the main topic of each part of the document. Another way to make a technical document attractive to a reader is to include visual aids and graphics that clearly show what the reader needs to do.

Technical Documents

The three main categories of technical documents and provide examples for each.

Introduction

Have you ever submitted a resume for a job, written an email to your boss, created a PowerPoint presentation or written directions for a friend on how to use an item? Then you've already written a technical document. Technical writing includes a wide range of documents used to inform or persuade a target audience with a specific need.

Technical documents include memos, graphics, letters, fliers, reports, newsletters, presentations, web pages, brochures, proposals, instructions, reviews, press releases, catalogs, advertisements, handbooks, business plans, policies and procedures, specifications, instructions, style guides, agendas and so forth. There are so many types of technical documents. It may be easiest to

understand the differences in them by grouping them into three main categories: traditional technical documents, end-user documents and technical marketing communications.

In order to help us better understand the different categories of technical writing - including the subject, purpose and audience of each - let's pretend that you are a toy developer who has just invented the latest and greatest water gun.

Traditional Technical Document

Your water gun is so amazing that you have recently landed a contract with Tarmart to sell your water guns in their stores. The new contract requires a large quantity of water guns to be produced, which means you no longer can make them yourself. You must use your expertise to create a technical diagram to send to the new manufacturer of your toy explaining exactly what you want the water gun to look like and how it should function.

This diagram is an example of a **traditional technical document**. Traditional technical documents are informative or instructional documents that are developed and written for an audience already familiar with a specific technical area. Since the toy manufacturer making your water guns are experts in their fields, the writer may include language and content that an audience of experts understands. Examples of other traditional technical documents include programmer guides, repair manuals, medical reports, research papers, reviews, schematics and memos. Writers of these types of documents should be technical experts in the field for which they are creating the document. Although the documents are written from one expert for another, the language of the document must still be clear and concise in order for the recipient to understand what the writer desires. After all, you'd hate for your water gun diagram to be confusing and end up with 5,000 water guns that leak.

End-User Document

Let's assume that you clearly explain to the manufacturer how to develop your water gun, and the company is able to produce 5,000 working toys. Before you can ship your new water guns to the store, you must create a set of directions to help the purchasers know how to use it.

The instruction manual is an example of an **end-user document**. End-user documents are technical documents designed to help the general public understand how to use an item. They are

usually part of a consumer product and include operating manuals, assembly instructions, information booklets and trouble-shooting guides. Writers of end-user documents must consider what issues the consumer might face when assembling or using a product, and provide clear instructions and solutions to any potential problems.

Since the readers of these documents vary in abilities and educational backgrounds, end-user documents should be written using terms the general public understands. After all, if you buy a new gadget, but don't understand how to use it, the item is worthless to you. For this reason, the writer of end-user documents doesn't have to be an expert in a specific technical field; the writer must just be able to write instructions in an easy-to-understand manner in order for the consumer to use the product effectively.

Technical Writing Process

Having a plan for your writing will help ensure that you effectively communicate your message. There are three steps of the writing process: prewriting, writing, and rewriting.

Importance of Planning

When I was in college, my boyfriend and I decided to hop in the car one day and just start driving. We had no idea where we were going, but the adventure of traveling without a plan seemed so exciting! Well, five hours, one flat tire, and a tow truck later, we were lost in a place we'd never been with still no idea where we were going. The trip was a disaster. We hadn't planned on having to pay for any unexpected 'emergencies,' so the cost of the tow and the tire left us without money for food or a place to stay. After getting the car back in working order, we headed back to our apartments, discouraged and disgruntled. What promised to be a spur-of-the-moment adventure turned out to be an expensive lesson on the need to plan ahead.

Writing, like road trips, requires pre-planning. You need to have a direction in mind, and a plan for what you want to do along the way.

Prewriting

Prewriting is the process of gathering information on a subject and planning out what our communication will say and look like. Prewriting is the roadmap for our documents. We must establish our purpose, identify our audience, and plan out our message.

Laying out a plan will help ensure that we effectively communicate our message and that our target audience is able to easily understand and apply the information. During the prewriting phase, consider following these steps to help map out a plan for your communication:

1. Establish your purpose. Ask yourself, why are you creating this document? Are you trying to inform an audience of something? Do you want to instruct the audience in how to do something? Do you need to persuade them to believe something? Establishing your purpose will help determine the type of communication you create.

For example, informing an audience about a new scientific breakthrough may mean you write a magazine article or a research paper on your topic. However, instructing your audience on how to use a new sewing machine will require a totally different type of document. You may need to create a how-to manual with lots of graphics and step-by-step instructions. Knowing what your purpose is will help you choose the best format for your communication.

2. Identify your audience. For whom are you creating this document? Who your audience is determines how you will communicate your information.

For example, if you intend your document to be read by computer geeks creating a new processing system, the language you are going to use will be high-tech and full of jargon. But if you're explaining to the general public how to use the new processing system, your language must be simple and easy to understand. You must determine who your target audience is before you begin writing so that you know how to say what you want to say.

3. Gather your information. Now that you know what you want to say and who you want to say it to, you need to collect the details. Make sure you consider everything the audience needs to know. Do you have the correct dates, times, expenses, locations, and required actions? Communication cannot be effective if it is not complete and accurate.

Imagine going on a road trip with part of the map missing. You need to gather all of the information you need to write your document so that you don't accidentally leave out any important detail in your communication.

4. Plan your message. Once you have all of your information together, you can begin to lay out exactly what you want to say. Consider using one of these prewriting techniques as you plan out what to say and when to say it in your communication:

- **Bubble-mapping** - Bubble maps allow you to brainstorm ideas by putting your main topic in the center circle, then linking all of the ideas you need to express about that topic in circles that link to the center.
- **Outlining** - If you like your information organized in a more orderly manner, you could make an outline of your information. The concept is the same as bubble mapping in that you determine your main points and the details that explain those points, but the layout allows for a neat, orderly examination of how the details fit together. Outlining may be the most beneficial for those who have a lot of little details you want to make sure you include in your document.
- **Storyboarding** - If you are a visual learner, storyboarding is an excellent way for you to visualize what you need to say. You simply draw out all of the important details of your communication in order of importance or action.

There are many different prewriting techniques, so choose the one that best suits your needs.

Using one will ensure that you present your information in a logical, orderly manner and that you don't accidentally leave out an important detail.

Writing

Once you have determined your audience and purpose, gathered all of your information, and planned out what you want to say, it's time to start writing. **Writing** is simply the process of putting your information into appropriate words, sentences, and paragraphs. The most important points to consider when writing your draft are the organization and format of your document.

Organization is the method by which you arrange the information in your document.

Rewriting

The third step of the writing process is revision. In this step, writers take another look at the work they have created by becoming the reader. In addition to identifying the parts of their writing that are good, and those that “speak” to the reader, writers also identify the places where their writing could be clearer or contain better word choices. As a final step in the revision process, the writer decides if there are parts of his or her work that can be eliminated.

Technical Writing Process

The technical writing process is essential to deliver accurate and clear information to large groups of people. While the stages of the technical writing process are similar to those of other writing projects, the technical demands of a technical writing project require a heightened awareness of presentation errors and style choices for the writer. The technical writing process takes these demands into consideration, organizing a project in stages designed to clearly organize writer responsibilities.

Preparation

Preparation is the earliest stage in the technical writing process. During the preparation stage, a technical writer answers a series of questions regarding his project. These include considerations about the skill level of the audience, which determines the technical specificity of the final document, and the purpose of the piece, which explains the direction in which the writer will direct the project. The scope of the project considers the amount of material the project should cover, and the medium used to present the information considers the specific format used, such as the internet, a Power Point presentation or formal document.

Research

The research stage is the phase in which the technical writer gathers information about the project. This includes interviewing people working on the project, reading technical information about the project and spending some hands-on time working with the new project, if this is

possible. Technical writers can return to this stage multiple times, if their initial information is not sufficient.

Organization

During the organization stage, a technical writer reviews all information gathered during the research phase, divides it into sections and creates a formal outline for the writing project. This includes dividing larger sections into a series of smaller sections, each clearly covering every necessary point. Technical writers divide the researched information throughout these sections, ensuring that every point has enough cited information to stand as an independent point, without repeating information in multiple sections.

First Draft

Technical writers sketch out the first draft, often by writing each section separately and using the organized research for each section as they write. Draft writing, for technical projects, focuses on active language, specific word choices, a clear presentation style and concise information for busy readers. Technical writers use obvious section titles, dividing information clearly for readers.

Review and Revise

Once the technical writer finishes with the first draft, she enters the review and revise stage, where she reads the draft and makes necessary changes. The technical writer checks for spelling, word choice, punctuation, passive voice usage and typos in the original draft. After the changes are made, she returns to the review and revise stage until the document is clear, precise and accurate.