What is Technical Writing?

The traditional definition says technical writing can be defined as the practice of articulating any product or service in the form of the document where processes are defined, such as software manuals or instructional materials. In earlier days, it was limited to user manuals type only.

The modern definition says Technical Writing is an art and science of writing niche that specialized in giving details about how things work and preparing others through documentation to carry out precise tasks for accomplishing preferred objectives or tasks.

Here is a list of some essential concepts and branches related to technical writing:

- Explaining the system or design.
- Describe the tasks as well as performance goals.
- Provide specialized training and tutoring.

Types of Technical Writing

In general, there are five different types of writing which cover a full degree for various domains.

1. **Commercial Writing**: Focuses on a particular type of writing to sell things to people.
2. **Creative Writing**: Focuses on a specific kind of writing for moving people emotionally.
3. **Business Writing**: Focuses on a particular type of writing to administer people efficiently.
4. **Technical Writing**: Focuses on a specific kind of writing in explaining how things work and how people can carry out particular tasks.
5. **Scientific Writing**: Focuses on a particular type of writing for recording and sharing scientific findings within academia.

Different Qualities That Are Associated with Technical Writing

Communication through documentation needs to have some qualities to make technical communication more effective and precise. These qualities are:

- Writing articles and documents using professional tools such as using MS Word, Adobe Frame Maker, Adobe Page Maker, Leap Office, etc.

- Technical writing needs knowledge of using technology like web pages and websites, SEO, social media sites, and promotions.

- Explaining or expressing any technical or specialized topics, such as computer applications, bio-mechanical domains, medical compounds, procedures, or environmental regulations and contents related to specialized fields, need to be written precisely that can be understood by users or target audience.

- Understand the target audience so that your document or technical content may connect them quickly, and they can proceed with the understanding and fulfill their requirements.

- Provide any specific instructions or stepwise guidance about how to perform something or some process.

Types of technical writing

Check out the summary table below highlighting the differences in types of technical writing and industries that need these documents:

Types of Technical Writing	Project Requirements	Major Industries in Need
- End-User Manuals and Assistance Guides - Medical and Scientific Papers - Technical Documentation/ Technical Reports - Technical Marketing Communications, like emails - Technical Corporate Reports - Feasibility Studies - White Papers - Research Results - Memos	- Brevity - Accuracy - Thoroughness - Appearance - Collaboration - Clarity - Communicability - Teaching Element - Order and Logic	- Business/Finance - Healthcare - Science & Engineering - Government - Education - Manufacturing - Insurance

Skills needed for technical writing

To be a successful technical writer, there is a core set of skills that you will want to master. Here are some of the most common skills needed to be successful:

Research

Research is one of the first steps in technical writing. After you have an assignment, you will be responsible for collecting the data (numerical and non-numerical) and turning it into valuable information.

Research can come from a variety of places including:

- On-Site Data
- Online and Intranet Publications
- Interviews
- Libraries and Research Databases

After you have researched, you will need to synthesize and begin planning your document organization.

Audience perception

The technical information you research and gather has to be shaped for reader interest, understanding, and perception.

Technical writers often have to communicate highly technical information to a non-technical audience. Therefore, an early step in the most effective technical writing process is analyzing your audience carefully so you can match information to their needs.

Communication skills

Communication skills are imperative to be a successful technical writer. You will likely be working with multiple teams and individuals from differing roles.

Your ability to listen, record, and communicate will be crucial.

It is difficult to clearly convey a concept that you have not mastered. Many technical writers have academic or work experience in the topic they are writing about and many technical writers have job titles of engineer, geologist, seismologist, financial analyst, or business analyst. They are employed in technical positions and have to summarize information cross-functionally to other areas of the company.

Technical writing is slightly easier if you come from the technical side and are learning to write. It is sometimes more difficult if your background is in writing and you are trying to learn the technical content.

Writing

Excellent writing skills ensure your documents are easy to read and are free of errors. Writing encompasses many of the other skills on this list.

It is important that you have the correct tone, style, and format for your document.

Document design

You may be responsible for adding graphics to complement your document.

It is important that the graphics aid the reader in comprehending the information. Graphs, tables, and charts are commonplace in technical reports.

You will also need to be proficient in formatting documents. The formatting should be professional and aid the reader in navigating the document. Headings should be easy to skim, and the content should be organized logically.

A poorly designed document will make it more difficult for the reader to understand the content. Document design is a key aspect of technical writing.

Fluency with digital tools

Today, writers must use multiple tools during the technical writing process. This often goes beyond basic text editors. Technical writers are expected to be able to create graphics and annotate images and screen captures and extract data from Excel and convey that data in charts and tables.

User research and testing

Some forms of technical writing may require user research and testing. An example application where detailed research and testing would be appropriate is a written guide instructing engineers how to fix a faulty mechanism on a deep ocean oil rig.

It is important that the documentation is easy to follow, especially if the application is crucial to a major function. To accurately write the guide, the writer may first observe how engineers solve the problem. They may use recording devices or just notes to write down the research. This type of research is closely related to testing.

Testing is necessary to ensure your document functions as intended.

After the writer has completed a draft of the document, they may give it to a test group to read. They can then observe the end users following the instructions in real-time.

They may follow up with a focus group or survey to get feedback on the usefulness of the document. They will use these real-world insights as they revise the document.

Even in less complex or critical applications, it is always a good idea to have a third party read over the text. This helps combat the curse of knowledge. The curse of knowledge is a cognitive bias that an individual has when trying to explain something they already understand. As an expert, it is hard to put yourself in the shoes of a learner who is less experienced.

Why Prewrite?

The pre-writing stage could also be dubbed the "talking stage" of writing. Researchers have determined that talking plays an important role in literacy. Andrew Wilkinson (1965) coined the phrase oracy, defining it as "the ability to express oneself coherently and to communicate freely with others by word of mouth." Wilkinson explained how oracy leads to increased skill in reading and writing. In other words, talking about a topic will improve the writing. This connection between talk and writing is best expressed by the author James Britton (1970) who stated: "talk is the sea upon which all else floats."

How to Write Your Own Feature Article

Prewriting Methods

There are a number of ways that students can tackle the prewriting stage of the writing process. Following are a few of the most common methods and strategies that students can use.

- **Brainstorming** - Brainstorming is the process of coming up with as many ideas as possible about a topic without being worried about the

feasibility or whether an idea is realistic or not. A list format is often the easiest to organize. This can be done individually and then shared with the class or done as a group. Access to this list during the writing process can help students make connections they may want to use later in their writing.

- **Freewriting** - The free write strategy is when your students write whatever comes into their mind about the topic at hand for a specific amount of time, like 10 or 15 minutes. In a free write, students should not worry about grammar, punctuation, or spelling. Instead, they should try and come up with as many ideas as they possibly can to help them when they get to the writing process.
- **Mind Maps** - Concept maps or mind-mapping are great strategies to use during the pre-writing stage. Both are visual ways to outline information. There are many varieties of mind maps that can be quite useful as students work in the prewriting stage. Webbing is a great tool that has students write a word in the middle of a sheet of paper. Related words or phrases are then connected by lines to this original word in the center. They build on the idea so that, in the end, the student has a wealth of ideas that are connected to this central idea. For example, if the topic for a paper were the role of the US President, the student would write this in the center of the paper. Then as they thought of each role that the president fulfills, they could write this down in a circle connected by a line to this original idea. From these terms, the student could then add supporting details. In the end, they would have a nice roadmap for an essay on this topic.
- **Drawing/Doodling** - Some students respond well to the idea of being able to combine words with drawings as they think about what they want to write in the prewriting stage. This can open up creative lines of thought.
- **Asking Questions** - Students often come up with more creative ideas through the use of questioning. For example, if the student has to write about Heathcliff's role in Wuthering Heights, they might begin by asking themselves some questions about him and the causes of his hatred. They might ask how a 'normal' person might react to better understand the depths of Heathcliff's malevolence. The point is that these questions can help the student uncover a deeper understanding of the topic before they begin writing the essay.
- **Outlining** - Students can employ traditional outlines to help them organize their thoughts in a logical manner. The student would start with the overall topic and then list out their ideas with supporting details. It is helpful to point out to students that the more detailed their outline is from the beginning, the easier it will be for them write their paper.

Teachers should recognize that prewriting that begins in a "sea of talk" will engage students. Many students will find that combining a couple of these strategies may work well to provide them with a great basis for their final product. They may find that if they ask questions as they brainstorm, free write,

mind-map, or doodle, they will organize their ideas for the topic. In short, the time put in up front in the pre-writing stage will make the writing stage much easier.