

# 1

## Introduction to Technical Communication

TECHNICAL COMMUNICATION IS USER-CENTERED

TECHNICAL COMMUNICATION IS EFFICIENT

TECHNICAL COMMUNICATION COMES IN ALL SHAPES AND SIZES

TECHNICAL COMMUNICATORS EMPLOY A BROAD ARRAY OF SKILLS

TECHNICAL COMMUNICATION IS PART OF MOST CAREERS

COMMUNICATION HAS BOTH AN ELECTRONIC AND A HUMAN SIDE

COMMUNICATION REACHES A DIVERSE AUDIENCE

**CONSIDER THIS** Twenty-First Century Jobs Require Portable Skills

Thanks to the revolution in electronic communication, the industrial age has given way to the *information age*. Instead of machines and physical goods, "information" and ideas have become our most prized commodities:

The new source of wealth is not material; it is information, knowledge applied to work to create value. The pursuit of wealth is now largely the pursuit of information. (Wriston 8)

But information in itself has no value—unless it is *usable*. Usable information enables us to perform complex tasks, solve problems, make decisions, and create ideas. A particular company, for example, might need information like the following (Davenport 39, 61, 136):

- What is our competition doing and how should we respond?
- Are customer preferences changing, and if so, how?
- What new government regulations do we need to address?
- How can we design company operations to take advantage of the Internet?
- Should we build, rent, or buy?
- What new technology should our company be thinking about?

In the workplace and beyond, usable information not only helps us use all sorts of technical products, but also helps us understand and respond to complicated technical and societal issues:

- Do the benefits of the Lyme disease vaccine outweigh its risks?
- How do I program my VCR?
- How safe are bioengineered foods?
- How can we protect individual privacy in the electronic age?
- Which brand of computer should I buy?
- How can our community service agency help prevent child abuse?

To answer these questions, Web sites, Intranets, and other resources—online or off—provide all sorts of *data* (measurements, observations, prices, statistics, and other raw facts). But to translate this data into usable information, we have to sift through it and figure out what it means and how it applies. Then we have to build a persuasive but honest case for our interpretation and recommendations. Finally—so that others can use this material—we shape it into some type of *document* (memo, letter, report, manual, online help, email, Web page, or script for an oral presentation). Often we do all this as a part of a team.

Whenever you convey usable information to various people in various situations, you work as a “technical communicator.”

## **TECHNICAL COMMUNICATION IS USER CENTERED**

Unlike poetry or fiction or essays, a technical document rarely focuses on the writer’s personal thoughts and feelings. This doesn’t mean that your document should have no personality (or *voice*), but only that the needs of your audience come first. Users typically are interested in “who you are” only to the extent that they want to know *what you have done*, *what you recommend*, or *how you speak for your company*. While a user-centered document never makes the writer “disappear,” it does focus on what the audience considers most important.

## **TECHNICAL COMMUNICATION IS EFFICIENT**

Professors read to *test* our knowledge, but colleagues, customers, and supervisors read to *use* our knowledge. In fact, much of your own technical communication may involve translating specialized information for the use of nontechnical audiences, as the Figure 1.1 sample document illustrates.

Nontechnical readers expect a document that won’t waste their time and energy. And so do all readers! In the United States especially, people using a technical document often go back and forth: instead of reading from beginning to end, they look up the information they need at that moment. For users to find the information and understand it, a document has to be easy to navigate and straightforward.

**NOTE**      *For any type of global communication, keep in mind that many cultures consider a direct, straightforward communication style offensive. For more detail, see page 37.*

An efficient technical document is carefully designed to include the features such as those displayed in Figure 1.1.

- *worthwhile content*—including all (and only) those details users need
- *sensible organization*—guiding the user and emphasizing important material
- *readable style*—promoting fluid reading and accurate understanding

- *effective visuals*—clarifying concepts and relationships, and substituting for words whenever possible
- *accessible design*—providing heads, lists, type styles, and other aids to navigation
- *supplements* (abstract, appendix, glossary, linked pages, and so on)—allowing users with different needs to read only those sections of a long document needed for their specific task

User-centered and efficient communication is no mere abstract notion: In the event of a lawsuit, faulty writing is treated like any other faulty product. If your inaccurate, unclear, or incomplete information leads to injury, damage, or loss, you and your company can be held legally responsible.

**NOTE** *Make sure your message is clear and straightforward—but don't oversimplify. Information designer Nathan Shedroff reminds us that, while **clarity** makes information easier to understand, **simplicity** is “often responsible for the ‘dumbing down’ of information rather than the illumination of it” (280). The “sound bytes” that often masquerade as network news reports serve as a good case in point.*

#### **Technical Communication Comes**

##### **in All Shapes and Sizes**

In the broadest sense, technical communication includes any document or presentation that conveys specialized information for use by a specific audience—often a nonexpert audience. Following is a sampling of the kinds of technical communication you might encounter or prepare, either on the job or in the community.

- **Letters.** Most people write letters long before beginning their careers. As a student, for example, you might write to request research data or to apply for a summer internship. On the job, you might write to persuade a client to invest in a new technology venture or to explain the delay in completing a construction project. Letters are not only the most “personal” form of technical communication, but they also provide written records and often serve as contracts.
- **Memos.** Most organizations use memos (and their email versions) as the primary vehicle for their internal written communication. Unlike a conversation, a memo leaves a “paper trail” for future reference—requests, recommendations, directives, instructions, and so on. Memos are usually brief and follow a format that includes a header (“To,” “From,” “Date,” “Subject”) and one or two pages of body text. Memos cover just about any topic and purpose: An employee might write to her division head requesting

assistance on a project; a team of students might write to their instructor outlining their progress on a term project.

- **Email.** Email, basically a memo in electronic form, is used more widely than paper memos. A typical email program offers a built-in memo format, automatically inserting the “Date” and the “To,” “From,” and “Subject” lines. People on the job communicate via email with colleagues, clients, customers, and suppliers—locally as well as worldwide. People are more inclined to forward email messages, and to write more informally and hastily than they would with paper memos.
- **Brochures, Pamphlets, and Fact Sheets.** These brief documents are often designed for public consumption. For example, to market goods or services, companies produce brochures containing product descriptions. Professional organizations, such as the American Medical Association, produce brochures and pamphlets defining various medical conditions, explaining the causes and describing available treatments. Government agencies provide fact sheets (as in Figure 1.1) that offer technical definitions and descriptions on all sorts of topics, ranging from mad cow disease, to stem cells, to bioterrorism.
- **Instructional Material.** Instructions explain the sequence of steps or required course of action for completing a specific task, such as how to program a DVD player or how to install system software. Instructions come in various formats: Brief *reference cards* often fit on a single page; *brochures* can be mailed or handed out; book-length *manuals* accompany complex products; *online help* is built right into the computer application; *hyperlinked pages* offer various levels and layers of information. The more that people rely on complex technology, the more they need usable instructions.
- **Reports.** Reports, both short and long, provide a basis for informed decisions on matters ranging from the best recruit to hire for management training to the most economical cars to lease for the company’s fleet. Some reports are strictly informative (“The Causes of Our Company’s Network Crash”); other reports recommend solutions to urgent problems (“Recommended Security Measures for Airline Safety”); still others have an overtly persuasive goal, advocating a particular position or course of action (“Why Voters Should Reject the Nuclear Waste Storage Facility Proposed for Our County”).

- **Proposals.** A proposal presents a strategy for solving a particular problem. Proposals attempt to persuade readers to improve conditions, accept a service or product, provide research funding, or otherwise support a plan of action. Proposals are sometimes written in response to requests for proposals (RFPs). For example, a community may seek to expand its middle school or the Defense Department may wish to develop an intensive training program for airport baggage screeners. These organizations would issue RFPs, and each interested vendor would prepare a proposal that examines the problem, presents a solution, and stipulates a fee for carrying out the project.

This listing is by no means exhaustive. Each profession has its own specific formats for communicating, and many organizations use prepared forms for much of their internal communication. Moreover, most versions of paper-based communication can also be adapted to other media:

- CD-ROM
- hyperlinked Web pages
- intranet Web pages (an organization's internal network)
- email attachments
- online help systems
- ebooks
- training sessions or oral presentations
- instructional videos

**NOTE** *Despite stunning advances in electronic communication, paper is by no means disappearing from today's workplace. According to research firm IDC, the 1.49 trillion printed pages in 2002 will increase to 1.84 trillion pages in 2006 (Grimes).*

## **TECHNICAL COMMUNICATORS EMPLOY A BROAD ARRAY OF SKILLS**

“Full-time” technical communicators serve many roles.<sup>1</sup> Trade and professional organizations employ technical communicators to produce newsletters, pamphlets, journals, and public relations material. Many work in business and industry, preparing instructional material, reports, proposals, and scripts for industrial films. They also prepare sales literature, publicity releases, handbooks, catalogs, brochures,

Web pages, intranet content, articles, speeches, and oral and multimedia presentations. To reduce costs and to speed production, technical communicators increasingly serve as “desktop publishers,” using software such as *PageMaker* or *Quark* to design, illustrate, lay out, and print a finished publication—the kind of specialized tasks done in the past by compositors, typesetters, and professional illustrators.

Besides writing, technical communication specialists do other work. For example, they conduct research, help develop Web sites, and edit reports for punctuation, grammar, style, and logical organization. They oversee publishing projects, coordinating the efforts of writers, visual artists, graphic designers, content experts, and lawyers to produce a complex manual or proposal. Given their broad range of skills, technical communicators often enter related fields such as publishing, magazine editing, radio, television, and college teaching.

## **TECHNICAL COMMUNICATION IS PART OF MOST CAREERS**

Whatever your job description, expect to be evaluated, at least in part, on your communication skills. At one IBM subsidiary, for example, 25 percent of an employee’s evaluation is based on how effectively that person shares information (Davenport 99). Even if you don’t anticipate a “writing” career, expect to be a “part-time” technical communicator, who will routinely face situations like these:

- As a medical professional, psychologist, social worker, or accountant, you will keep precise records that are crucial to patient or client welfare, and, increasingly, a basis for legal action.
- As a scientist, you will report on your research and explain its significance.
- As a manager, you will write memos, personnel evaluations, inspection reports, and give oral presentations.
- As a lab or service technician, you will keep daily activity records and help train coworkers in using, installing, or servicing equipment.
- As an attorney, you will research and interpret legal issues for clients.
- As an engineer or architect, you will collaborate with colleagues in related fields before presenting a proposal to your client. (For example, an architect’s plans are reviewed by a structural engineer who certifies that the design is sound.)

The more you advance in your field, the more you share information and establish human contacts. Managers and executives, for example, spend much of their time negotiating, setting policies, and promoting their ideas—often among diverse cultures around the globe. In short, the higher your career goals, the more critical is your need to communicate.

**NOTE** *Instead of joining the corporate ranks, you might decide to work in the nonprofit sector, say, for an environmental group such as the Sierra Club or a community service agency such as the United Way or Head Start, the preschool program for disadvantaged children. Or you might work as an intern or volunteer in these organizations. Whatever the setting, your writing will serve the community—say, in a brochure for public outreach, or a grant request for state funding, or a handbook for clients. In short, technical communication is not merely an instrument for financial profit: It can also serve the good of society. To explore this vital dimension, see the Service-Learning Project at the end of most chapters.*

## **COMMUNICATION HAS BOTH AN ELECTRONIC AND A HUMAN SIDE**

Electronic mail, instant messaging, fax, teleconferencing, videoconferencing, Internet chat rooms, hypertext, multimedia—these and other resources, collectively known as *information technology* (IT)—enhance the speed, volume, and ways of transmitting information. Electronically mediated communication can reach a limitless audience instantly and globally, and can solicit immediate feedback.

Despite the tremendous advantages IT gives today's communicators, their information still needs to be *written*. Also, only humans can give *meaning* to all the information they convey and receive. Information technology, in short, is a tool, not a substitute for human interaction.

People make information meaningful by posing and answering questions no computer can answer.

Today more than ever, people who communicate on the job need to sort, organize, and interpret their material so users can understand it and act on it. With so much information required, and so much available, no one can afford to “let the data speak for themselves.”

### **Communication Reaches a Diverse Audience**

Electronically linked, our global community shares social, political, and financial interests. Multinational corporations

often use parts manufactured in one country and shipped to another for assembly into a product to be marketed elsewhere. Cars may be assembled in the United States for a German automaker, or farm equipment manufactured in East Asia for a U.S. company. Research crosses national boundaries, and professionals transact across cultures with documents like these (Weymouth 143):

- scientific reports and articles on AIDS and other diseases
- studies of global pollution and industrial emissions
- specifications for hydroelectric dams and other engineering projects
- operating instructions for appliances and electronic equipment
- catalogs, promotional literature, and repair manuals
- contracts and business agreements

To connect diverse communities, any document must convey respect not only for language differences, but also for cultural differences:

Our accumulated knowledge and experiences, beliefs and values, attitudes and roles—in other words, our cultures—shape us as individuals and differentiate us as a people. Our cultures, inbred through family life, religious training, and educational and work experiences...manifest themselves...in our thoughts and feelings, our actions and reactions, and our views of the world.

Most important for communicators, our cultures manifest themselves in our information needs and our styles of communication...our expectations as to how information should be organized, what should be included in its content, and how it should be expressed. (Hein 125)

Cultures differ over which behaviors seem appropriate for social interaction, business relationships, contract negotiation, and communication practices. An effective communication style in one culture may be offensive elsewhere. One survey of top international executives reveals the following attitudes toward U.S. communication style (Wandycz 22–23):

- *Latin America*: “Americans are too straightforward, too direct.”
- *Eastern Europe*: “An imperial tone...It’s always about how [Americans] know best.”
- *Southeast Asia*: “To get my respect, American business[people] should know something about [our culture]. But they don’t.”
- *Western Europe*: “Americans miss the small points.”
- *Central Europe*: “Americans tend to oversell themselves.”

In short, global communication requires documents that achieve “efficiency” without being offensive. For more discussion, see pages 56, 59, 104, 282.

### EXERCISES

1. Research the kinds of communicating you will do in your career. (Begin with the *Dictionary of Occupational Titles* in your library or on the Web.) You might interview a member of your chosen profession. What kinds of documents and presentations will you produce, and for what audiences and purposes? What types of global audiences can you expect? Explain in a memo to your instructor. (See pages 386, 387 for memo elements and format.)
2. Write a memo to your boss, justifying reimbursement for this course. Explain how the course will help you become more effective on the job.
3. Locate a Web site for a company or organization that hires graduates in your major. In addition to technical knowledge, what skills does this company seek in its job candidates? Discuss your findings in class. Also, trace the sequence of links you followed to reach your topic.

### COLLABORATIVE PROJECT

#### Introducing a Classmate

Class members will work together often this semester. So that everyone becomes acquainted, your task is to introduce to the class the person seated next to you. (That person, in turn, will introduce you.) Follow this procedure:

- a. Exchange with your neighbor whatever personal information you think the class needs: background, major, career plans, communication needs of your intended profession, and so on. Each person gets five minutes to tell her or his story.
- b. Take careful notes; ask questions if you need to.
- c. Take your notes home and select only what you think the class will find useful.
- d. Prepare a one-page memo telling your classmates who this person is. (See pages 386, 387 for memo elements and format.)
- e. Ask your neighbor to review the memo for accuracy; revise as needed.
- f. Present the class with a two-minute oral paraphrase of your memo, and submit a copy of the memo to your instructor.

### SERVICE-LEARNING PROJECT

Identify a community service agency in your area that needs to have one or more documents written. Start by looking in the yellow pages under “Social and Human Services” or “Environmental Organizations.” Or look through your campus directory for campus service agencies such as the Writing and Reading Center, Health Services, International Student Services, Women’s Resource Center, or Career Resources Center. Then narrow your list to one or two agencies that interest you. Explore the kinds of documents and publications that agency produces and then write a one-page memo reporting your findings to your classmates.

Information is the ultimate product

Typical information needs in the workplace

#### 1.1

For more on information needs related to bio-terrorism visit

[www.ablongman.com/lannonweb](http://www.ablongman.com/lannonweb)

<lannonweb>

Typical information needs in society

Usable information is not merely raw data

What users expect

How workplace and school writing differ

Features of efficient documents

A communicator’s legal accountability

**FIGURE 1.1 An Efficient Technical Document** The text, organization, and design of this brief guide work together to make technical information accessible to a general audience.

*Source: U.S. Environmental Protection Agency, April 2001. Information available at <www.epa.gov/superfund/sites> or <www.cluin.org>.*

**FIGURE 1.1 An Efficient Technical Document** (continued)

Common types of technical communication

**JOB...**

**JOB...**

*ON THE*

**Types of writing**

*“I do ‘Social History’ assessments on all new patients that are admitted to the unit. This includes my written assessment (based on an interview of the patient) of why the patient has been admitted, a brief psychosocial history of the patient (previous hospitalizations, family history of mental illness or substance abuse, any history of physical or sexual abuse, and the family and cultural dynamics), a description of the patient’s educational background, and a final evaluation of what issues I feel need to be treated or focused upon during the patient’s stay (usually including aftercare plans, discharge planning, individual and group therapy).”*

—Emma Bryant, social worker

**JOB...**

**JOB...**

*ON THE*

**JOB...**

**JOB...**

*ON THE*

Other media for technical communications

What technical communicators do

<sup>1</sup>My thanks to Pamela Herbert for this overview.

**Types of writing**

“Writing is probably 30 to 40 percent of my job, with editing taking up another 50 percent, and training and tutoring accounting for the remainder. I oversee semitechnical reports from my managers to upper managers and to our military sponsors—usually progress reports ranging from one to twenty pages; I also edit some sections of highly technical, engineer-to-engineer reports. The engineers and scientists write the body, and I handle the abstract, introduction, executive summary, acknowledgments,

conclusion, and list of references, and I sometimes add figures and tables. I also write general reports—things like articles for the company newsletter—and training materials for engineers. I’m currently writing materials on grammar, audience analysis, and techniques for oral presentation.”

—Bill Trippe, Communications Specialist  
with military contract company

***JOB...***

***JOB...***

***ON THE***

Related career paths

How various professionals serve as part-time technical communicators

**1.2**

For more on effective electronic collaboration visit <[www.ablongman.com/lannonweb](http://www.ablongman.com/lannonweb)>

The rise of information technology  
Limitations of information technology

### **QUESTIONS ONLY HUMANS CAN ANSWER**

- *Which information is most relevant to this situation?*
- *Can I verify the accuracy of this source?*
- *What does this information mean?*
- *What action does it suggest?*
- *How does this information affect me or my colleagues?*
- *With whom should I share it?*
- *How might others interpret this information?*

### **1.3**

For more on global communication visit <[www.ablongman.com/lannonweb](http://www.ablongman.com/lannonweb)>

Documents that address global audiences  
How cultures shape communication styles

### **1.4**

For more on cross-cultural communication visit <[www.ablongman.com/lannonweb](http://www.ablongman.com/lannonweb)>

How various cultures view U.S. communication style

### **CONSIDER THIS Twenty-First Century Jobs Require Portable Skills**

A central theme in today’s workplace is “nothing lasts forever.” High-tech and dotcom companies emerge and vanish overnight. Even large, established companies expanding at one moment may be “downsizing” at the next.

To lower their costs and remain flexible amid rapidly shifting conditions, employers increasingly offer jobs that are temporary: for contract workers, part-timers, consultants, and the like (Jones 51). Instead of joining a company, climbing through the ranks, and retiring with a gold watch and a comfortable pension, today’s college graduate can look forward to a series of employers—and careers.

UC-San Francisco researchers Yelin and Trupin recently found that only 33 percent of the California workforce held “traditional,” permanent, full-time jobs, only 22 percent of them having held these jobs for three years or more (cited in Koretz 32). As of early 2002, workers nationwide

had been with their current employer an average of 3.7 years, according to the Bureau of Labor Statistics.

No longer based on seniority, your job security in the twenty-first century will depend on skills you can carry from one employer to another—no matter what the job (Peters 172; Task Force 19):

- ℓ Can you write and speak effectively?*
- ℓ Can you research information, verify its accuracy, figure out what it means, and shape it for the user's specific purposes?*
- ℓ Can you work on a team, with people from diverse backgrounds?*
- ℓ Can you get along with, listen to, and motivate others?*
- ℓ Are you flexible enough to adapt to rapid changes in business conditions and technology?*
- ℓ Can you market yourself and your ideas persuasively?*
- ℓ Are you ready to pursue lifelong learning and constant improvement?*

These, in short, are among the *portable skills* employers seek in today's college graduates—skills all related to communication.

For more exercises, visit

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