TECHNICAL COMMUNICATION

SIXTEENTH EDITION

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Technical Communication

Sixteenth Edition

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Preface

Whether digital, in print, or over a video connection, workplace communication is more than a value-neutral exercise in "information transfer." Workplace communication is also a complex social transaction. From reports to proposals, job applications to email messages, Zoom meetings to presentations, every rhetorical situation has its own specific interpersonal, ethical, legal, and cultural demands. Moreover, today's workplace professional needs to be a skilled communicator and a discriminating consumer of information, skilled in methods of inquiry, retrieval, evaluation, and interpretation essential to informed decision making.

Designed in response to these issues, *Technical Communication*, Sixteenth Edition, addresses a wide range of interests for classes in which students from a variety of majors are enrolled. The text explains, illustrates, and applies rhetorical principles to an array of assignments—from memos, résumés, and email to formal reports, proposals, and social media. To help students develop awareness of audience and accountability, exercises incorporate the problem-solving demands typical in college and on the job. Self-contained chapters allow for various course plans and customized assignments.

What's New to the Sixteenth Edition?

Since the last edition, the COVID-19 pandemic brought with it many changes to workplace communication. *Technical Communication*, Sixteenth Edition, has been thoroughly revised to account for these innovations in workplace communication and to reflect today's technologically sophisticated, diverse, and global workforce. Students will benefit from a variety of new content and features in this edition:

Updated MLA and APA Guidelines. Since the last edition of *Technical Communication*, both the MLA and APA have published new guidelines. We have therefore updated Appendix A to reflect the *MLA Handbook*, Ninth Edition (2021) and the *Publication Manual of the American Psychological Association*, Seventh Edition (2020). We have also updated many of the sample references (in Appendix A as well as in several chapters) to reflect more relevant and timely research topics.

New and updated content on inclusive language. In keeping with today's usage and following both the APA and MLA guidelines, Chapter 11 (Editing) and Appendix B discuss the use of the singular pronouns (they/their) and other forms of inclusive language.

Discussions of ChatGPT and the writing process. The recent rise of ChatGPT and related AI technology has brought with it many questions about the use of such apps in the technical communication classroom. In this edition, we have addressed these issues in a note at the end of this preface, a new "Consider This" box in the writing process chapter (Chapter 6), and content in the Instructor's Manual and other supplements.

Coverage of digital communication throughout. As in every edition of *Technical Communication*, innovations in digital communication have been woven throughout the book. In this edition, each chapter's examples and figures reflect the use of PDF for most workplace documents. In addition, throughout the discussions and exercises, we've made special mention of the use of Zoom and Microsoft Teams for remote and hybrid format meetings and teamwork. We have also incorporated discussions about collaborative writing apps and spaces (such as Google Drive and Microsoft OneDrive).

Updated information about video, in-person, and hybrid workplace presentations. Related to the above, Chapter 23 has been thoroughly revised to focus on presentations in person, via Zoom (or other video apps), or in a hybrid format, with a new Audience and Purpose Profile Sheet, and new sections and Guidelines on video conferencing and slide presentations. Chapter 5 has also been updated to include these formats for team projects.

New chapter on Web pages and social media. Throughout the book, we've placed a special emphasis on the relationships between social media and technical communication, with social media considerations incorporated into nearly every chapter. But in addition, recognizing that Web pages and social media go hand-in-hand, we have combined the former Chapters 24 and 25 into a more compact yet thorough chapter that emphasizes audience considerations when writing for these formats. This chapter also includes an updated section on creating instructional videos, because many forms of instructions these days are in video format on YouTube or the company's Web site. A concluding section on credibility and legal issues emphasizes the importance of social media guidelines for all organizations and the role of technical communicators in creating and following these guidelines.

Revised chapter on resumes and job application materials. Recognizing that the vast majority of resume and cover letter submissions take place online via PDF uploads, this chapter has been revised to reflect these changes. The chapter also includes a discussion about Automated Tracking Systems (ATS), the systems used by most employers to store and categorize (via keywords) job applications. This chapter also includes an entirely updated discussion and example of a digital job portfolio.

Revised chapter on email and texting. Chapter 14, previously just "Email," has been revised to become "Email and Texting." The chapter maintains its discussion of the three major types of email (primary, transmittal, and formatted) but adds new content on instant messaging (IM) and texting in the workplace, including the use of the chat feature in Zoom and Microsoft Teams.

Revised chapter on visuals to include memes and infographics. Chapter 12, "Designing Visual Information," has been updated to include a discussion about creating and using memes for technical communication.

Updated information about information credibility, disinformation, and misinformation. We have updated discussions on the challenges faced when using the Internet for research, including revised sections in Chapters 7, 8, and 9 (on research) about *confirmation bias* and ways that online information tends to reinforce what people already believe or want to believe. In addition, we have added a new "Guidelines for Identifying Misinformation" and included in it examples about deep fakes, memes, and AI.

Many new or revised sample documents throughout. Recongnizing that instructors depend on sample documents that do not change too much between editions, we have revised many of the existing examples to include (in addition to what's mentioned above) updated topics, such as electronic vehicles (EVs). We have also created new figures, including several in Chapter 12; a new set of social media instructions for Chapter 19; a new online job posting for Chapter 16; a new adjustment letter in Chapter 15; and more.

Revised learning objectives. All Learning Objectives have been revised to ensure consistency. Within each chapter, major sections are tied to the Learning Objectives that appear at the beginning of each chapter.

Hallmarks of *Technical Communication*

Technical Communication, Sixteenth Edition, retains—and enhances or expands—the features that have made it a best-selling text for technical communication over fourteen editions. These include the following:

- **Complete coverage for any course in technical communication, business communication, or professional writing.** The topics move from basic foundational concepts to chapters on research, organization, style, visual characteristics, and document design, and finally to specific documents and applications. The appendix includes thorough coverage of the most recent MLA and APA documentation styles, and a handbook of grammar, mechanics, and usage.
- **A reader-friendly writing style that presents all topics clearly and concisely.** Simple, straightforward explanations of concepts and audience/purpose analyses of specific document types help differentiate technical communication from academic writing.
- **The most current and thorough coverage of workplace technologies, ethics, and global considerations in the workplace.** Always prominent in the book, these three topics have been updated and expanded throughout to keep up with the changes in the contemporary workplace.
- **Strong coverage of information literacy.** According to the American Library Association Presidential Committee on Information Literacy, information-literate people "know how knowledge is organized, how to find information, and how to use information in such a way that others can learn from them." Critical thinking—the basis of information literacy—is covered intensively in Part II and integrated throughout the text, especially in discussions about online information.
- **A focus on applications beyond the classroom.** Clear ties to the workplace have always been a primary feature of this book. This edition includes examples from everyday on-the-job situations and sample documents, as well as dedicated chapters on ethics, teamwork, and global issues. Each chapter opener includes a quote from an on-the-job communicator.
- **Emphasis on the humanistic aspects of technical communication.** Technical communication is ultimately a humanistic endeavor, not just a set of job-related transcription tasks, with broad societal implications. Accordingly, situations and sample documents in this edition address complex technical and societal issues such as climate change, public health issues, environmental and energy topics, digital technology, and genomics.
- **Plentiful model documents and other useful figures throughout the book.** Descriptions and instructions for creating technical documents are accompanied by clear, annotated examples. Graphic illustrations throughout make abstract concepts easy to understand.
- **Highly praised pedagogical features.** Pedagogical features, including chapter-opening Learning Objectives, summary Guidelines boxes, real-world Consider This boxes, Case Studies, annotated figures, summary marginal notes, and end-of-chapter Checklists and Projects reinforce chapter topics. These features are outlined in more detail below.

How this Book is Organized

Technical Communication is designed to allow instructors maximum flexibility. Each chapter is self-contained, and each part focuses on a crucial aspect of the communication process. Following are the five major parts of the book:

- **Part 1: Communicating in the Workplace** treats job-related communication as a problem-solving process. Students learn to think critically about the informative, persuasive, and ethical dimensions of their communications. They also learn how to adapt to the interpersonal challenges of collaborative work, and to address the various needs and expectations of global audiences.
- **Part 2: The Research Process** treats research as a deliberate inquiry process. Students learn to formulate significant research questions; to explore primary and secondary sources in hard copy and digital form; to evaluate and interpret their findings; and to summarize for economy, accuracy, and emphasis. Students are asked to think critically about online information and to consider the credibility and truthfulness of the source.
- **Part 3: Organization, Style, and Visual Design** offers strategies for organizing, composing, and designing messages that readers can follow and understand. Students learn to control their material and develop a readable style. They also learn about the rhetorical implications of graphics and page design—specifically, how to enhance a document's access, appeal, and visual impact for audiences who need to locate, understand, and use the information successfully.
- **Part 4: Specific Documents and Applications** applies earlier concepts and strategies to the preparation of print and electronic documents and oral presentations. Various letters, memos, reports, and proposals offer a balance of examples from the workplace and from student writing. Each sample document has been chosen so that students can emulate it easily. Content on email, Web pages, and social media emphasize the ubiquity of digital communication in today's workplace.
- **Part 5: Resources for Writers** includes "A Quick Guide to Documentation," which provides general guidance as well as specific style guides and citation models for the most recent MLA and APA styles, and "A Quick Guide to Grammar, Usage, and Mechanics," which provides a handy resource for answering questions about the basic building blocks of writing.

Learning Enhancement Features

This book is written and designed to be a highly accessible document, so that readers can "read to learn and learn to do." *Technical Communication*, Sixteenth Edition, includes the following learning enhancement features that will help students access the material easily and use the ideas to become effective technical communicators:

- ***Chapter opening quotations*** demonstrate the real-world applications of each chapter's topic.
- ***Learning Objectives*** at the beginning of each chapter tie in with the main headed sections of each chapter and provide a set of learning goals for students to fulfill.
- ***Guidelines* boxes** help students prepare specific documents by synthesizing the chapter's information.
- ***Cases* and sample situations** encourage students to make appropriate choices as they analyze their audience and purpose and then compose their document.
- **Sample documents** model various kinds of technical writing, illustrating for students what they need to do. Captions and annotations identify key features in sample documents.
- ***Consider This* boxes** provide interesting and topical applications of the important issues discussed in various chapters, such as collaboration, technology, and ethics.
- ***Notes* callouts** clarify up-to-the-minute business and technological advances and underscore important advice.

- **Marginal notes** summarize larger chunks of information to reinforce key chapter concepts.
- ***Checklists*** promote careful editing, revision, and collaboration. Students polish their writing by reviewing key criteria for the document and by referring to cross-referenced pages in the text for more information on each point.
- **General, team, global, and digital and social media** *Projects* at each chapter's end help students apply what they have learned.

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Students can rent the text from their campus bookstore or directly from Pearson. Barnes & Noble and Follett bookstores are partners in this program.

Rent to Own

If a student has rented the text from either Pearson or their campus bookstore, they can choose to permanently own the text by paying a flat ownership fee.

EBook

Students can choose to purchase or rent the EBook version of the text.

Supplements

Pearson is pleased to offer the following resources to qualified adopters of *Technical Communication*. These resources are available to instantly download at www.pearson.com. Search for and select the title and toggle to "I'm an Educator." Scroll down to find the following supplements:

- **TEST BANK** Evaluate learning at every level. Reviewed for clarity and accuracy, the Test Bank measures this material's learning objectives with multiple-choice, true/false, and fill-in-the-blank questions. You can easily customize the assessment to work in any major learning management system and to match what is covered in your course.
- **INSTRUCTOR'S RESOURCE MANUAL** Create a comprehensive roadmap for teaching classroom, online, or hybrid courses. Designed for new and experienced instructors, the Instructor's Resource Manual includes overall teaching strategies and chapter-specific resources (including chapter overviews, Learning Objectives, teaching tips, additional exercises, and quizzes).
- **POWERPOINT PRESENTATION** Make lectures more enriching for students. The accessible PowerPoint Presentation includes a full lecture outline and figures from the textbook.

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—John M. Lannon and Laura J. Gurak

Note for the Sixteenth Edition: ChatGPT and Technical Communication

The rise of large language learning models (LLMs)—Open AI's ChatGPT being the most prominent but also Microsoft Bing and Google Bard—brings with it both challenges and opportunities for technical communication. It's clear that LLMs are the next step in what has been a progression toward increasingly automated forms of writing. In that sense, ChatGPT and the like can be considered more of an evolution than a revolution. Starting with Plato's *Phaedrus,* concerns arose about how the written word would influence human memory. Later, the printing press came along, and with it, the eventual use of what came to be called "clichés": Printing press operators would set up and retain certain phrases (such as "To Whom It May Concern" or "Once Upon a Time" or the like) to save time and effort.

Personal computers and word processing increased the use of automated features, starting with templates for common document types such as resumes, reports, and brochures. These apps and others (texting, email) continued to automate our writing via spelling and grammar checkers, auto-correct, autofill, and, most recently, predictive text (when you start typing a sentence with, say, Google Docs, and you see a suggestion not just for one word but for the entire sentence). The Internet added to the mix, including the dominance of Wikipedia and increasingly smart context- and location-sensitive online searches. Our use of these technologies over the past 30 years has in fact provided the content (millions of humans typing) for LLMs that became the basis for ChatGPT and the like.

So, where do we go from here? Instructors of technical communication will recall that with each change described above, engaging with the technology, rather than ignoring it, is often the best approach. Students know that these apps are not going away; in fact, this newest twist to digital writing will be something they face daily at work. If anything, people are doing more writing than ever (email, texts, memos, reports, chats during Zoom session) and continue to look for shortcuts. Therefore, instructors would be wise to consider how to teach with LLMs rather than outright banning their use (Roose).

On the positive side, just like the printing press operators who saved time by reaching for the

"To Whom It May Concern" set of letters, LLMs can serve to help brainstorm and generate ideas, especially for simple documents and situations. On the challenging side, however, using these apps exclusively would negate the rhetorical principles that underlie the most effective, context-sensitive, responsive forms of technical communication. As described in the "Consider This" box in Chapter 6, LLMs are not attentive to the office politics, personalities, audience concerns, and other critical, unique aspects of a specific writing situation. In Chapter 6, Glenn Tarullo wrestles with a workplace writing situation that requires a direct yet diplomatic style, sensitivity to all of the people involved, and many other variables that are in fact part of any workplace writing environment.

Many colleges and universities are now engaging with faculty and students about these issues. The University of Minnesota libraries describe LLMs this way:

> Keep in mind: [LLMs] don't think. They don't understand, read, choose, or give you the "best information." Sometimes it might feel or seem like it, but this isn't how the technology works. That said, they also won't tell you where they got the information they're pulling from, and who is doing the work behind the scenes. Many, if not most, are unregulated and influenced by how we all interact with it. (University of Minnesota Libraries "What is ChatGPT")

Along with Minnesota, most schools are offering advice and suggestions for engaging with LLMs, including sample syllabi, policy statements, feedback from faculty and students, workshops, and ideas for classroom activities.

One concern, plagiarism, is not new to writing instructors and can be handled by using time-tested techniques, including designing writing assignments that require work to be done in class, using peer reviews, encouraging multiple drafts, and engaging with other techniques that move away from the "standard essay" (usually not part of a technical writing class in the first place) and toward, as one instructor put it, "designing writing assignments that are genuinely engaging for students [and] that are tied to authentic occasions for learning and, from the student's perspective, seem worth doing" (Warner). (Especially in technical communication, assignments are not as amenable to automated writing as is the typical standard essay.) In an article on its blog, the National Council of Teachers of English (NCTE) offers suggestions for using LLMs to "get started with the writing process" but then employ more rhetorically oriented techniques to continue the assignment (O'Bryan). (See Chapter 4 for more about plagiarism.)

Like all forms of writing, we learn by imitation. The good news is that the most effective technical communication must be based on rhetorical principles in response to the specific situations of readers (audiences) and contexts (purposes). Writing technologies, including this latest iteration (LLMs), can be useful tools for brainstorming and getting started. But they can also be used to teach about the difference between automated text and text that is specifically geared toward a unique writing situation. The Instructor's Manual for the sixteenth edition contains more ideas, references, and in-class activities that can be applied across all chapters in relation to ChatGPT and other LLMs. With these technologies evolving quickly, instructors and students should stay abreast of the resources offered by their college and universities as well as our professional societies (like the NCTE and other technical communication-oriented organizations).

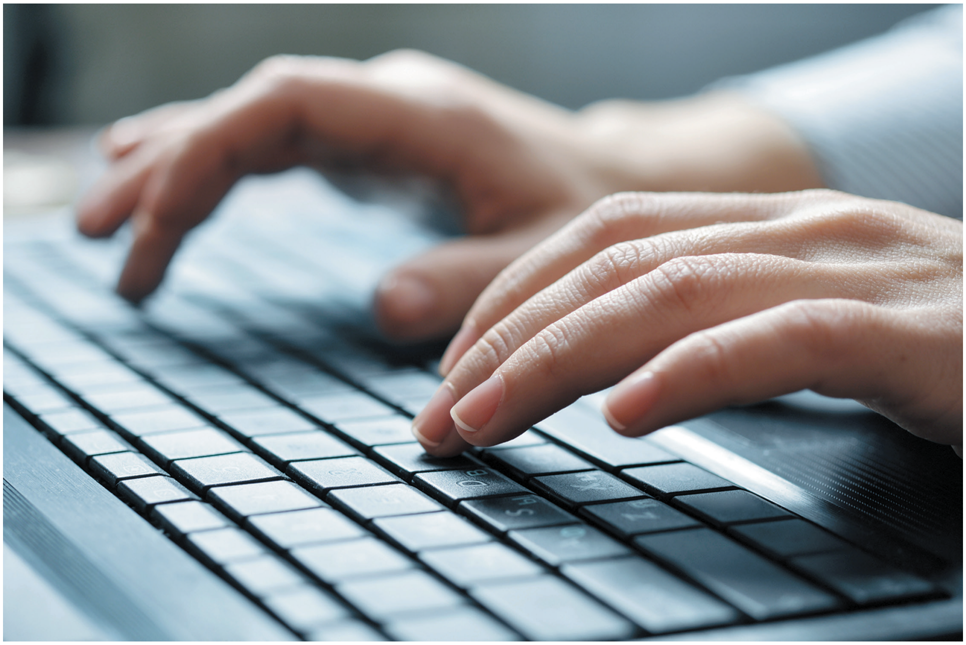
Part 1

Communicating in the Workplace

1 Introduction to Technical Communication
2 Meeting the Needs of Specific Audiences
3 Persuading Your Audience
4 Weighing the Ethical Issues
5 Teamwork and Global Considerations
6 An Overview of the Technical Writing Process

Chapter 1

Introduction to Technical Communication



mama_mia/Shutterstock

"Writing is essential to my work. Everything we do at my company results in a written product of some kind—a formal technical report, a summary of key findings, recommendations and submissions to academic journals or professional associations. We also write proposals to help secure new contracts. No matter if the document is to be delivered in print or online, writing is the most important skill we seek in potential employees and nurture and reward in current employees. It is very hard to find people with strong writing skills, regardless of their academic background."

—Paul Harder, President, mid-sized consulting firm

What Is Technical Communication?
Main Features of Technical Communication
Purposes of Technical Communication
Preparing Effective Technical Documents
Projects

Learning Objectives

1.1 Define technical communication

1.2 Identify the main features of technical communication

1.3 Explain the purposes of technical communication

1.4 Describe the four tasks involved in preparing effective technical documents

What Is Technical Communication?

1.1 Define technical communication

Technical communication is the exchange of information that helps people interact with technology and solve complex problems. Almost every day, we make decisions or take actions that depend on technical information. When we purchase any new device, from a smart TV to a Wi-Fi thermostat, it's the setup information that we look for as soon as we open the box. Before we opt for the latest in advanced medical treatment, we go online and search for all the information we can find about this treatment's benefits and risks. From banking systems to online courses to business negotiations, almost every aspect of daily life involves technology and technical information. Because our technologies are so much a part of our lives, we need information that is technically accurate and, importantly, easy to understand and use.

Technical communication helps us interact with technology in our daily lives

Technical communication serves various needs in various settings. People may need to perform a task (such as assembling an exercise bike), answering a question (such as what to take when you have a cold), or making a decision (such as whether to accept a sales proposal). In the workplace, we are not only consumers of technical communication but also producers. To be effective and useful, any document or presentation we prepare (memo, letter, report, Web page, PowerPoint presentation) must advance the goals of our readers, viewers, or listeners.

Technical communication helps us solve complex problems

Figure 1.1 shows a sampling of the kinds of technical communication you might encounter or prepare, either on the job or in the community.

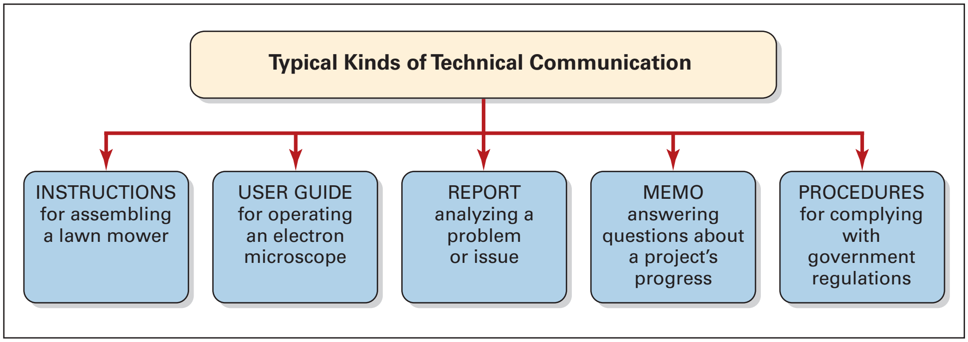

Typical Kinds of Technical Communication
INSTRUCTIONS for assembling a lawn mower
USER GUIDE for operating an electron microscope
REPORT analyzing a problem or issue
MEMO answering questions about a project's progress
PROCEDURES for complying with government regulations

Figure 1.1 **Technical Communication Serves Various Needs**

Technical Communication Is a Digital *and* a Human Activity

Digital communication requires attention to style and tone

In today's workplace, with all of the digital communication available to us, we communicate in writing more than ever. Email, texts, chat sessions, social media and blog posts, document review features (such as Word's track changes when editing group documents): These technologies are a daily part of our workplace communication. Digital technologies make it easy for people to collaborate, especially across different time zones or work schedules. Yet in digital formats, we often communicate with such speed that we forget about basic professional standards for workplace communication. For instance, the informal or even humorous tone we use to text our friends is typically not appropriate for a work-related email. An unclear or inaccurate email sent late in the day when you are rushing to get out of the office could easily cause a safety error or legal problem; an inappropriate tone might result in wasted hours resolving an interpersonal situation instead of working on the project.

Online research is not the same as critical thinking

Digital technology also provides plenty of ways, from simple to sophisticated, to research and find information. Doing a Google or other online search, however, is not a substitute for critical thinking skills. The big questions involved in most workplace projects are questions that require us to take our research findings and make the information meaningful by asking questions such as these:

Questions that require critical thinking skills

- Which information is relevant to this situation?
- Can I verify the credibility and 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?

Technical Communication Reaches a Global Audience

Write to a diverse audience

Linked as we are through our transportation systems and especially our digital technologies, the global community shares social, political, and financial interests. We can no longer pretend to operate solely within regional or national boundaries. Organizations are increasingly multinational; employees work on teams with colleagues from around the globe. The best collaborations happen when communication is tuned to reflect the diversity of people, countries, and cultures that make up the organization and the project team.

Consider the cultural context

Understanding the point of view of another culture takes time. Even within specific cultures, people are individuals and can't be lumped together into one stereotype. As researchers in intercultural communication remind us, a key component is the communication's *context* (Collier 9; Martin 6). For instance, people communicate differently in the context of being at home than they do when at work.

Understand that communication behaviors differ across cultures

Cultures differ over which communication behaviors and approaches are appropriate for business relationships, including contract and other legal negotiations, types of documents (e.g., whether to use email, a memo, or a letter), tone and style, use of visuals, and so forth. An effective and appropriate communication style in one culture may be considered inappropriate or even offensive in another. In the workplace, communication tends to be patterned by a set of norms that have developed over time in different cultures. As one business expert notes,

> Every aspect of global communication is influenced by cultural differences. Even the choice of medium used to communicate may have cultural overtones. For example, it has been noted that industrialized nations rely heavily on electronic technology and emphasize written messages over oral or face-to-face communication. Certainly the United States, Canada, the UK and Germany exemplify this trend. But Japan, which has access to the latest technologies, still relies more on face-to-face communications than on the written mode (Goman 1).

This expert goes on to explain how "[i]n some cultures, personal bonds and informal agreements are far more binding than any formal contract. In others, the meticulous wording of legal documents is viewed as paramount" (Goman 2).

Take the time to learn about cultural differences

The documents you research and write at work need to reflect an understanding and sensitivity to cultural differences and the communication approaches of your teammates at work and your readers (i.e., your customers or clients). Your best bet is to learn as much as you can by listening and observing; asking trusted colleagues; and reading magazines, newspaper articles, travel Web sites, social media posts, and other such information (just be sure the information is written by someone with expertise and experience in international communication). You might also try an online short course on international communication. For more on cross-cultural communication, see Chapters 3 and 5 as well as the Global Projects at the end of each chapter.

Technical Communication Is Part of Most Careers

Whatever your job description, you should expect to be evaluated at least in part on your written and oral communication skills. Even if you don't anticipate an actual career in writing, every job involves being a technical communicator at some point. You can expect to encounter situations such as the following:

Most professionals serve as part-time technical communicators

- As a medical professional, psychologist, social worker, or accountant, you will keep precise records that are 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, and inspection reports; you will also give presentations, both in person and over video (like Zoom or Microsoft Teams).
- As a lab or service technician, you will keep daily activity records and help train coworkers in installing, using, or servicing equipment.
- As an attorney, you will research and interpret the law for clients.
- As an engineer or architect, you will collaborate with colleagues as well as experts 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.)
- As an employee or intern in the nonprofit sector (an environmental group or a government agency), you will research important topics and write brochures, press releases, or handbooks for clients.
- As an employee of any company or organization, you will write status reports, trip reports, memos, proposals, instructions, email, texts, and many other forms of technical communication.

The more you advance in your field, the more you will need to share information and establish contacts. Managers and executives spend much of their time negotiating, setting policies, and promoting their ideas—often among diverse cultures around the globe.

In addition, most people can expect to work for several different employers throughout their career. Each employer will have questions such as the following:

Employers seek portable skills

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

Although technical expertise and experience are important, the above items, most especially the first two (communication and critical thinking), are top among the portable skills employers seek in today's college graduates.

Technical Communicators Play Many Roles

The variety of job titles of technical communicators

Full-time technical communicators work in many capacities. Job titles include information architect, user experience engineer, technical writer, technical editor, documentation specialist, Web development specialist, social media manager, and content developer. In the public sector, government agencies (federal, state, and local) hire technical communicators to take technical research and make it accessible to nonexpert readers by writing and designing blog and social media posts, podcasts, Web pages, short reports, and brochures. In the private sector, technical communicators can be found across the spectrum, including in the highly regulated banking, pharmaceutical, and medical device industries, where these skilled communicators create specifications, procedures, and documentation for global audiences. You will also find technical communicators employed at retail companies (such as Target and Best Buy) to work on Web sites and technical documentation and in every high-tech company (such as Microsoft and Apple) where teams of technical communicators are responsible for user manuals, online help, customer support, and much more.

What technical communicators do

Technical communicators also edit reports for punctuation, grammar, style, and logical organization. They may oversee publishing projects, coordinating the efforts of writers, visual artists, graphic designers, content experts, and lawyers to produce a complex manual, report, or proposal. Given their broad range of skills, technical communicators often enter related fields such as technical or scientific publishing, magazine editing, video production (including writing scripts), training, and college teaching.

Main Features of Technical Communication

1.2 Identify the main features of technical communication

Almost any form of technical communication displays certain shared features: The communication is reader-centered, accessible and efficient, often produced by teams, and delivered in a variety of digital and hard copy formats.

Reader-Centered

Focus on the reader, not the writer

Unlike poetry, fiction, or college essays, a technical document rarely focuses on the writer's personal thoughts and feelings. This doesn't mean your document should have no personality (or voice), but it does mean that the needs of your readers come first.

What readers expect

Workplace readers 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. Reader-centered documents focus on what people need to learn, do, or decide. For example, while the history of how this product was invented may be of interest to the writer, instructions for assembling a new workstation desk should focus on what readers need to do—assemble their desk and start using it. Writing from a reader-centered perspective takes practice and attention (to help you get the idea, the rest of this book will emphasize writing and design that is reader-centered).

Accessible and Efficient

Make documents easy to navigate and understand

Readers expect to find the information they need and to have questions answered clearly. For instance, the document shown in Figure 1.2 is written and designed as an infographic, making the content easy for nontechnical audiences to understand. The ideas are divided into three main sections; visuals are combined with text.

An accessible and efficient technical document includes elements such as those displayed in Figure 1.2 as well as others listed below.

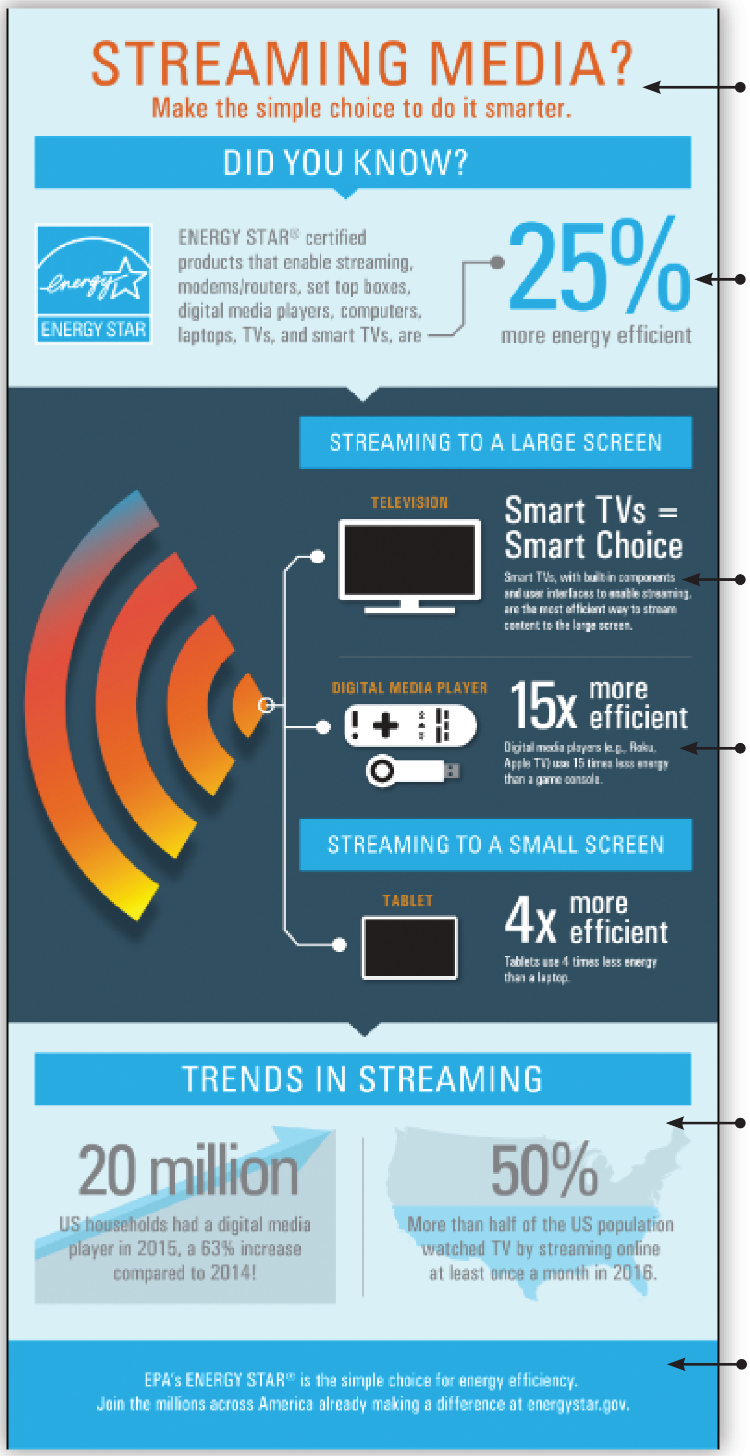
Elements that make a document accessible and efficient

- **worthwhile content**—includes all (and only) the information readers need
- **sensible organization**—guides the reader and emphasizes important material
- **readable style**—promotes fluid reading and accurate understanding
- **effective visuals**—clarify concepts and relationships, and substitute for words whenever possible
- **effective page design**—provides heads, lists, type styles, white space, and other aids to navigation
- **supplements (abstract, appendix, glossary, linked pages, and so on)**—allow readers to focus on the specific parts of a long document that are relevant to their purpose

Recognize your legal accountability

Accessible, 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 or organization can be held responsible.

> *NOTE Make sure your message is clear and straightforward—but do not 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.*



STREAMING MEDIA?

Make the simple choice to do it smarter.

DID YOU KNOW?

energy
ENERGY STAR

ENERGY STAR® certified products that enable streaming, modems/routers, set top boxes, digital media players, computers, laptops, TVs, and smart TVs, are 25% more energy efficient

STREAMING TO A LARGE SCREEN

TELEVISION

Smart TVs = Smart Choice

Smart TVs, with built-in components and user interfaces to enable streaming, are the most efficient way to stream content to the large screen.

15x more efficient

Digital media players (e.g., Roku, Apple TV) use 15 times less energy than a game console.

STREAMING TO A SMALL SCREEN

4x more efficient

Tablets use 4 times less energy than a laptop.

TRENDS IN STREAMING

20 million

US households had a digital media player in 2015, a 63% increase compared to 2014!

50%

More than half of the US population watched TV by streaming online at least once a month in 2016.

EPA's ENERGY STAR® is the simple choice for energy efficiency.
Join the millions across America already making a difference at energystar.gov.

Heading is in the form of a question readers might have

Important energy savings information is in large type

Visuals are combined with short sentences

Color combinations highlight key points

Key data points are highlighted with font size and visuals

Information source (EPA) lets readers know the data is credible

U.S. Environmental Protection Agency, ENERGY STAR program.

Figure 1.2 **An Effective Technical Document** Word choice, layout, use of visuals, and an infographic format make the information easy for everyday readers to understand and access.