



TECHNICAL COMMUNICATION TODAY



Fifth Edition



Richard Johnson-Sheehan

Technical Communication Today

FIFTH EDITION

Richard Johnson-Sheehan
Purdue University

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Library of Congress Cataloging-in-Publication Data

Johnson-Sheehan, Richard, author.

Technical communication today / Richard Johnson-Sheehan, Purdue University. -- Fifth edition.
pages cm

Includes bibliographical references and index.

ISBN 978-0-321-90798-1 -- ISBN 0-321-90798-1

1. Communication of technical information. I. Title.

T10.5.J64 2015

601'.4--dc23

2014022467

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10 9 8 7 6 5 4 3 2 1—DOC—17 16 15 14

www.pearsonhighered.com

Student Edition ISBN 10: 0-321-90798-1

Student Edition ISBN 13: 978-0-321-90798-1

PEARSON

A la Carte ISBN 10: 0-321-99665-8

A la Carte ISBN 13: 978-0-321-99665-7

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Preface

In the technical workplace, people use their computers to help them research, compose, design, revise, and deliver technical documents and presentations. Networked computers and mobile devices are the central nervous system of the technical workplace, and *Technical Communication Today* helps students and professionals take full advantage of these important workplace tools.

New media and communication technologies are dramatically altering technical fields at an astounding rate. People are working more efficiently, more globally, and more visually. These changes are exciting, and they will continue to accelerate in the technical workplace. This new edition of *Technical Communication Today* continues to help writers master these changing communication tools that are critical to success in technical fields.

Today, as the centrality of technology in our lives has expanded, almost all professionals find themselves needing to communicate technical information. To meet this need, this book addresses a broad range of people, including those who need to communicate in business, computer science, the natural sciences, the social sciences, public relations, medicine, law, and engineering.

What's New in the Fifth Edition?

This edition has been streamlined so that students can quickly find the key information they are looking for in every chapter. Many chapters have also been reframed to present the writing process for any document as a series of steps. In addition:

- A new **Chapter 21, “Writing for the Web,”** provides an overarching look at how to write for the Web, with coverage on creating and designing websites, social media pages, blogs, videos, podcasts, and wikis.
- An **updated Chapter 11, “Starting Your Career,”** reflects the electronic shift in the job search process. In addition, it provides more guidance on creating chronological résumés and designing a searchable résumé.
- A **revised Chapter 14, “Researching in the Technical Workplace,”** now provides step-by-step guidance on the research process, with more help on beginning research with primary and secondary sources; collecting evidence through print, electronic, and empirical sources; and new coverage of revisiting a hypothesis to determine its validity.
- **New sample documents** provide even more examples of the types of communications students will encounter in the workplace, including technical descriptions (Chapter 6), instructions (Chapter 7), reports (Chapter 10), and a résumé from an international student (Chapter 11).
- **New Microgenre examples** in Part 2, including tweeting at work (Chapter 5), demonstrate how elements of broad genres can be applied to narrower rhetorical situations.

- **Four new case studies** prepare students for real workplace situations by presenting ethical challenges for reflection and rich class discussion.
 - Responding to a memo from a senior management official who has expressed dissatisfaction with the way one of his offices is being “run” (Chapter 5).
 - Determining whether or not it is ethical for a fiberoptic telecommunications company to block certain content from reaching its users (Chapter 13).
 - Creating a brochure designed specifically for parents of school-aged children, raising awareness about bed bugs (Chapter 17).
 - Addressing a cross-cultural issue involving the unfortunate translation of the name of an x-ray machine in another country (Chapter 19).
- **Newly titled chapter reviews, “What You Need to Know,”** reinforce key points for students.
- **New exercises and projects** throughout.
- **Updated APA and MLA** documentation coverage.

Guiding Themes

In this book, I have incorporated the newest technology in workplace communication, but the basics have not been forgotten. *Technical Communication Today* is grounded in a solid core of rhetorical principles that have been around since the beginning. These core principles have held up well and, in fact, are even more relevant as we return to a more visual and oral culture.

Computers as Thinking Tools

This book’s foremost theme is that networked computers and mobile devices are integral and indispensable in technical communication. *Technical Communication Today* shows students how to fully use computers and succeed in a complex and fast-moving technical workplace.

Visual-Spatial Reading, Thinking, and Composing

Documents are “spaces” where information is stored and flows. Visual-spatial reading, thinking, and composing involve interacting with text in real time. *Technical Communication Today* shows students how to engage, compose, and interact with texts in four important ways:

- It shows writers how to use visual-spatial techniques to research, invent, draft, design, and edit their work.
- It teaches students how to write and speak visually, while designing highly navigable documents and presentations.
- It provides guidance on composing visual-spatial multimodal documents and presentations.
- It practices what it preaches by providing information in an accessible, visual-spatial format.

The International, Transcultural Workplace

As with each edition, international and transcultural issues have been expanded as the world becomes more globalized. This topic has been woven into the main chapter discussion, rather than placed on its own, because issues of globalization are not separable from technical communication.

The Activity of Technical Communication

Technical Communication Today continues to stress the activity of technical communication—producing effective documents and presentations. Each chapter follows a step-by-step process approach that mirrors how professionals in the technical workplace communicate. As someone who has consulted and taught technical communication for over two decades, I know that students today rarely read their textbooks, but instead raid them for specific information. For this reason, like any good technical communicator, I have tried to make this book as “raidable” as possible. That way, students can get in the book, get what they need, and get things done.

Resources for Students and Instructors

MyWritingLab Now Available for Technical Communication

Integrated solutions for writing. *MyWritingLab* is an online homework, tutorial, and assessment program that provides engaging experiences for today’s instructors and students. New features, built on *MyWritingLab*’s hallmark foundation, offer instructors:

- A new Composing Space for students
- Customizable Rubrics for assessing and grading student writing
- Multimedia instruction on all aspects of technical communication
- Advanced reporting to analyze class performance

Adaptive learning powered by multimedia instruction. For students who enter the course under-prepared, *MyWritingLab* offers pre-assessments and personalized remediation so students see improved results and instructors spend less time in class reviewing the basics. Rich multimedia resources are built in to engage students and support faculty throughout the course. Visit www.mywritinglab.com for more information.

Instructor’s Manual

The *Instructor’s Manual*, available online at pearsonhighered.com, offers chapter-specific teaching strategies, prompts for class discussion, strategies for improving students’ writing and presentations, in-and-out-of-class activities, and quizzes (with suggested answers). Additional instructor resources include a Test Bank and PowerPoint slides.

CourseSmart

Students can subscribe to this book as a *CourseSmart eText* at coursesmart.com. The subscription includes all of the book’s content in a format that enables students to search, bookmark, take notes, and print reading assignments that incorporate lecture notes.

Acknowledgments

Every edition of *Technical Communication Today* has given me the opportunity to work with many people at Pearson and at colleges around the country. I wish to thank the following individuals for their insight and support: Teresa Aggen, Pikes Peak Community College; Sherrie L. Amido, California Polytechnic State University—San Luis Obispo; James Baker, Texas A&M University; Lauri M. Baker, University of Florida; Russell Barrett, Blinn College; Eric Bateman, San Juan College; Norman Douglas Bradley, University of California—Santa Barbara; Lee Brasseur, Illinois State University; Jonathon Briggs, Central New Mexico Community College; Stuart Brown, New Mexico State University; Ellie Bunting, Edison College; Maria J. Cahill, Edison State College; Tracy L. Dalton, Missouri State University; Roger Friedman, Kansas State University; Timothy D. Giles, Georgia Southern University; Mark Gula, Northern Arizona University; Jeffrey Jablonski, University of Nevada—Las Vegas; Rebecca Jackson, Texas State University; Leslie Janac, Blinn College—Bryan Campus; Miles A. Kimball, Texas Tech University; Christy L. Kinnion, Wake Technical Community College; Barry Lawler, Oregon State University; Barbara L'Eplattenier, University of Arkansas—Little Rock; Anna Maheshwari, Schoolcraft College; Barry Maid, Arizona State University; Jodie Marion, Mt. Hood Community College; Steve Marsden, Stephen F. Austin State University; Mary S. McCauley, Wake Technical Community College; Kenneth Mitchell, Southeastern Louisiana University; Jacqueline S. Palmer, Texas A&M University; Andrea M. Penner, San Juan College; Cindy Raisor, Texas A&M University; Sherry Rankins-Robertson, Arizona State University; Mark T. Rooze, Florence-Darlington Technical College; Carlos Salinas, The University of Texas at El Paso; Teryl Sands, Arizona State University; Paul Sawyer, Southeastern Louisiana University; Jennifer Sheppard, New Mexico State University; Rick Simmons, Louisiana Technical University; Nancy Small, Texas A&M University; Kara Smith, Brunswick Community College; Krista Soria, University of Alaska Anchorage; Karina Stokes, University of Houston—Downtown; Christine Strebeck, Louisiana Tech University; Valerie Thomas, University of New Mexico; Christopher Toth, Iowa State University; Jack Trotter, Trident Technical College; Greg Wilson, Iowa State University; Alan Zemel, Drexel University.

Editors Brad Potthoff and Anne Brunell Ehrenworth were essential in the revision of this book and I thank them for their ideas. Thanks also to my colleagues, Professors Scott Sanders, Charles Paine, and David Blakesley. Finally, thanks to Gracemarie Mike and Mary McCall for their assistance.

Most important, I would like to thank my wife, Tracey, and my children, Emily and Collin, for their patience, because sometimes working on books like this one takes time away from them.

RICHARD JOHNSON-SHEEHAN
PURDUE UNIVERSITY

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In this chapter, you will learn:

- How to develop a writing process that is suitable for the technical workplace.
- How genres are used in technical workplaces to develop documents.
- How to use your computer to overcome writer's block.
- To define technical communication as a process of managing information in ways that allow people to take action.
- The importance of communication in today's technical workplace.
- The importance of effective written and spoken communication to your career.

CHAPTER

1

Communicating in the Technical Workplace

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When new college graduates begin their technical and scientific careers, they are often surprised by the amount of writing and speaking required in their new jobs. They knew technical communication would be important, but they never realized it would be so crucial to their success.

Communication is the central nervous system of the technical workplace. People who can write and speak effectively using a variety of media tend to be successful. Meanwhile, people with weak communication skills are often passed over for jobs and promotions. Technical communication will be vitally important to your career, whether you are an engineer, scientist, doctor, nurse, psychologist, social worker, anthropologist, architect, technical writer, or any other professional in a technical field.

Developing a Workplace Writing Process

One of the major differences between workplace writing and college writing is the pace at which you need to work. Computer networks and smartphones have greatly increased the speed of the technical workplace, and they allow people to work around the clock. So, you need to work smarter, not harder.

To help you work smarter, this book will teach you a *genre-based approach* to technical communication. Genres are patterns that reflect how communities, including people in technical workplaces, get things done. A genre shapes a project's content, organization, style, and design, as well as the medium in which it is delivered.

For example, an analytical report follows a different genre than technical specifications (Figure 1.1). Reports and specifications are written for completely different purposes and for different kinds of readers. Their content, organization, style, and design are also very different. Yet, in most technical workplaces, you would need to know how to use both of these genres.

Communication Is the Central Nervous System of the Workplace



Your ability to communicate with others through computer networks will be critical to your career.

Two Different Genres

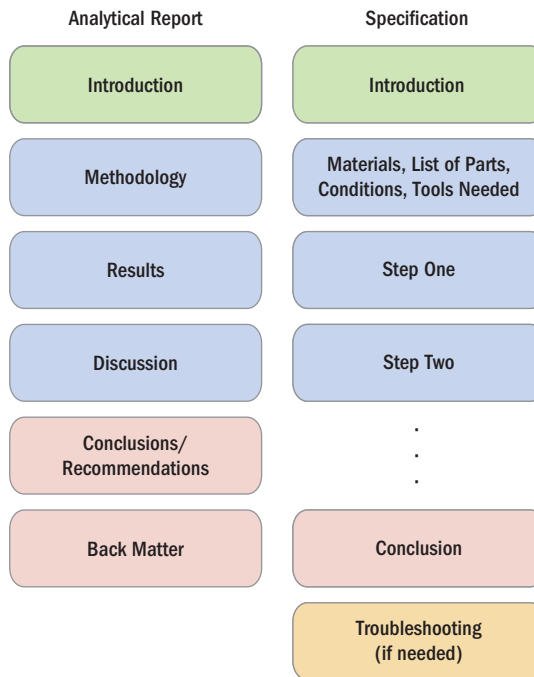


Figure 1.1: Each genre has its own content, organization, style, and design. Here are the outlines of two distinctly different genres set side by side.

Genres do much more than help you organize your ideas. They help you interpret workplace situations and make sense of what is happening around you. Genres are not formulas or recipes to be followed mechanically. Instead, genres reflect the activities and practices of technical workplaces. Genres are flexible, allowing them to be adapted to many different kinds of projects.

In this book, you will learn a *genre set* that will be helpful to you throughout your career. Learning these technical communication genres will allow you produce clear documents and give authoritative presentations so you can achieve your goals.

Genres and the Technical Writing Process

In your previous courses on writing and public speaking, you probably learned a *writing process*. This process included a few stages such as prewriting, drafting, revising, and proofreading.

The technical writing process modifies these stages and adds in a few new ones, as shown in Figure 1.2. In this book, this process is divided into five stages: (1) Planning and Researching, (2) Organizing and Drafting, (3) Improving Style, (4) Designing, and (5) Revising and Editing.

While writing a document or presentation, you will need to move back and forth among these stages. For example, while organizing and drafting your document, you may realize that you need to do a little more research on your topic. While editing, you may realize that the style of the document needs to be changed to fit the needs of the readers. Generally, though, this technical writing process will guide you from the beginning to the end of the project.

The Technical Writing Process

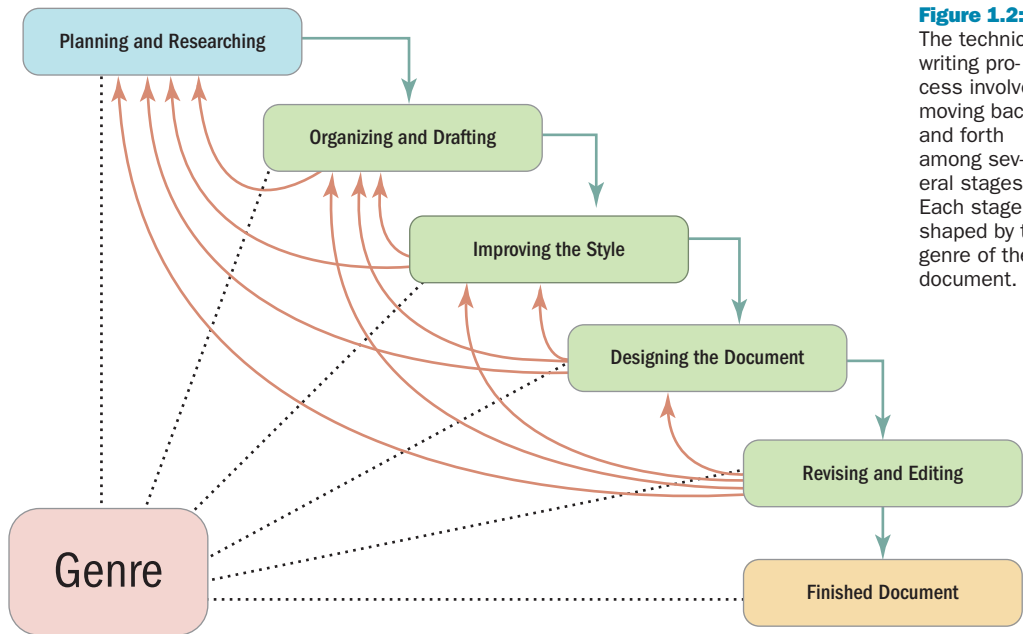


Figure 1.2: The technical writing process involves moving back and forth among several stages. Each stage is shaped by the genre of the document.

Meanwhile, as shown in Figure 1.2, the genre of your document guides each stage in your writing process. The genre helps you make decisions about the content, organization, style, and design of your document, as well as the most appropriate medium for your ideas.

Stage 1: Planning Out Your Project and Doing Start-Up Research

During the planning and researching stage, you should accomplish three tasks: analyze the rhetorical situation, do start-up research, and refine your purpose.

ANALYZING THE RHETORICAL SITUATION Understanding the rhetorical situation means gaining a firm grasp of your document's subject, purpose, readers, and context of use (Figure 1.3).

To define the rhetorical situation, start out by asking the *Five-W and How Questions*: who, what, why, where, when, and how.

- *Who* are my readers, and who else is involved with the project?
- *What* do the readers want and need, and what do I want and need?
- *Why* do the readers need the information in this document?
- *Where* do they need the information, and *where* will they use it?
- *When* will the information be used, and *when* is it needed?
- *How* should I achieve my purpose and goals?

Defining the Rhetorical Situation

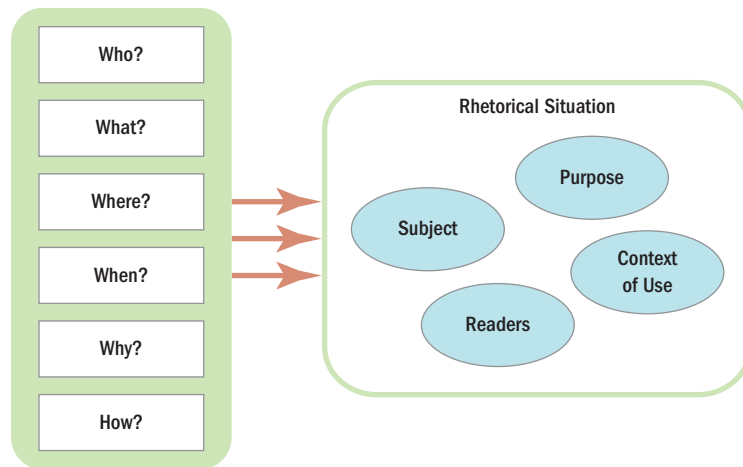


Figure 1.3: The Five-W and How Questions can help you determine the rhetorical situation for your technical document or presentation.

The Five-W and How Questions will give you an overall sense of your document’s rhetorical situation.

Now, spend some time taking notes on the following four elements of the rhetorical situation:

Subject—What is the document about? What is it *not* about? What kinds of information will my readers need to make a decision or complete a task? What is the scope of the project?

Purpose—What does this document need to achieve or prove? Why do my readers need this document and what do they need to know?

Readers—Who are the readers of this document? What are their specific needs and interests? What are they looking for in this document?

Context of use—Where and when will this document be used? What physical, economic, political, and ethical constraints will shape this text?

Defining the rhetorical situation may seem like an added step that will keep you from writing. Actually, knowing your document’s rhetorical situation will save you time and effort, because you will avoid dead ends, unnecessary revision, and writer’s block.

DEFINING YOUR PURPOSE Among the four elements of the rhetorical situation, your document’s purpose is the most important. Your purpose is what you want to do—and what you want the document to achieve.

The purpose statement of your document is like a compass. You can use that purpose statement to guide your decisions about the content, organization, style, and design of your document.

When defining your purpose, try to express exactly what you want your document to achieve. Sometimes it helps to find an appropriate action verb and then build your purpose statement around it. Here are some useful action verbs that you might use:

Link

To learn about adapting texts to readers and contexts, go to Chapter 2, page 19.

INFORMATIVE DOCUMENTS

inform
describe
define
review
demonstrate
instruct
advise
announce
explain
notify

PERSUASIVE DOCUMENTS

persuade
convince
influence
support
change
advocate
recommend
defend
justify
urge

Using the action verb you have chosen, state your purpose in one sentence. It might help to finish the phrase “The purpose of my document is to . . .”

The purpose of my report is to review the successes and failures of wolf reintroduction programs in the western United States.

The purpose of my proposal is to recommend significant changes to flood control strategies in the Ohio River Valley.

Hammering your purpose statement down into one sentence is hard work, but worth the effort. Your one-sentence purpose statement will focus your writing, saving you time. Chapter 12 on strategic planning provides some helpful ideas for figuring out your purpose statement, especially with larger, more complex projects.

RESEARCHING YOUR SUBJECT Solid research is your next step. Computers have significantly changed the way we do research in technical workplaces. Before computers and Internet search engines, finding enough information was usually a writer’s main challenge. Today, there is almost too much information available on any given subject. So, it is important that you learn how to *manage* the information you collect, sorting through all the texts, scraps, junk, and distortions to uncover what you need. Your documents should give your readers only the information they require to make a decision or take action. Leave out anything else.

While researching your subject, gather information from a variety of sources, including the electronic sources, print documents, and empirical methods (e.g., experiments, surveys, observations, interviews). Chapters 14 and 15 will help you do effective research and evaluate your sources.

Stage 2: Organizing and Drafting

While organizing and drafting, you are essentially doing two things at the same time:

Organizing the content—Using common genres to shape your ideas into patterns that will be familiar to readers.

Drafting the content—Generating the written text of your document by weaving together facts, data, reasoning, and examples.

The genre you are using will help you understand how to organize the information you've collected in a way that achieves your purpose. For example, the document in Figure 1.4 is easily recognizable as a *set of instructions* because it is following the genre.

Chapters 5 through 11 will teach you how to use the most common genres in technical workplaces. In most situations, you will already know which genre you need because your supervisor or instructor will ask you to write a “specification,” “report,” or “proposal.” But if you are uncertain which genre suits your needs, pay attention to your document’s purpose. Then, find the genre that best suits the purpose you are trying to achieve.

Sample of Genre: Instructions

Larger steps are clearly marked.

Diagrams illustrate the steps.

The text explains each step.

Headings guide readers.

Quick Start Guide VERIZON HIGH SPEED INTERNET Step-By-Step Setup Instructions

1. Do you have dial-up or another Internet service? If you will no longer be using that service, unplug both ends of its phone cord or cable.

2. Do you have more than one computer? If so, and you use a modem, disconnect it from the computer where you are installing Verizon High Speed Internet. You may reconnect your router after your installation is successful.

3. Do you have any phones mounted on the wall? If so, install a wall mount filter. To order additional filters, call 1.800.567.6789.

4. Install filters on phone devices. Install filters at the wall jack as shown. Filters are required for:

- All phones (corded and cordless phone bases)
- Dial-up modems (if still in use)
- Answering machines
- Caller ID units
- Fax machines
- DTP units/landline TV dialers
- Security systems
- Motor readers
- TTY devices
- Emergency medical devices

5. Connect the phone cord or Ethernet cable to the modem and the Ethernet port on your desktop or laptop. If you can't find an Ethernet port, insert the CD now.

6. Connect the power cord to the modem and plug it into a power outlet. Wait for the internet light to become steady or flashing green.

7. Run Internet Explorer. If you are not automatically redirected, go to <http://actvatemysd.verizon.net>. Follow the online instructions to set up your account.

8. Can't connect to the Internet? Insert the Verizon Installation CD. Select "New User" or "Troubleshoot my connection".

Need Help? Use the CD for troubleshooting, or call Verizon Online at 1.800.567.6789.

Figure 1.4: A genre follows a pattern that readers will find familiar. Readers would immediately recognize this document as a set of instructions and be able to use it.

Source: “Quick Start Guide,” Verizon Wireless, used by permission.