

Technical Communication

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TECHNICAL COMMUNICATION

2nd Edition

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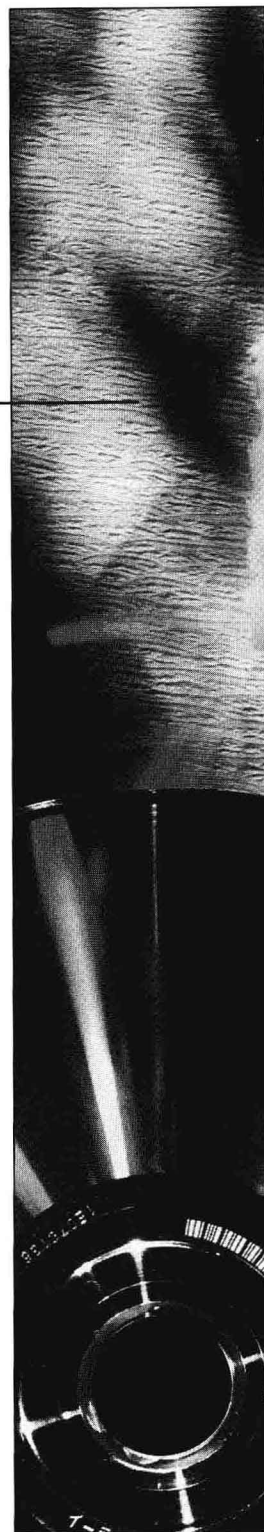
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TECHNICAL COMMUNICATION

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Preface

The first question you will probably have about this text is “why five authors?” The answer to that question illustrates the changing nature of technical communication.

Technical communication—the specialized communication that helps readers, viewers, or listeners respond to the challenges of a technological world—is complex, must be socially and legally responsible, and has important impact on everyday life. More and more often, technical communication is part of a team effort. Products and processes in business, industry, and education are too complex for a single person to know everything that is essential to the success of a project.

Each of the five authors of this textbook is an expert in some aspect of technical communication. That expertise comes from many years in the classroom and many years in industrial, research, business, and scholarly settings. We believe that by combining our voices, our experiences, and our knowledge we can bring you the latest communication strategies that will enable you to function well in this complex technological world.

All of you will become technical professionals who communicate. As a professional, you will need to know how to conduct research about technology and how to help your readers, viewers, and listeners—your audiences—use your information to solve problems. You will need to display technical data visually, present information orally, design and package effective documents, and use communication technologies to accomplish these tasks. In addition, you need to know what forms and formats are traditionally used on the job, how to choose an appropriate style for your communication, and how to analyze your audience’s needs and interests. In order to be effective in your job, you will need to know how to establish your credibility as an author, how to write as part of a collaborative team, how to help your audience make decisions, how to avoid endangering your audience, and how to meet many more communication challenges.

In this text, then, you receive the advice of five teachers, scholars, and practitioners, and we have worked hard to make that advice reflect a growing body of knowledge about technology and communication.

Organization *Technical Communication* has four parts. Part One, “Understanding Technical Communication,” focuses on communication in today’s workplace and helps you understand the workplace’s uses, creators, and audiences. Chapter 1 looks at the nature of technical communication and how it is affected by increasing use of technology, by growing regard for how society affects and is affected by technical communication, by the global nature of the workplace, and by increasing awareness of cultural diversity. This chapter, also provides you with some of the history and special characteristics of technical communication. In Chapter 2 you will learn about writing and writing processes as they occur in the workplace, and Chapter 3 teaches you how to address your audiences effectively by thinking rhetorically and determining your audience’s needs, attitudes, and knowledge. The focus of Chapter 4 is on the persuasive nature of technical communication and how to establish your credibility, how to appeal to your audience’s values, and how to provide good reasons for your argument.

The chapters in Part Two, “Acquiring the Tools of Technical Communication,” give you the strategies for writing effective technical communication, in whatever situation you are called upon to do so. Chapter 5 introduces you to the nature of collaborative writing—producing documents as part of a writing team. It provides practical advice for maintaining effective interpersonal relationships in that team as well as for employing the new and emerging technologies that support collaboration. In Chapters 6 and 7, you’ll learn research strategies for collecting and generating information, whether you use the library, conduct a survey, or navigate the Internet. In Chapter 8, you’ll look at editing and style issues, and you’ll learn what to check, change, or correct as you revise, edit, and proofread your documents. Finally, Chapter 9 covers document design and packaging—everything from type styles to binding—and Chapter 10 demonstrates how to display data visually in graphs, tables, charts, and drawings. Chapter 10 also introduces you to the software and hardware used to create effective visual displays in print, multimedia, and oral presentations.

Part Three, “Creating Effective Documents,” focuses on the typical forms and formats used to organize technical documents. Chapter 11 covers definitions and descriptions, and Chapter 12 looks at creating effective instructions, specifications, and procedures—all traditional systems for organizing technical information. Chapters 13 and 14 focus on the longest and often most challenging type of technical communication—the report. These chapters will show you how to recognize and create the traditional types and parts of reports and how reports help readers make decisions, based on technical, managerial, and social criteria. Finally, Chapter 15 demonstrates how effective proposals, which set forth solutions to problems, can win not only approval but also funding for your ideas.

The final part of this text, “Developing and Maintaining a Professional Edge,” concentrates on some common and challenging communication

situations. Chapter 16 introduces you to what is the most personal and frequent type of workplace communication, correspondence, and it shows you how to apply what you've learned so far to the creation of a successful job search. The last chapter shows you how to apply much of what you have learned about written documents and visual displays to oral presentations, including the job interview.

Several features in this text make it useful and interesting for you.

Special Features

■ SOCIAL CONSTRUCTION

Many of the examples, assignments, and exercises in the text are *socially situated*, in that they address social as well as technical issues. We don't believe that either communication or technology are isolated phenomena; instead, we believe that they occur in a rich setting that is shaped by economics, politics, ethical and legal considerations, and social and cultural forces. Therefore, the examples, assignments, and exercises we offer here assume that the technology is created and used by people with various values, interests, and needs—that writers can and should help audiences understand and use technology, make decisions about technology, and solve problems with technology. When writers fail at their jobs, there are consequences to those failures; writers can alienate, frustrate, or endanger their audiences.

■ COLLABORATION

One of our goals is to help you see that the need to communicate springs from unique and describable workplace problems, values, and goals. In fact, in this text, we assume that you never write alone—whether you *collaborate* within a writing team or listen and respond to the needs of people in your organization, your communications are socially constructed.

■ CASE STUDIES

This text also contains a **set of documents**, upon which many exercises are based. These documents, collected in Appendix A, address both technical and social issues: the AIDS epidemic, Y2K computer programming issues, environmental and public relations concerns. You'll read how community and medical leaders have responded, through technical communication, to health care workers and the general public's need to know about AIDS and the HIV virus. You'll read about bioremediation, a process used in the *Exxon Valdez* oil spill. You'll see how one university responded to community concern about the number of birds trapped and

killed in experimental agricultural fields. And, you'll see how Web documents are being used to address issues of interest to a broad segment of society.

■ TECHNOLOGY

To be successful in the workplace, people must use a variety of media to communicate their ideas effectively. We know that documents in today's workplace can take a variety of forms: print, Web pages, CD-ROMs, e-mail, and multimedia, to name just a few of the most common. Therefore in this text we try to familiarize you with software and hardware as well as the types of communications you will be called upon to create using this technology.

Through this text, we'll teach you **how to use technology to communicate**. You'll see not only how to find information within computer databases and in the electronic environment of the Internet and how to use the computer to draft and revise your documents, but also how to use the computer software to display data, organize oral presentations, and even collaborate within a writing team.

■ PERSUASION

This text emphasizes the **persuasive nature of technical communication**. Thus, you'll not only learn how to convey technical information in a clear and concise manner, but you'll also learn how to persuade your audience that you have found solutions for problems, help an audience make decisions, and demonstrate that you deserve to be hired or funded.

■ DIVERSITY

Within this text, we also remind you about the **culturally diverse and international nature** of technical communication. We point out when to think about your audience's level of literacy, how to meet the needs of color-blind or hearing impaired audiences, and when to consider an international audience's response to your words and symbols.

■ LEARNING AIDS

Finally, **each chapter begins with a quotation** from a technical communication scholar, teacher, or practitioner. These statements should help you think and discuss some of the main principles within each chapter. Throughout the text, we have **highlighted important or new words and defined them in the margin**, so that you can easily review them. There is also a glossary that has longer definitions of some terms and that allows you to review quickly any points you might want to check as you

read. And, we have created **Writing Strategy** checklists and worksheets for you to use in creating documents now and in the future.

The Instructor's Resource Guide (IRG) to this textbook offers a range of supplemental activities, readings, and information to new and experienced teachers. We provide sample syllabi for different length terms, and we offer suggestions about how to integrate the case studies into the classroom. With each chapter, we give an overview, set of goals, definitions of important terms and concepts, teaching strategies, and supplementary activities and assignments. When appropriate, we provide overhead transparency masters and handouts. Finally, we have reprinted several landmark and recent articles that inform different aspects of teaching technical communication.

The Instructor's Resource Guide

We want to thank some special people who contributed to either our collective or individual efforts. Ann Hill Duin, Steve Doheny-Farina, and Sherry Little contributed much to the first edition of this textbook, and their words and thoughts still have great impact on this second edition. Linda Jorn, University of Minnesota, shared with us the AIDS documents that appear in this book, and Linda Van Buskirk, Cornell University, alerted us to and helped us gather the *Exxon Valdez* documents. Sam Racine and Linda Clemens, University of Minnesota, helped gather and document research sources, and Linda developed the Instructor's Resource Guide, using the excellent foundation provided by Laurie Gardener in the manual that accompanied the first edition. Paul Brady, University of Minnesota, provided examples of Web page design from his courses. Susan Wakefield and Linda Clemens, University of Minnesota, worked on permissions. Patricia Goubil-Gambrell, formerly of Texas Tech University, alerted us to some of the examples that appear in chapters 13 and 14. Andrew Stephenson, at Penn State, offered information on scientific writing and gave permission to use and revise his work, and Gay Gragson enhanced our conversations about audience.

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