PAUL V. ANDERSON

TECHNICAL COMMUNICATION

a reader-centered approach

EIGHTH EDITION

TECHNICAL COMMUNICATION

a reader-centered approach

EIGHTH EDITION

PAUL V. ANDERSON

Elon University

WADSWORTH
CENGAGE Learning®

Australia • Brazil • Japan • Korea • Mexico • Singapore • Spain • United Kingdom • United States

WADSWORTH
CENGAGE Learning

Technical Communication: A Reader-Centered Approach, Eighth Edition
Paul V. Anderson

Publisher: Michael Rosenberg
Development Editor: Ed Dodd
Assistant Editor: Erin Bosco
Editorial Assistant: Rebecca Donahue
Media Editor: Janine Tangney
Brand Manager: Lydia LeStar
Market Development Manager: Erin Parkins
Content Project Manager: Corinna Dibble
Art Director: Marissa Falco
Manufacturing Planner: Betsy Donaghey
Rights Acquisition Specialist: Jessica Elias
Production Service and Compositor: MPS Limited
Text and Cover Designer: Riezebos Holzbaur Design Group

Library of Congress Control Number: 2012956388

ISBN-13: 978-1-133-30981-9

ISBN-10: 1-133-30981-X

Wadsworth
20 Channel Center Street
Boston, MA 02210
USA

Cengage Learning is a leading provider of customized learning solutions with office locations around the globe, including Singapore, the United Kingdom, Australia, Mexico, Brazil and Japan. Locate your local office at **international.cengage.com/region**

Cengage Learning products are represented in Canada by Nelson Education, Ltd.

For your course and learning solutions, visit **www.cengage.com**

Purchase any of our products at your local college store or at our preferred online store **www.cengagebrain.com**

Instructors: Please visit **login.cengage.com** and log in to access instructor-specific resources.

Printed in Canada
1 2 3 4 5 6 7 17 16 15 14 13

FOR MY FAMILY

Margie

Christopher and Kirsten

Soren and Sigrid

Rachel and Jeff

Drew

Mom and Dad

AND FOR MY TEACHERS

James W. Souther and Myron L. White

BRIEF CONTENTS

CONTENTS

PART III
PLANNING 87

PREFACE

PREFACE FOR INSTRUCTORS

Welcome to the Eighth Edition of *Technical Communication: A Reader-Centered Approach*. I have written this book with one central goal: to help you create a teaching and learning experience that significantly increases your students' ability to write effectively in their careers and in their other courses.

Why You and Your Students Will Like This Edition

In this edition, I have added major new features to those that have have worked so well for faculty and students in the past.

This book places you at the center of the action in your course.

You are the most important resource your students have. You know what their majors and career plans are, what they bring to the course, and how they learn. However, most textbooks are written as if they were the chief source of the knowledge students can gain from a course. Implicitly, they position the instructor as a person who is supposed to help students learn what the textbook has to teach. In this edition, I've taken the more sensible approach of telling students explicitly—in Chapter 1—that you are their most important resource: "Your technical communication instructor will provide you with an invaluable head start toward mastering the writing skills needed in your career. . . . This book's goal is to support your instructor in this effort" (page 19).

Along with describing the importance of the information, guidance, and feedback you will provide, Chapter 1 tells your students, "In sum, you'll get the most out of this book if you listen carefully to the ways your instructor asks you to use it."

This book focuses your students on what really matters in the writing they will do in their careers: their readers.

This edition retains the book's distinctive reader-centered approach. Its premise is that for your students, success in the writing they do in their future (or current) careers will be measured by their readers' responses. If they are able to write communications that help their readers quickly find and easily use the information that they need, and if they are able to create communications that influence their readers' attitudes in the intended way, they will write effectively. As this book addresses each aspect of writing, from the largest considerations of content and organization to the smallest details of sentence construction and table design, it supports your efforts to help students so that they can elicit the desired responses from their readers.

It is designed to provide flexible support for the course you design.

The reader-centered approach and the design of the book provide a flexible teaching resource, enabling you to select any array of chapters and projects while still preparing your students, whatever their majors, with sophisticated yet transferable skills they will need wherever they choose to work after graduation.

It includes new features to help students learn transferable skills.

In this edition, I've placed even greater emphasis on teaching transferable skills. To transfer learning, students need to be able to see a new situation as an opportunity to apply acquired knowledge. To assist students in recognizing these opportunities, I've reorganized chapters into "how to" sections. An individual guideline no longer stands alone, as something to be remembered by itself. Instead, each is associated with a recurring writing goal, so that students can call the advice to mind when they encounter the same goal in a new context. Of course, whenever writers apply knowledge they learned in another context, they need to adapt it. The best guide for adapting is the central strategy of this book: look at what you are writing from your readers' perspective.

It includes learning objectives at the beginning of the chapters to help students gain more from their reading.

Research on reading indicates what we already knew intuitively: that people learn more from reading when they read with a purpose, with a focus. I have added *learning objectives* to chapter introductions. And I have added that students should keep these outcomes in mind not only when reading but also when working on their course projects and when discussing the chapters in class with you.

It highlights the importance of writing *useful* communications.

One goal of almost everything your students will write in their careers will be to help their readers do something they need to do. There are exceptions, of course: thank-you notes, invitations, and other social communications. But the rest will help their readers perform some task, whether physical (repairing a piece of equipment) or mental (deciding which software package to purchase for the company). In previous editions, I described this goal as *usability*. But I discovered that my own students found this term to be too abstract. So, I have replaced it with the more familiar term *usefulness*. And I've rewritten passages in Chapter 1 and throughout the rest of the book to help students imagine the tasks their communications are intended to help their readers perform. Helping students imagine their readers' tasks is a powerful way of helping them write communications their readers will find useful.

It provides in-depth coverage in an easy-to-learn manner.

In most chapters, the major points are distilled into easy-to-remember guidelines whose implications and applications are then elaborated. The guidelines themselves reinforce one another because they all flow from a common set of reader-centered principles and processes.

It provides many, richly annotated examples.

Guidelines can be mere abstractions to students unless they see concrete examples illustrating their application in the kinds of documents the students will write. Throughout, the book includes sample communications with annotations that illustrate the application of its advice. Moreover, these annotations are written in a way that focus on the writer's purpose, in order to focus your students' attention not on the features of the communication but on the decisions and strategies of the writer and, by implication, on the decisions they can make and the strategies they can use.

It includes other new material.

Two major additions to this edition have already been noted: inclusion of learning objectives for every chapter and the new section of Chapter 1 that explains that the book's goal is to help you help your students. Here are some other additions.

- New figures help students see the importance of matching the way they write their résumés and job application letters to the ways employers read applications for employment (Chapter 2).
- New discussions explain to students that carefully defining the goals of a communication is as crucial to their success as preparing a design specification is for engineers, computer scientists, architects, and other professionals (Chapter 3).
- A new chapter on conducting reader-centered research help students integrate strategies for finding, analyzing, and thinking critically about information and data that had appeared in two chapters in the previous edition (Chapter 6).
- New sections guide students in the use of online databases for research (Chapter 7).
- New figures help students distill the chapter's advice for creating an effective, professional voice; creating effective, high-impact sentences; and choosing the words they use (Chapter 10).
- New sections help students define the goals of the endings of the communications they will write in their careers (Chapter 12).
- New sections tell students how to increase the commitment and effort of all members of their writing teams in school and on the job (Chapter 19).
- New sections describe ways students can use to increase motivation and reduce misunderstanding among members of the virtual teams (teams that collaborate partly or solely on the Internet) (Chapter 19).
- New advice helps students select the points on which they should focus their oral presentations (Chapter 20).
- New discussions tell students how to achieve the appropriate level of formality in e-mails, instant messages, memos, and letters they write on the job (Chapter 23).
- New sections tell students how to use the IEEE style for documenting sources (Appendix A).

It includes revised discussions of many topics.

In addition to increasing students' ability to transfer their learning by reorganizing the chapters around "how to" topics, this edition includes the following changes designed to increase its helpfulness to students.

- More practical details about ways students can envision the tasks—whether physical or mental—that their communications will help their on-the-job readers perform (Chapter 3).
- Additional suggestions to help students organize their communications to maximize their usefulness to their readers (Chapter 3).
- Additional suggestions for ways students can determine what to say in communications and how to organize their messages (Chapter 4).
- Streamlined section on using memory and creativity (Chapter 7).
- Clearer explanation of formal and informal classification (Chapter 9).
- Fuller discussion of ways to establish an effective, professional voice (Chapter 10).
- Redesigned layouts of the book's pages on creating reader-centered graphics that make their guidelines easier for students to use (Chapter 15).
- Additional suggestions for ways students can avoid biasing the results when they are testing drafts (Chapter 18).
- Fuller discussion of differences among the ways writing teams are structured in the workplace (Chapter 19).
- More advice for choosing among the various technologies that can support team writing (Chapter 19).
- More complete advice for defining the goals of an oral presentation (Chapter 20).
- Simpler advice for choosing the most effective visual medium for an oral presentation (Chapter 20).
- New suggestions students can use to structure their oral presentation (Chapter 20).
- More complete advice for developing the content for a website (Chapter 22).
- More practical suggestions for helping readers navigate a website (Chapter 22).
- Fuller advice for determining what background information readers need in e-mails, instant messages, memos, and letters written at work (Chapter 23).
- Expanded advice for writing effective e-mails (Chapter 23).
- Revised *Writer's Guides* throughout the book to reflect the new organization of chapters around the "how to" goals that support transfer of writing strategies and skills.

It includes key updates.

In the tutorials and examples, this edition uses the latest versions of Microsoft Office (tutorials using earlier versions are available via the text's CourseMate at www.cengagebrain.com). Appendix A describes the newest versions of APA, IEEE, and MLA documentation styles, including the use of the digital object identifier (doi).

ADDITIONAL KEY FEATURES OF THIS EDITION

Among the many features retained from the previous edition, I have paid special attention to the following because I believe they increase the book's breadth and effectiveness for teaching and learning.

- **Easy-to-remember guidelines** in the first twenty-two chapters help students retain the most central strategies, thereby increasing their resourcefulness and confidence as writers.
- **Writer's Tutorials** guide students step-by-step through certain processes. (See pages 37 and 164 for examples.)
- **Ethics Guidelines** are integrated into the chapters, so ethics becomes a continuous topic throughout a course rather than the topic for one day's reading. In addition, most chapters include special exercises that focus on ethical issues particular to the topic of those chapters.
- **Marginal notes** highlight key points in the text and bookmark key discussions.
- **Web guideposts** in the margin direct students to supplementary resources and information at the book's CourseMate.
- **Learn More guideposts** in the margin direct students to related discussions in other chapters.
- **Try This** features in the margin invite students to explore beyond the book even as they are reading it.
- **Planning Guides and Revision Checklists** assist students as they work on their course projects and professional communications. Downloadable versions of these are available at the book's CourseMate.
- **Global Guidelines**, which are also integrated into the chapters, help students learn the many ways that cultural difference affects communication and provide concrete suggestions for increasing their effectiveness in cross-cultural communications.
- **Exercises** at the end of chapters promote students' ability to apply the book's advice by asking them to Use What You've Learned. The exercises are grouped in four categories: *Apply Your Expertise*, *Explore Online*, *Collaborate with Your Classmates*, and *Apply Your Ethics*.

ORGANIZATION AND COVERAGE OF THIS EDITION

I have also retained the book's overall organization into four major sections. This structure balances attention to communication processes and products, and it provides you and other instructors with the flexibility to take up the chapters from each section in the way that best advances your courses.

- **Introduction.** Chapter 1 helps students understand the nature of writing in the workplace, the way this book builds on what they've learned in other courses, and the kinds of expertise this book will help them develop. Chapter 2 provides a detailed overview of the reader-centered approach by leading students through the process of creating highly effective résumés and job application letters.

- **Communication Process.** Chapters 3 through 18 guide students through the activities in the writing process, helping them become confident, resourceful writers. Three reference guides help students use a variety of research methods, employ seven organizational patterns that are often useful in workplace communications, and create eleven types of graphics. Richly annotated examples enable students to see the book's advice in action.
- **Applications.** Chapters 19 through 22 provide detailed advice for applying the reader-centered approach when communicating and collaborating through the Internet, creating communications with a team, creating oral presentations, making websites, and working on client and service-learning projects.
- **Superstructures.** Chapters 23 through 28 take a reader-centered approach to six of the most common types of career-related communications: correspondence, proposals, empirical research reports, feasibility reports, progress reports, and instructions.

In addition, Appendix A explains the APA, IEEE, and MLA documentation styles. Appendix B includes a variety of effective projects for student assignments. Downloadable and editable versions of projects are available at the book's CourseMate.

SUPPORTING MATERIALS FOR STUDENTS AND INSTRUCTORS

CENGAGEbrain.com

On CengageBrain.com students will be able to save up to 60% on their course materials through our full spectrum of options. Students will have the option to rent their textbooks, purchase print textbooks, e-textbooks, individual e-chapters, and audio books, all for substantial savings over average retail prices. CengageBrain .com also includes access to Cengage Learning's broad range of homework and study tools and features a selection of free content.

- **Instructor's Manual.** Accompanying this edition of *Technical Communication* is an updated instructor's manual that includes a thorough introduction to the course; information on how to integrate supplemental materials into the class, advice on teaching the exercises and cases in the textbook, and more. Instructors may request printed copies by calling 1-800-423-0563 and requesting ISBN-13: 978-1-285-06468-0, by contacting their local Cengage sales representative, or by downloading a PDF version from the book's CourseMate at www.cengagebrain.com.
- **English CourseMate.** *Technical Communication: A Reader-Centered Approach,* Eighth Edition includes English CourseMate, which provides additional resources for your students.

  English CourseMate includes:

  - an interactive eBook, with highlighting, note taking and search capabilities
  - interactive learning tools including:
    - o **Quizzes**
    - o **Tutorials**, many in video form, offering thorough guidance on key technical communication, grammar, and writing topics.

- o **Exercises** supplementing those in the text, interactive chapter quizzes, and a final exam provide students with additional opportunities to work with core concepts from the text.
- **Annotated sample documents** modeling reader-centered communication in a realistic format.
- **Cases**—some suitable for homework or class discussion, others appropriate for course projects—to help students hone their reader-centered communication skills.
- **Downloadable and customizable Planning Guides** to help students navigate the process of creating many kinds of communication.
- **Superstructures** to serve as quick reference guides to crafting specific types of documents, from reports to proposals.
- **PowerPoint presentations** for every chapter, providing handy tools for concept review and class discussion.
- **A Style Guide** that provides brief, user-friendly guidance on issues of grammar, punctuation, style, and usage.
- **Projects from Appendix B**, so students can consult their assignments even when their book isn't handy. Additional projects provide instructors with a wider selection from which to choose assignments that are most appropriate for their students.
- **Web Resources**, directing students to additional online tools and technical communication sites of interest.
- and more!

Go to CengageBrain.com to access these resources, and look for this icon to find resources related to your text in English CourseMate.

- **Enhanced InSite for *Technical Communication: A Reader-Centered Approach*, Eighth Edition**

  Printed Access Card (1 semester) ISBN: 978-1-285-19083-9

  Instant Access Card (1 semester) ISBN: 978-1-285-19084-6

  Printed Access Card (2 semester) ISBN: 978-1-285-19097-6

  Instant Access Card (2 semester) ISBN: 978-1-285-19100-3

With Enhanced InSite for *Technical Communication: A Reader-Centered Approach,* Eighth Edition, instructors and students can manage the flow of papers online, check for originality, and conduct peer reviews. Students can access the multimedia eBook for a text-specific workbook, private tutoring options, and resources for writers that include anti-plagiarism tutorials and downloadable grammar podcasts. **Enhanced Insite**™ provides the tools and resources instructors and students need, plus the training and support they want. Learn more at **www.cengage.com/insite**. *(Access card/code is required.)*

- **Questia**

  Instant Access Code 12 Month Subscription (ISBN: 978-1-285-07920-2)

  Instant Access Code 6 Month Subscription (ISBN: 978-1-4282-7743-4)

Questia is the online library that provides 24/7 access to the web's premier collection of full textbooks and academic journal and periodical articles in the humanities and social sciences. And, it is more than a vast collection of online sources. Questia can help your students in the entire research process, from topic selection and research to organization of their notes and proper citations. Questia will help your students write better papers, providing a wider array of scholarly sources, and enabling them to organize what they've learned into a better thought-out paper.

- **Turnitin.** This proven online plagiarism-prevention software promotes fairness in the classroom by helping students learn to correctly cite sources and by allowing instructors to check for originality before reading and grading papers. Visit **www.cengage.com/turnitin** to view a demonstration.

AUTHOR'S ACKNOWLEDGMENTS

Writing a textbook is truly a collaborative effort to which numerous people make substantial contributions. I take great pleasure in this opportunity to thank the many people who generously furnished advice and assistance while I was working on this eighth edition of *Technical Communication: A Reader-Centered Approach*. I am grateful to the following individuals, who prepared extensive and thoughtful reviews of the seventh edition and my preliminary plans for the eighth edition: Craig Baehr (Texas Tech University), Tracy Dalton (Missouri State University), Dr. Geraldine E. Forsberg (Western Washington University), Roger Friedmann (English Department, Kansas State University), Carole M. Mablekos, Ph.D. (Department of Engineering Management, School of Engineering, Drexel University), Jodie Marion (Mt. Hood Community College), and Wayne Schmadeka (University of Houston–Downtown).

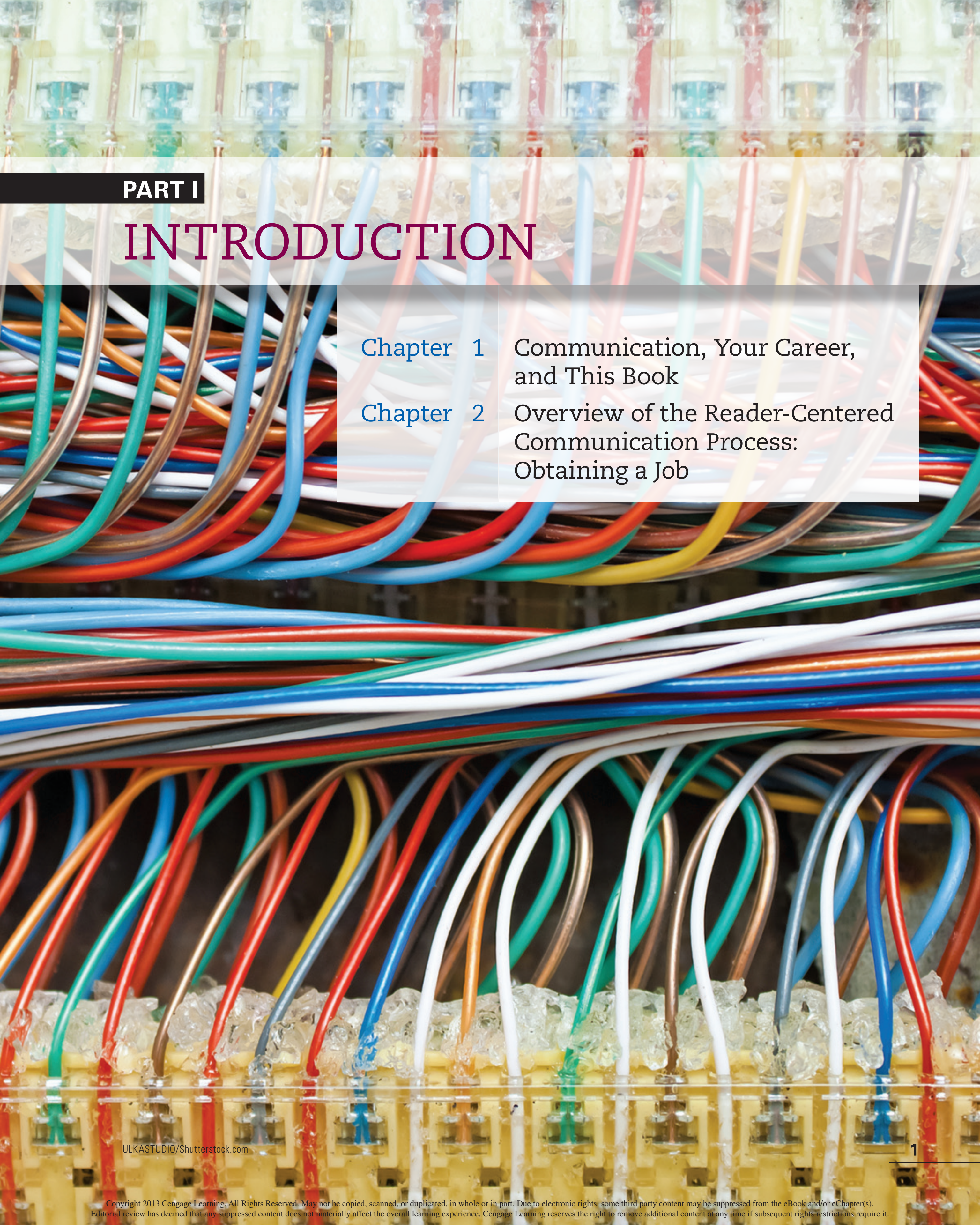
I would also like to thank the following persons who reviewed the previous edition: Gertrude L. Burge (University of Nebraska), Diljit K. Chatha (Prairie View A&M University), Zana Katherine Combiths (Virginia Polytechnic University), Janice Cooke (University of New Orleans), Nancy Coppola (New Jersey Institute of Technology), Dawnelle A. Jager (Syracuse University), Linda G. Johnson (Southeast Technical Institute), Matthew S. S. Johnson (Southern Illinois University Edwardsville), L. Renee Riess (Hill College), Barbara Schneider (University of Toledo), and William West (University of Minnesota–Minneapolis).

While developing this edition, I have benefited from the thoughtful and energetic assistance of an extraordinary group at Wadsworth/Cengage Learning. Ed Dodd skillfully shepherded the book through the many phases of development and production. I am very grateful to Ed Dionne for his exceptional support during production. Wendy Granger and Sarah Carey contributed abundant resourcefulness and tenacity while conducting photo research and text research, respectively. Michael Rosenberg's confidence that this edition would turn out well has been indispensable.

I am indebted to all my students for their keen critiques of the book and for the originality of their work, which provides a continuous supply of new ideas. In particular, I thank Jessica Bayles, Erin Flinn, Allen Hines, Billy O'Brien, Joseph Terbrueggen, Curtis Walor, and Tricia M. Wellspring, whose thorough, thoughtful work provided examples and helped me develop several of the new discussions in this edition. I am also indebted to Katherine Durack (Miami University, Ohio) and Elizabeth Ferszt's English 301 students at Arizona State University, whose kindness and sharp eyes helped me make many corrections. I am also grateful to Elizabeth Ferszt for her many suggestions. For this edition, Betty Marak, who has read this book more than anyone else over the years, assisted once more in preparing the manuscript. Kirsten Anderson of Turnstone Design assisted me in several ways again for this edition. Tom Collins and Steve Oberjohn have provided enduring assistance over the years. Tom graciously offered a hand again this time. All my work in technical communication benefits from many conversations with and numerous examples of excellent teaching provided by Jean Lutz. I owe a special thanks to Steven Bauer, of Hollow Tree Literary Services, for his very astute editorial suggestions, gently delivered. I am deeply grateful to all of these individuals.

Finally, I thank my family. Their encouragement, kindness, and good humor have made yet another edition possible.

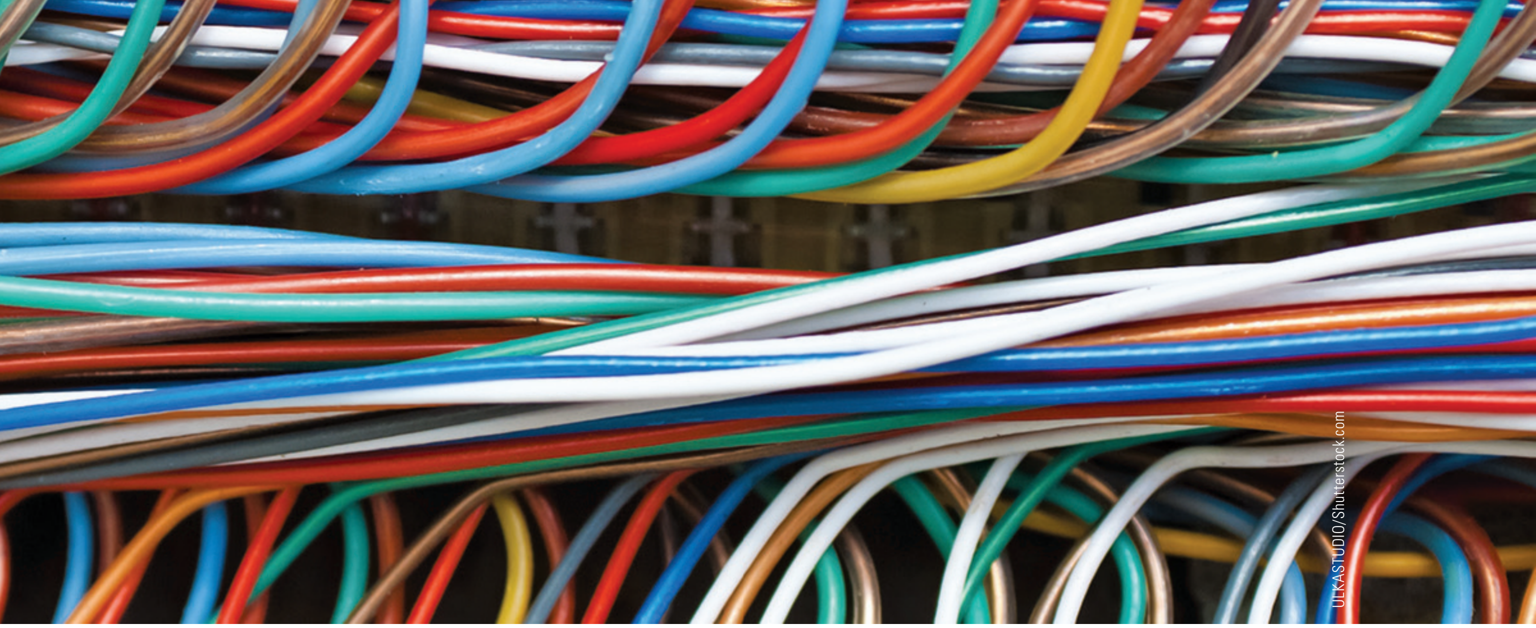
PAUL V. ANDERSON
Elon University
Elon, North Carolina



PART I

INTRODUCTION

ULKASTUDIO/Shutterstock.com



ULKASTUDIO/Shutterstock.com

1 | Communication, Your Career, and This Book

WEB For additional information, examples, and exercises related to this chapter, go to your English CourseMate at *www .cengagebrain.com.*

From the perspective of your professional career, communication is one of the most valuable subjects you will study in college.

Why? Imagine what your days at work will be like. If you are majoring in engineering, computer science, ecology, or any other specialized field, you will spend much of your time using the special knowledge and skills you learned in college to answer questions asked by co-workers and to complete projects assigned by managers. Furthermore, you'll generate many good ideas on your own. Looking around, you'll discover ways to make things work better or do them less expensively, overcome problems that have stumped others, or make improvements others haven't begun to dream about.

Yet all of your ideas and knowledge will be useless unless you communicate them to someone else. Consider the examples of Sarah and Larry. A recent college graduate who majored in metallurgy, Sarah has spent three weeks analyzing pistons that broke when her employer tested a fuel-saving automobile engine. Her analysis has been skillful. Her conclusions are valid. However, the insights she gained about why the pistons failed will be useless to her employer unless she can communicate them clearly and usefully to the engineers who must redesign the pistons. Similarly, Larry, a nutritionist newly hired by a hospital, has several ideas for improving the efficiency of the hospital's kitchen. However, his ideas will reduce costs and improve service to patients only if he can present his recommendations persuasively to the people who have the power to implement these changes.

COMMUNICATION EXPERTISE WILL BE CRITICAL TO YOUR SUCCESS

Like Sarah and Larry, you will be able to make your work valuable to others only if you communicate it effectively. Numerous studies indicate that the typical college graduate spends about 20 percent of the work week writing (Beer & McMurrey, 2009; Sageev & Romanowski, 2001). That's one day out of every five-day work week! And it doesn't include the additional time you'll spend talking—whether in person or on the phone and Internet, whether in meetings or one-on-one.

College graduates typically spend one day a week—or more—writing.

Your writing ability will also help you advance in your career. College graduates judged to be in the top 20 percent of writing ability earn, on-average, more than three times as much as workers rated in the bottom 20 percent of writing ability (Fisher, 1998). Writing ability is a major consideration for promotion, according to the U.S. National Commission on Writing (2004).

Writing is so important to employers that they spend an estimated $3.1 billion annually on writing instruction for their employees (National Commission on Writing, 2004). Moreover, private corporations, nonprofit organizations, and government agencies the world over hire professional technical writers. In the United States, technical writing is consistently rated as one of the top 50 jobs, based on employee satisfaction and projected number of job openings through at least 2020 (Wolgemuth, 2010). It could be an ideal career for you if you enjoy writing and learning about computers, health, engineering, or similar fields.

WEB For more information on careers in technical communication and related fields, go to your English CourseMate at ***www.cengagebrain.com***.

Besides being essential to your career, communication expertise will enable you to make valuable contributions to your campus or community. Volunteer groups, service clubs, and other organizations will welcome your ability to present their goals, proposals, and accomplishments clearly and persuasively.

LEARNING OBJECTIVES FOR THIS CHAPTER

Your technical writing instructor and this book share the goal of helping you develop the communication expertise needed to realize your full potential on the job and in your community. By reading this chapter and discussing it in class you will build the foundation for the rest of your technical writing course. As you read and discuss the chapter, focus on learning how to do the following things. You might imagine that your instructor will give a quiz in which you will be asked to do one or more of them.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Describe the major ways writing at work differs from writing at school.
2. Name and explain the two qualities that writing at work must have to be effective.
3. Summarize in one sentence the reader-centered approach to writing.
4. Explain why you should focus constantly on your reader when writing at work.
5. Use six reader-centered strategies when writing a brief communication.
6. Describe this book's approach to ethics.
7. Tell how to gain the most benefit from your technical writing course and this book.

CHARACTERISTICS OF WORKPLACE WRITING

First, let's ask an obvious question. You already write well enough to have been accepted to college. You may also have earned advanced placement credit for a first-year writing course. Why do you need another writing course?

It's true that what you already know about writing will be useful at work. However, the writing done at work differs significantly from the writing typically assigned in school. To succeed in your career, you need to develop additional skills—even new ways of thinking.

Serves Practical Purposes

The most important difference concerns purpose. On the job, you will write for practical purposes, such as helping your employer improve a product or increase efficiency. Your readers will be supervisors, co-workers, customers, or other individuals who need information and ideas from you in order to pursue their own practical goals. You may already have prepared this type of communication for instructors who asked you to write to real or imagined readers, people who need your information in order to make a decision or take an action.

However, most of your academic writing—term papers, essay exams, and similar school assignments—have a much different purpose. They are intended to help you learn and to demonstrate your mastery of course material. Although your instructors will read them in order to assess your knowledge and decide what grade to assign, they usually don't need information and ideas from you in order to guide their decisions and actions as they pursue their own goals.

Different purposes profoundly affect the kind of communication you need to produce. For an essay exam or term paper whose purpose is to show how much you know, you succeed by saying as much as you can about your subject. At work, where your purpose is to help your readers make a decision or perform a task, you succeed by telling your readers only what they need, no matter how much more you know. Sarah, the metallurgist, doesn't need to tell the design engineers everything she learned about the broken pistons, just the information that will help them make better ones. Extra information will only clog their paths to what they require in order to do their work.

Learning what your readers need and determining the most helpful way to present this information are the most critical skills in workplace writing, though they are not relevant for most writing assigned at school.

Must Satisfy Different Readers in a Single Communication

Students usually write to a single reader, the instructor. In contrast, at work, you will often prepare communications that addresses two or more people who differ from one another in important ways, such as their familiarity with your specialty, the ways they will use your information, and their professional and personal concerns. For example, in his report recommending changes to the hospital kitchen, Larry's readers may include his supervisor, who will want to learn how operations in her area would have to change if Larry's recommendations were adopted; the vice president for finance, who will want to analyze Larry's cost estimates; the director of personnel, who will want to know how job descriptions would need to change; and members of the labor union, who will want assurances that the new work assignments will treat employees fairly.

On the job, you will often need to construct communications that, like Larry's, must simultaneously satisfy an array of persons who will each read it with his or her own set of concerns and goals in mind.

Addresses International and Multicultural Audiences

LEARN MORE To learn strategies for addressing international and intercultural communication audiences, read the Global Guidelines included in most other chapters.

When writing at work, you may often address readers from other nations and cultural backgrounds. Many organizations have clients, customers, and suppliers in other parts of the world. Thirty-three percent of U.S. corporate profits are generated by international trade (Lustig & Koester, 2006). The economies of many other nations are similarly linked to distant parts of the globe. Corporate and other websites are accessed by people around the planet. Even when communicating with co-workers at your own location, you may address a multicultural audience—persons of diverse national and ethnic origins.

Uses Distinctive Types of Communication

At work, people create a wide variety of job-related communications that aren't usually prepared at school, including memos, business letters, instructions, project proposals, and progress reports. Each of these types of communication has its own conventions, which you must follow to write successfully.

Employs Graphics and Visual Design to Increase Effectiveness

In communications written at work, tables, charts, drawings, photographs, and other graphics are often as important as written text. To write effectively, you will need expertise at creating graphics and at arranging your graphics and text on a page or computer screen in ways that make your communications visually appealing, easy to understand, and easy to navigate. Figure 1.1 shows a page from an instruction manual that illustrates the importance of graphics and visual design.


© Anton Vengo/SuperStock

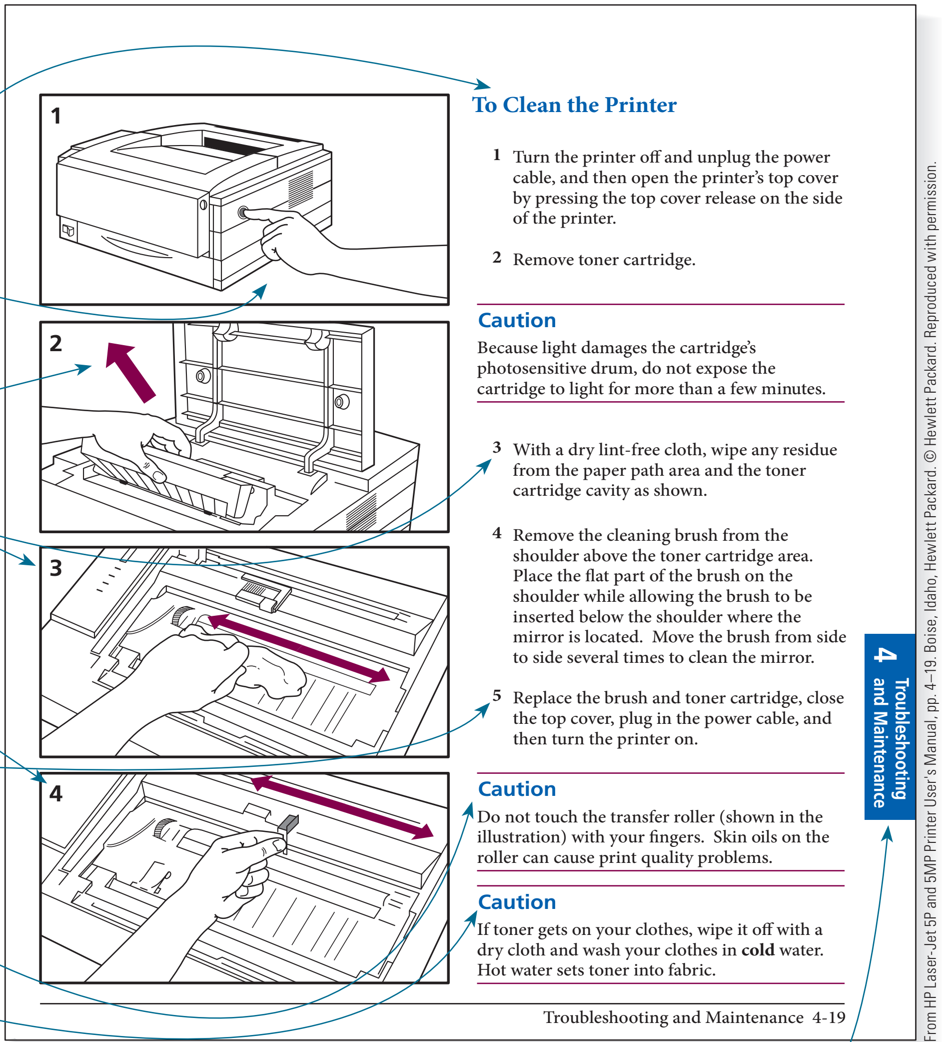
On the job, groups of employees often work together to plan, draft, and revise proposals, reports, and other printed, online, and oral communications. To learn strategies for using graphics and visual design to achieve your communication objectives on the job, see Chapters 14 and 16.

Created Collaboratively

Whatever experience you gain at school in writing collaboratively will benefit you on the job. For long documents, the number of co-writers is sometimes astonishingly large, into the hundreds. Even when you prepare communications alone, you may consult your co-workers, your boss, and even members of your intended audience as part of your writing process.

FIGURE 1.1

Page That Illustrates the Way Graphics and Visual Design Work Together with Words in Technical Communications


1

2

3

4

To Clean the Printer

1 Turn the printer off and unplug the power cable, and then open the printer's top cover by pressing the top cover release on the side of the printer.

2 Remove toner cartridge.

Caution

Because light damages the cartridge's photosensitive drum, do not expose the cartridge to light for more than a few minutes.

3 With a dry lint-free cloth, wipe any residue from the paper path area and the toner cartridge cavity as shown.

4 Remove the cleaning brush from the shoulder above the toner cartridge area. Place the flat part of the brush on the shoulder while allowing the brush to be inserted below the shoulder where the mirror is located. Move the brush from side to side several times to clean the mirror.

5 Replace the brush and toner cartridge, close the top cover, plug in the power cable, and then turn the printer on.

Caution

Do not touch the transfer roller (shown in the illustration) with your fingers. Skin oils on the roller can cause print quality problems.

Caution

If toner gets on your clothes, wipe it off with a dry cloth and wash your clothes in **cold** water. Hot water sets toner into fabric.

4 Troubleshooting and Maintenance

Troubleshooting and Maintenance 4-19

From HP Laser-Jet 5P and 5MP Printer User's Manual, pp. 4–19. Boise, Idaho, Hewlett Packard. © Hewlett Packard. Reproduced with permission.

The visually prominent heading explains what readers will learn from this page.

The drawings show exactly what a reader needs to do to clean the printer; they even show a hand performing these tasks.

The drawings include arrows to indicate the direction of movement.

Each numbered drawing corresponds to the step with the same number.

The numbers for the drawings and steps are visually prominent to help readers match each drawing with its corresponding step.

- In the drawings, the numbers are large and bold.
- In the steps, the numbers are bold and placed in a column of their own.

The cautions are highlighted visually.

- Horizontal lines (called rules) set the cautions off from the text.
- The word Caution is printed in bold and blue.

At the side of this and every page in the manual is a colored rectangle that gives the section number and title. These rectangles help readers flip quickly to the specific information they need.

In one common form of collaboration, you will need to submit drafts of some of your communications for review by managers and others who have the power to demand changes. The number of reviewers may range from one to a dozen or more. Some drafts go through many cycles of review and revision before obtaining final approval.

Created in a Globally Networked Environment

At work, increasing numbers of employees are doing their collaborative writing in a globally networked environment. Using the Internet, project team members

© Monty Rakusen/Jupiterimages/Getty Images

FIGURE 1.2

Writing Team Members in Australia and Germany Conduct a Work Session Online

write reports, proposals, and other documents even though these people may be located in different countries or on different continents. The teams may hold their work sessions entirely online (see Figure 1.2), never meeting in person. Their members may come from different cultures and have different languages as their native languages.

LEARN MORE To learn strategies for writing collaboratively in the globally networked workplace, see Chapter 19, pages 406–407. See also the Global Guidelines included in many chapters.

Shaped by Organizational Conventions and Culture

Each organization has a certain style that reflects the way it perceives and presents itself to outsiders. For example, an organization might be formal and conservative or informal and progressive. Individual departments within organizations may also have their own styles. On the job, you will be expected to understand the style of your organization or department and employ it in your writing.

Shaped by Social and Political Factors

Every communication situation has social dimensions. In your writing at school, the key social relationship usually is that of a student to a teacher. At work, you will have a much wider variety of relationships with your readers, such as manager to subordinate, customer to supplier, or co-worker to co-worker. Sometimes these relationships will be characterized by cooperation and goodwill. At other times, they will be fraught with competitiveness as people strive for recognition, power, or money for themselves and their departments. To write effectively, you will need to adjust the style, tone, and overall approach of each communication to these social and political considerations.

Must Meet Deadlines

In many jobs, deadlines are much more significant—and changeable—than most deadlines at school. A deadline may be pushed back or advanced several times during a project, but no matter what the deadline is, the work must be completed on time. For example, when a company prepares a proposal or sales document, it must reach the client by the deadline the client has set. Otherwise, it may not be considered at all—no matter how good it is. Employers sometimes advise that "it's better to be 80 percent complete than 100 percent late."

Sensitive to Legal and Ethical Issues

WEB For more on the legal and ethical dimensions of workplace communication, go to your English CourseMate at *www.cengagebrain.com*.

Ethics are discussed further on page 18.

Under the law, most documents written by employees represent the position and commitments of the organization itself. Company documents can even be subpoenaed as evidence in disputes over contracts and in product liability lawsuits.

Even when the law does not come into play, many communications written at work have moral and ethical dimensions. The decisions and actions they advocate can affect many people for better or worse. Because of the importance of the ethical dimension of workplace writing, this book incorporates in most chapters a discussion of ethical issues that may arise in your on-the-job communications.

AT WORK, WRITING IS AN ACTION

As you can infer from the preceding section, there is tremendous variety among communications written on the job, depending on such variables as their purposes and readers; organizational conventions and cultures; and the political, social, legal, and ethical contexts in which they are prepared. Some people diminish their ability to write effectively in these multifaceted, shifting situations because they mistakenly think of writing as an afterthought, as merely recording or transporting information they developed while acting as specialists in their chosen field.

Nothing could be further from the truth.

When you write at work, you act. You exert your power to make something happen, to change things from the way they are now to the way you want them to be. Consider, again, the examples of Sarah and Larry. Sarah wants to help her team develop a successful engine. Acting as a metallurgical specialist, she has tested the faulty pistons to determine why they failed. To contribute to the success of the engine, she must now perform a writing act. She must now compose sentences, construct tables of data, and perform other writing activities to present her results in a way the engineers will find useful. Similarly, Larry believes that the hospital kitchen is run inefficiently. Acting as a nutrition specialist, he has devised a plan for improving its operation. For his plan to be put into effect, Larry must perform an act of writing. He must write a proposal that persuades the hospital's decision makers to implement his plan.

AT WORK, WRITING SUPPORTS THE READER'S ACTION

Just as writing at work is an action, so, too, is reading. The engineers' only reason for reading Sarah's report is to obtain information that helps them do their job, which is to redesign the pistons. When the hospital's administrators read Larry's report, their goal is to perform one of their jobs: looking for ways to reduce costs while treating patients effectively.

Similarly, almost every time you write in your career, you goal will be to help others do their work. The exceptions? Thank-you notes, invitations to office social events, and other communications that don't require the expertise you are developing in your college major. When you are using writing as a specialist, you will be acting for the purpose of helping your readers do their jobs.

THE TWO ESSENTIAL QUALITIES OF EFFECTIVE WRITING AT WORK: USEFULNESS AND PERSUASIVENESS

Usefulness defined

When you understand that the purpose of workplace writing is to help readers do something they need to do, you can see why your two major goals as a writer on the job are to create communications that are *useful* and *persuasive* for your readers.

To be *useful* a communication must help readers perform their tasks effectively and efficiently. Their tasks may be physical, such as installing a new memory card in a computer. Or their tasks may be mental, as when Sarah's readers use her report to redesign the pistons and Larry's readers compare his recommended procedures with those currently used in the hospital kitchen. Many features of a communication affect its usefulness. Sarah's report must contain all the information the engineers require, but exclude all unnecessary information that would make it difficult for them to find the crucial facts they need. Her report must also organize and present her information in a way that makes it easy for them to use as they redesign the pistons. Similarly, Larry's report must contain the information the hospital administrators consider relevant to their decisions about the kitchen. In addition, it must be organized around their criteria so they won't have to search through disparate sections of the report to find what they need.

Persuasiveness defined

A communication's *persuasiveness* is its ability to influence its readers' attitudes and actions. For instance, a proposal's goal would be to persuade its readers to change their attitude toward a proposed action (such as upgrading software used at the organization) from neutral—or, possibly, from hostile—to favorable.

In most communications, either usefulness or persuasiveness dominates: usefulness in instructions, for example, and persuasiveness in proposals. However, every workplace communication must possess both to succeed. Instructions are effective only if the intended readers are persuaded to use them. A proposal can persuade only if its readers can easily find, understand, and analyze its content. To see how communications combine usefulness and persuasiveness in a single communication, look at the web page and memo shown in Figures 1.3 and 1.4.

Thus, the starting point for creating any communication in your career is to ask, "What will make it useful and persuasive to my readers?"

FIGURE 1.3

Web Page That Combines Usefulness and Persuasiveness

In this home page, writers at Dell met the challenge of creating a site that would be both useful and persuasive to a wide variety of persons, including consumers and business people, novice and expert computer users, and new visitors and longtime customers.

Usefulness Strategies

At the top of the page, the writers provide several links that enable people to find specific information quickly.

- A link that takes existing personal and business customers to their accounts.
- A link to a search engine that enables people to locate specific information without navigating through multiple screens.
- A link to support.
- A link that enables people to check the status of orders they've made.

To help people who prefer to buy on the phone rather than online, the writers include the number for Dell's sales agents.

The writers organize their links in ways that help users quickly find the information they want.

- They organized links above the large photo around types of customers.
- They grouped the links across the bottom of the page under headings. Two of the headings feature words terms users often look for: "Service" and "Deals."

Courtesy of Dell, Inc.

Persuasive Strategies

To highlight the support services Dell provides individual customers, the writers use a photo in which a Dell representative stands very close to a customer, who listens intently.

The writers use a set of icons to represent the many features of their computers.

By providing a list of "headlines" about the company, the writers convey the impression that it is vibrant and innovative while also providing information for which some users may be looking.

To emphasize satisfaction of consumers who purchase Dell computers for home use, the writers include a photo of two relaxed, smiling customers.

In this memo, Frank, a chemist, uses many reader-centered strategies to make his report on test results useful and persuasive to his boss, Alyssa. His report will help her decide whether to use a newly developed plastic to bottle an oven cleaner manufactured by their employer.This product is sold on supermarket shelves.

PIAGETT HOUSEHOLD PRODUCTS
Intracompany Correspondence

October 10, 2013

To Alyssa Wyatt
From Frank Thurmond
Subject Test of Salett 321 Bottles for Use with StripIt

We have completed the tests you requested to find out whether we can package StripIt Oven Cleaner in bottles made of the new plastic, Salett 321. We conclude that we cannot, chiefly because StripIt attacks and begins to destroy the plastic at 100°F. We also found other significant problems.

Test Methods
To test Salett 321, we used two procedures that are standard in the container industry. First, we evaluated the storage performance of filled bottles by placing them in a chamber for 28 days at 73°F. We stored other sets of 24 bottles at 100°F and 125° for the same period. Second, we tested the response of filled bottles to environmental stress by exposing 24 of them for 7 days to varying humidities and varying tremperatures up to 140°F.

We also subjected glass bottles containing StripIt to the same test conditions.

Results and Discussion
In the 28 day storage tests, we discovered three major problems:

- StripIt attacked the bottles made from Salett 321 at 100°F and 125°F. At 125°F, the damage was particularly serious, causing localized but severe deformation. Most likely, StripIt's ketone solvents weakened the plastic. The deformed bottles leaned enough to fall off shelves in retail stores.
- The sidewalls sagged slightly at all temperatures, making the bottles unattractive.
- StripIt yellowed in plastic bottles stored at 125°F. No discoloration occured in glass bottles at this temperature. We speculate that StripIt interacted with the resin used in Salett 321, absorbing impurities from it.

In the environmental test, StripIt attacked the bottles at 140°F.

Conclusion
Salett 321 is not a suitable container for StripIt. Please call me if you want additional information about these tests.

FIGURE 1.4

Memo That Combines Usefulness and Persuasiveness

Usefulness Strategies

In the subject line, Frank tells Alyssa exactly what the memo is about.

Frank uses the first sentence to tell Alyssa how the memo relates to her: It reports on tests she requested.

In the next two sentences, Frank presents the information that Alyssa most needs: The new plastic won't work. She doesn't have to read the entire memo to find this key information.

Using headings and topic sentences, Frank helps Alyssa locate specific details quickly.

He uses bold type to make the headings stand out visually.

By presenting the test results in a list, he enables Alyssa to read through them quickly.

Frank states clearly the significance of each test result.

Persuasive Strategies

To build credibility for his results, Frank describes the test method in detail.

To establish the credibility of the conclusion he draws, Frank presents specific details concerning each of the three major problems discovered in the storage tests.

By using lively active verbs (highlighted in color), he creates a vivid, action-oriented writing style.

By preparing a neat and carefully proofread memo, Frank bolsters confidence in the care he takes with his work.

THE MAIN ADVICE OF THIS BOOK: THINK CONSTANTLY ABOUT YOUR READERS

The key to determining what will make your communications useful and persuasive to your reader is to follow the main advice of this book: When writing, think constantly about your readers. Think about what they want from you—and why. Think about how you want to help or influence them and how they will react to what you have to say. Think about them as if they were standing right there in front of you while you talked together.

You may be surprised that this book emphasizes the personal dimension of writing more than such important characteristics as clarity and correctness. Although clarity and correctness are important, they cannot, by themselves, ensure that something you write at work will be successful.

For example, if Larry's proposal for modifying the hospital kitchen is to succeed, he will have to explain the problems created by the present operation in a way that his readers find compelling, address the kinds of objections his readers will raise to his recommendations, and deal sensitively with the possibility that his readers may feel threatened by having a new employee suggest improvements to a system they themselves set up. If his proposal fails to do these things, it will not succeed, no matter how "clear and correct" the writing is. A communication may be perfectly clear, perfectly correct, and yet be utterly unpersuasive, utterly ineffective.

The same is true for all the writing you will do at work: What matters is how your readers respond, as Figure 1.5 illustrates. That's the reason for taking the reader-centered approach described in this book. This approach focuses your attention on the ways you want to help and influence your readers, and teaches specific strategies that you can use to achieve these goals.

THE DYNAMIC INTERACTION BETWEEN YOUR COMMUNICATION AND YOUR READERS

But what does it mean to think constantly about your readers? The full—and helpful—explanation comes in later chapters. The central point is to be able to imagine your readers in the very act of reading. Not after reading, *but while reading*. Given this sort of insight into your readers, you have an excellent opportunity to shape your communication to elicit the responses you desire.

An explanation of the following three basic principles of reading, which have been established by extensive research, will help you understand the importance of thinking about your readers at this level of detail.

- Readers construct meaning.
- Readers' responses are shaped by the situation.
- Readers react moment by moment.

All three research findings stress that writing is not a passive activity for readers, but a dynamic interaction between readers and texts.

Readers Construct Meaning

When researchers say that readers construct meaning, they are emphasizing the fact that the meaning of a written message doesn't leap into our minds solely

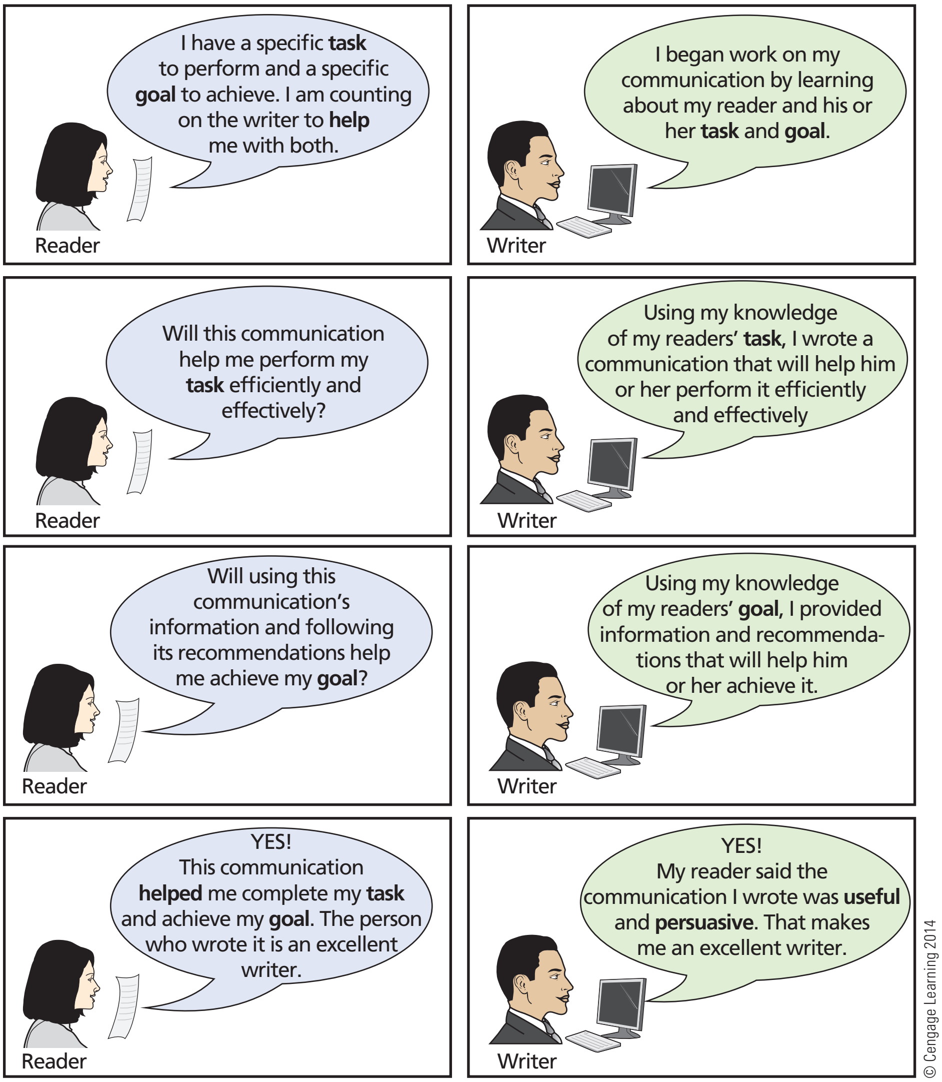


FIGURE 1.5

To Write Effectively at Work, You Must Create Communications That Are Useful and Persuasive to Your Readers

from the words we see. Instead, to derive meaning from the message, we actively interact with it. In this interaction, we employ a great deal of knowledge that's not on the page, but in our heads. Consider, for example, the knowledge we must possess and apply to understand this simple sentence: "It's a dog." To begin, we must know enough about letters and language to decipher the three printed words (*it's*, *a*, and *dog*) and to understand their grammatical relationships. Because young children and people who do not speak English do not possess this knowledge, they cannot read the sentence. Often, we must also bring other kinds of knowledge to a statement in order to understand it. For instance, to understand the meaning of the sentence "It's a dog," we must know whether it was made during a discussion of Jim's new pet or during an evaluation of ABC Corporation's new computer.

In addition to constructing the meanings from individual words and sentences, we build these smaller meanings into larger structures of knowledge. These structures are not merely memories of words we have read. They are our own creations.

To demonstrate this point to yourself, write a sentence that explains the statement, which you read earlier in this chapter, that workplace writing "serves practical purposes." If you were then to go back and look for a sentence that exactly matches yours, most likely, you wouldn't find one. The sentence you wrote is not one you remembered. Rather, it is the meaning you constructed through your interaction with the text.

The fact that readers construct the meaning they derive from a communication has many implications for you that are explored later in this book. An especially important one is this: You should learn as much as possible about the knowledge your readers will bring to your communication so you can create one that helps them construct the meanings you want them to build.

Readers' Responses Are Shaped by the Situation

A second important fact about reading is that people's reactions to a communication you write will be shaped by the context—including such things as their purpose for reading, their perception of your purpose in writing, their personal stake in the subject discussed, and their past relations with you.

For example, Kate has finished investigating several brands of laptop computers to determine which one she should recommend her company purchase for each of its fifty field engineers. Opening her e-mail, she finds a message from a co-worker who asserts that the ABC computer is "a dog." Kate's response to this statement will depend on many factors. Did the information Kate gathered support this assessment? Was the statement made by a computer specialist, a salesperson for one of ABC's competitors, or the president of Kate's company? Has she already announced publicly her own assessment of the computer, or is she still undecided about it? Depending on the answers to these questions, Kate's response might range anywhere from pleasure that her own judgment has been supported by a well-respected person, to embarrassment that her publicly announced judgment has been called into question.

The range of situational factors that can affect a reader's response is obviously unlimited. The key point is that in order to predict how your readers might respond to a communication you are writing, you must understand thoroughly the context in which they will read it.

Readers React Moment by Moment

The third important fact about reading is that readers react to communications moment by moment. When we read a humorous novel, we chuckle as we read a funny sentence. We don't wait until we finish the entire book. Similarly, people react to each part of a memo, report, or proposal as soon as they come to it. Consider the following scenario.

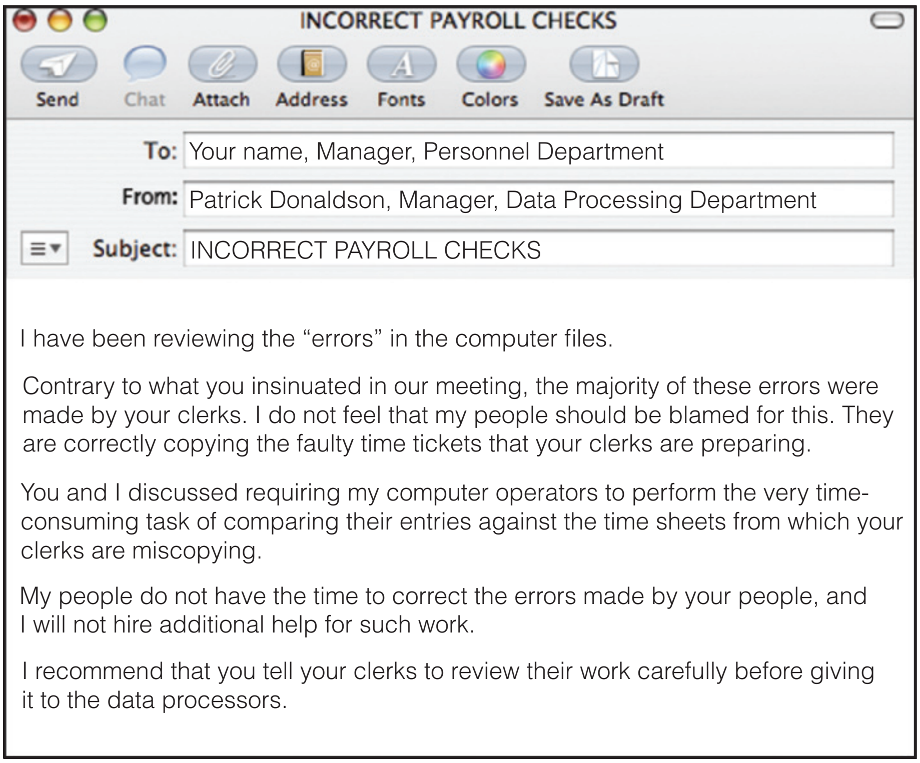
Imagine that you manage a factory's personnel department. A few days ago, you discussed a problem with Patrick, who manages the data processing department. Recently, the company's computer began issuing some payroll checks for the wrong amount. Your department and Patrick's work together to prepare each week's payroll in a somewhat antiquated way. First, your clerks collect a time sheet for each employee, review the information, and transfer it to time tickets, which they forward to Patrick's department. His clerks enter the information into a computer program that calculates each employee's pay and prints the checks. The whole procedure is summarized in the diagram shown here.

In your discussion with Patrick, you proposed a solution he did not like. Because you two are at the same level in the company, neither of you can tell the other what to do. When you turn on your computer this morning, you find an e-mail message from Patrick.

For this demonstration, your task is to read the memo *very slowly*—so slowly that you can focus on the way you react, moment by moment, to each statement. First, get a sheet of paper. Then, turn to the e-mail message shown in Figure 1.6, covering it with the sheet of paper.

Next, slide the paper down the page, stopping after you read the first sentence. Immediately record your reactions (in your role as manager of the personnel department). Proceed in this way through the rest of the message.

Finished? Now look over your notes. Most people who participate in this demonstration find themselves responding strongly to almost every sentence. For example, they react to the quotation marks that surround the word *errors* in the first sentence. The word *insinuated* in the second sentence also draws an immediate response from most readers. (They laugh if they forget to play the role of personnel manager; they cringe if they remember to play the role.)


INCORRECT PAYROLL CHECKS

Send Chat Attach Address Fonts Colors Save As Draft

To: Your name, Manager, Personnel Department

From: Patrick Donaldson, Manager, Data Processing Department

Subject: INCORRECT PAYROLL CHECKS

I have been reviewing the "errors" in the computer files.

Contrary to what you insinuated in our meeting, the majority of these errors were made by your clerks. I do not feel that my people should be blamed for this. They are correctly copying the faulty time tickets that your clerks are preparing.

You and I discussed requiring my computer operators to perform the very time-consuming task of comparing their entries against the time sheets from which your clerks are miscopying.

My people do not have the time to correct the errors made by your people, and I will not hire additional help for such work.

I recommend that you tell your clerks to review their work carefully before giving it to the data processors.

FIGURE 1.6

E-mail Message for Demonstration

The fact that readers respond to a communication moment by moment is important to you as a writer because your readers' reaction to any one sentence in a communication you write will influence their reaction to everything they read from that point forward. For example, most people who read Patrick's memo while playing the role of personnel manager grow defensive the moment they see the quotation marks around the word *errors,* and they become even more so when they read the word *insinuated.* After they read the third paragraph, their defensiveness hardens into a grim determination to resist any recommendation Patrick may make.

A few readers are more even-tempered. Instead of becoming defensive, they become skeptical. As they read the first two sentences, they realize Patrick is behaving emotionally rather than intellectually, so they evaluate his statements very carefully. When they read his accusation that the personnel department clerks are miscopying the time sheets, they want to know what evidence supports that claim. When the next sentence fails to provide any evidence, they feel disinclined to go along with any recommendations from Patrick.

Thus, even though individual readers react to the first few sentences of this memo differently, their early reactions shape their responses to the sentences that follow. Consequently, even though Patrick's recommendation seems sensible enough, not many readers feel inclined to accept it.

Of course, Patrick may have had some other purpose in writing his memo. For example, he may have wanted to inflame the personnel manager into responding rashly so that he or she would get in trouble with the boss. For that purpose, his memo might have worked very well. But even in that case, the basic points of this demonstration would remain unchanged: People react to what they read on a moment-by-moment basis, and their reactions at each moment shape their reactions to what follows.

The preceding example underscores the importance of taking a reader-centered approach to writing, one in which you think constantly about your readers. Each reader creates his or her own response to your communications. To write effectively, you must predict these responses and design your messages accordingly. You will be best able to do this if you keep your readers—their needs and goals, feelings and situations, preferences and responsibilities—foremost in mind throughout your work on each communication.

SIX READER-CENTERED STRATEGIES YOU CAN BEGIN USING NOW

Later in this book, you will find detailed advice about using your knowledge of your readers to create effective communications that help and persuade them in even the most novel situations. However, the good news is that, despite the many ways readers' goals, concerns, feelings, and likely responses can vary from situation to situation, readers approach most on-the-job communications with several widely shared aims and preferences. The following list briefly introduces several reader-centered strategies you can begin using immediately that address these common aims and preferences. All are discussed more fully in later chapters. Many are illustrated in the web page and memo shown in Figures 1.3 and 1.4.

- **Begin by identifying the specific task your readers will perform using your communication.** Develop enough detail to understand how they will proceed. If the task is a proposal, what criteria will they apply? If the task is to perform a procedure, what level of detail will the readers need concerning the steps to be performed?
- **Identify the readers' attitudes that are relevant to the communication.** Imagine how much more effectively Patrick could have written the subject line of his e-mail—as well as its contents—if he had thought about the way the personnel manager's irritation might shape the manager's response to his recommendation.
- **Help your readers quickly find the information needed to perform tasks.** State your main points at the beginning rather than the middle or end of your communications. Use headings, topic sentences, and lists to guide your readers to the specific information they want to locate. Eliminate irrelevant information that can clog the path to what your readers want.
- **Use an easy-to-read writing style.** The most basic way you can make a communication useful to your readers is to ensure that the readers can readily understand what the communication is saying. Trim away unnecessary words. Use the active voice rather than the passive. Put action in verbs rather than in other parts of speech. In an early and important test of the effectiveness of these three techniques, researchers James Suchan and Robert Colucci (1989) created two versions of the same report. The high-impact version used the techniques. The low-impact one did not. The high-impact version reduced reading time by 22 percent, and tests showed that readers understood it better.
- **Highlight the points your readers will find to be persuasive.** Present the information your readers will find more persuasive before you present the information they will find to be less persuasive. Show how taking the actions you advocate will enable them to achieve their own goals. When selecting evidence to support your arguments, look specifically for items you know your readers will find to be credible and compelling.
- **Talk with your readers.** Before you begin work on a report or set of instructions, ask your readers, "What do you want in this communication? How will you use the information it presents?" When planning the communication, share your thoughts or outline, asking for their reactions. After you've completed a first draft, ask for their feedback.

If you cannot speak directly with your readers, talk with them imaginatively by creating an imaginary movie of your reader in the act of reading your communication (Elbow, 1998). In your movie, it's crucial that you talk *with* your readers, not *to* them. When you talk *to* other people, you are like an actor reciting a speech: You stick to your script without regard to the way your audience is responding. When you talk *with* other people, you adjust your statements to fit their reactions. Does someone furrow his brow in puzzlement? You explain the point more fully. Does someone twist her hands impatiently? You abbreviate your message.

By creating a mental movie of her readers, Marti, a mechanical engineer, gradually refined one step in a set of instructions so that it met her readers' needs. Here is her first draft.

Marti's first draft

> 15. Check the reading on Gauge E.

While watching her readers' reactions in her mental movie, Marti saw them ask, "What should the reading be?" So she answered their question.

Marti's second draft

> 15. Determine whether the reading on Gauge E matches the appropriate value listed in the Table of Values.

In her mental movie, Marti then imagined her readers asking, "Where is the Table of Values?" She revised again.

Marti's third draft

> 15. Determine whether the reading on Gauge E matches the appropriate value listed in the Table of Values (page 38).

Finally, Marti imagined her reader discovering in the Table of Values that the reading on Gauge E was wrong. Her imaginary readers asked, "What should we do now?" Marti added another sentence.

Marti's addition

> *If the value does not match, follow the procedure for correcting imbalances (page 27).*

COMMUNICATING ETHICALLY

So far, this chapter has introduced concepts and strategies that will serve as the springboard from which you can understand and apply the rest of this book's advice for creating effective communications at work. Because effective communications create change—they make things happen—they also have an important ethical dimension. When things happen, people are affected. Their happiness and even their health and well-being may be impacted. For example, you may write a proposal for a new product that can cause physical harm—at least if not handled properly. You may prepare a report that managers will use to make other people's jobs significantly more—or less—desirable, or even to determine whether these people will continue to be employed. Ethical considerations can also apply to impacts on people outside your employer's organization, even on future generations and on the environment.

Because technical communications have an important ethical dimension, in addition to providing advice for creating useful, persuasive communications, this book also provides advice for creating ethical ones.

At work, you have three major sources for guidance:

- **Professionals in your specialty have probably developed a code of ethics.** The Center for Business Ethics has collected hundreds of codes of ethics that corporations have adopted as their official policies. For a link, go to your English CourseMate at www.cengagebrain.com.
- **Your employer may also have developed an ethics code.** Some companies have even hired professional ethics specialists whom employees may consult.
- **Your own sense of values, the ones you developed in your home, community, and studies is also crucial.**

© Google, Inc.; Staff/MCT/Newscom; Courtesy of International Business Machines Corporation; Mark Fairhurst/UPPA/Photoshot/Newscom; Courtesy of Exxon Mobil Corporation

These corporations are among the thousands worldwide that have adopted ethics codes to guide employee and company conduct.

A basic challenge facing anyone addressing ethical issues in workplace settings is that different people have different values and, consequently, different views of the right actions to take in various situations. This fact should not surprise you. For thousands of years, philosophers have offered various incompatible ethical systems. They have yet to reach agreement. Moreover, people from different cultural backgrounds and different nations adhere to different values. On your own campus, you surely know other students with whom you disagree on ethical issues.

The same thing happens in the workplace. Consequently, this book won't tell you what your values ought to be. Instead, it seeks to help you act in accordance with your own values. Toward that end, it seeks to enhance your sensitivity to often subtle and difficult-to-detect ethical implications so that you don't inadvertently end up preparing a communication that affects people in ways you wish it hadn't. This book also presents some ways of looking at the ethical aspects of various writing decisions—such as the way you use colors in graphs—that you may not have considered before. Ultimately, however, the book's goals are to help you communicate in ways that, after careful consideration, you believe to be ethical and to enable you to build the communication expertise needed to influence others when you want to raise ethical questions.

LEARN MORE To learn strategies for recognizing and addressing the ethical issues that arise on the job, read the Ethics Guidelines included in most other chapters.

HOW TO GAIN THE MOST FROM THIS BOOK

If writing at work is as different from writing in school as this chapter has described, how do college graduates learn to do it? How can *you* learn to do it?

By following students from their final years of college through their early years as employees, researchers have learned that new college graduates learn this new kind of writing by receiving advice *while they are writing*—from a supervisor, manager, or other experienced employees. That is, they learn the same way people learn to swim, ride a bike, or do long division: *by doing it* with guidance from someone who already knows how it's done.

Your technical communication instructor will provide you with an invaluable head start toward mastering the writing skills needed in your career by providing you with the same kind of mentoring. This book's goal is to support your instructor in that effort.

In the preceding sentence, the word "support" is crucial. Like your instructor, the book will explain and illustrate strategies and techniques for writing effectively at work. But your instructor may refine the book's advice based on his or her knowledge of the writing done in the careers you might pursue. Almost certainly, your instructor will ask you to read the book's chapters out of sequence. Because people learn to write *by writing*, your instructor will organize your course around writing projects rather than on the order of the chapters in the book. Based on his or her knowledge of writing practices in the career you have chosen, your instructor may even contradict something the book says.

And throughout your writing course, your instructor will give you something a book simply cannot: the feedback on your writing that is so important to your learning to write in a new way.

In sum, you'll get the most out of this book if you listen carefully to the ways your instructor asks you to use it.

In your effort to learn how to write effectively in your career, I wish you good luck and great success.

USE WHAT YOU'VE LEARNED

For additional ways to use what you've learned, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Interview someone who holds the kind of job you might like to have. Ask about the types of communications the person writes, the readers he or she addresses, the writing process and technology the person uses, and the amount of time the person spends writing. Supplement these questions with any others that will help you understand how writing fits into this person's work. According to your instructor's directions, bring either notes or a one-page report to class.
2. Find a communication written by someone who has the kind of job you want, perhaps by asking a friend, family member, or your own employer. Explain the communication's purposes from the point of view of both the writer and readers. Describe some of the writing strategies the writer has used to achieve these purposes.

EXPLORE ONLINE

Explore websites created by two organizations in the same business (airlines, computers, museums, etc.) or two employers for whom you might like to work. Compare the strategies used to make the sites useful and persuasive. Note ways their usefulness and persuasiveness might be increased.

COLLABORATE WITH YOUR CLASSMATES

Working with another student, rewrite the e-mail message by Patrick (Figure 1.6, page 15) so that it will be more likely to persuade the personnel manager to follow Patrick's recommendation. Assume Patrick knows the manager's clerks are miscopying because he has examined the time sheets, time tickets, and computer files associated with thirty-seven incorrect payroll checks; in thirty-five cases, the clerks made the errors. Take into account the way you expect the personnel manager to react upon finding an e-mail from Patrick in his or her in-box. Make sure that the first sentence of your revision addresses a person in that frame of mind and that your other sentences lead effectively from there to the last sentence, which you should leave unchanged.

APPLY YOUR ETHICS

As a first step in bringing your personal values to your on-the-job communication, list those values that you think will matter most in your career. Explain situations in which you think it may be especially important for you to be guided by them.

CASE Help Mickey Chelini Select the Right Forklift Truck

It has been two weeks since you received this assignment from your boss, Mickey Chelini, who is the Production Engineer at the manufacturing plant that employs you. "We've been having more trouble with one of our forklift trucks," he explained. You are not surprised. Some of those jalopies have been breaking down regularly for years. "And Ballinger's finally decided to replace one of them," Mickey continued. Ballinger is Mickey's boss and the top executive at the plant. His title is Plant Manager.

"What finally happened to make him decide that?" you asked. "I thought he was going to keep trying to repair those wrecks forever."

"Actually, he wants to replace one of the newer ones that we bought just two years ago," Mickey replied. "That particular forklift was manufactured by a company that has since gone bankrupt. Ballinger's afraid we won't be able to get replacement parts. I think he's right."

"Hmm," you commented.

"Anyway," Mickey said, "Ballinger wants to be sure he spends the company's money more wisely this time. He's done a little investigation himself and has narrowed the choice to two machines. He's asked me to figure out which one is the best choice."

You could see what was coming. You've had a hundred assignments like this before from Mickey.

"I'd like you to pull together all the relevant information for me. Don't make any recommendation yourself; just give me all the information I need to make my recommendation. Have it to me in two weeks."

"Will do," you said, as you started to think about how you could squeeze this assignment into your already tight schedule.

YOUR ASSIGNMENT

It's now two weeks later. You've gathered the information given below in the "Notes on Forklifts." First, plan your final report by performing the following activities:

- List the specific questions Mickey will want your report to answer. Note: Your boss does not want you to include a recommendation in your report.
- Underline the facts in your notes that you would include in your report; put an asterisk by those you would emphasize.
- Decide how you would organize the report.
- Explain which techniques from the list on pages 16–17 you would use when writing this report. What other things would you do to assist your readers?

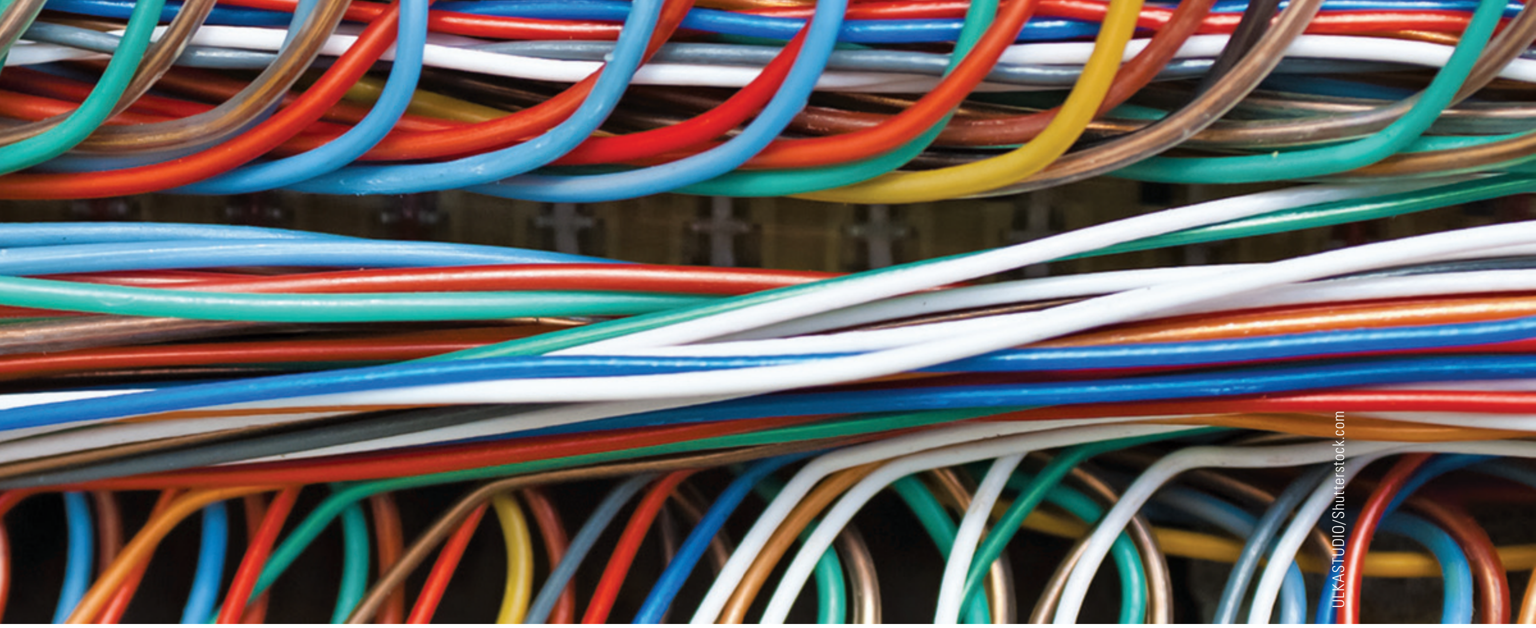
Second, imagine that you have been promoted to Mickey's job (Production Engineer). Tell how you would write the report that you would send to Ballinger about the purchase of a new forklift. It must contain your recommendation.

NOTES ON FORKLIFTS

Present Forklift. The present forklift, which is red, moves raw material from the loading dock to the beginning of the production line and takes finished products from the Packaging Department back to the loading dock. When it moves raw materials, the forklift hoists pallets weighing 600 pounds onto a platform 8 feet high, so that the raw materials can be emptied into a hopper. When transporting finished products, the forklift picks up and delivers pallets weighing 200 pounds at ground level. The forklift moves between stations at 10 mph, although some improvements in the production line will increase that rate to 15 mph in the next two months. The present forklift is easy to operate. No injuries and very little damage have been associated with its use.

Electric Forklift. The electric forklift carries loads of up to 1,000 pounds at speeds up to 30 mph. Although the electric forklift can hoist materials only 6 feet high, a 2-foot ramp could be built beneath the hopper platform in three days (perhaps over a long weekend, when the plant is closed). During construction of the ramp, production would have to stop. The ramp would cost $1,600. The electric forklift costs $37,250, and a special battery charger costs $1,500 more. The forklift would use about $2,000 worth of electricity each year. Preventive maintenance costs would be about $700 per year, and repair costs would be about $800 per year. While operating, the electric forklift emits no harmful fumes. Parts are available from a warehouse 500 miles away. They are ordered by phone and delivered the next day. The electric forklift has a good operating record, with very little damage to goods and with no injuries at all. It comes in blue and red.

Gasoline Forklift. The gasoline forklift is green and carries loads of up to 1 ton as rapidly as 40 mph. It can hoist materials 12 feet high. Because this forklift is larger than the one presently being used, the company would have to widen a doorway in the cement wall separating the Packaging Department from the loading dock. This alteration would cost $1,800 and would stop production for two days. The gasoline forklift costs $79,000 but needs no auxiliary equipment. However, under regulations established by the Occupational Safety and Health Administration, the company would have to install a ventilation fan to carry the exhaust fumes away from the hopper area. The fan costs $1,870. The gasoline forklift would require about $1,800 of fuel per year. Preventive maintenance would run an additional $3,400 per year, and repairs would cost about $2,600 per year. Repair parts are available from the factory, which is 17 miles from our plant. Other owners of this forklift have incurred no damage or injuries during its operation.



2 | Overview of the Reader-Centered Communication Process: Obtaining a Job

WEB To read additional information, see more examples, and access links related to this chapter, go to your English CourseMate at *www.cengagebrain.com.*

As explained in Chapter 1, this book aims to support your instructor in helping you learn a reader-centered approach to writing that you can use successfully in any of the many and varied communication situations you will encounter in your career.

This chapter has the twin purposes of providing an overview of the reader-centered writing process—the rest of the book provides details—and of helping you write a résumé and job application letter that grab employers' attention. To fit these two purposes together, the chapter shows how you can take a reader-centered approach in the various stages of your work on your résumé and letter, from initial planning to final polishing.

The résumé and letter are ideal subjects for introducing you to the reader-centered process because they illustrate with special clarity the point that the success of your work-related writing depends on your reader's response to them. No matter how good you or anyone else believes your résumé and letter to be, they succeed only if an employer responds by inviting you for an interview or offering you an internship or job. Thus, in addition to helping you use a reader-centered approach to your own on-the-job writing, this chapter will help you see *why* it is important to do so.

HOW TO GAIN THE MOST FROM THIS CHAPTER

While reading this chapter and discussing it in class, you could focus solely on the advice for securing employment. Certainly, pay attention to that advice and put it to good use. But if that's all you do, you will miss the advice that will have a more lasting value for you. You should also notice how all of the advice about writing for a job emerges from a simple two-step process:

- You first learn about your reader.
- You then repeatedly use the knowledge you gain to choose the most effective way to handle every detail of your communication.

The ability to use these two reader-centered steps is a skill—a powerful one—you can use with confidence when preparing any work-related communication in your class and career. To learn *all* that this chapter and your instructor have to teach, make it your goal to learn to do all of the following:

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Write an effective résumé.
2. Write an effective job application letter.
3. Explain how detailed knowledge of your reader helps you create a résumé and job application letter.
4. Describe changes you might need to make in your résumé and application letters when applying for a position in a culture different from your own.
5. Conduct your job search ethically.

HOW TO WRITE AN EFFECTIVE RÉSUMÉ

If you've prepared a résumé before, you have probably seen much generic advice about the topics to include (e.g., education), ways to write about them (e.g., give dates), and so on. This general advice is good, but insufficient. You can do better than that.

When reading résumés, employers are not looking for people with *general* qualifications. They want to hire persons who have the *specific* abilities required for the *specific* jobs they have open. To make your résumé stand out, learn what those abilities are and then create a résumé that emphasizes that you have them.

Guideline 1 | Define your résumé's objectives by learning what you reader wants

The way to begin is to define precisely what you want your résumé to do. This definition will assist you in every other step of writing. Typically, people say that

iStockphoto.com/Yuri_Arcurs

Effective résumés are targeted to specific employers who are seeking employees with specific qualifications.

TRY THIS Haven't decided on your career yet? Go to a website that offers a free service or test for people trying to find careers they would like. See if it suggests any careers you hadn't thought of. For links to such websites, go to Chapter 2 in your English CourseMate at ***www.cengagebrain.com.***

their résumé's purpose is to get them an interview or a job offer. While this description is certainly true, it is not very helpful as a guide for determining how to write a résumé that appeals to employers. It imagines the résumé from the writer's perspective—*it is writer-centered*—rather than from the reader's perspective.

Taking the more productive *reader-centered approach*, you begin by asking questions: "Who, exactly, is the person who will read *my* résumé? What does this person want? and How can I help him or her find it?" So, let's focus on this person. We know that this person has a goal—to hire someone to perform a specific job. He or she wants to identify someone who has the knowledge and ability to do that work well. To succeed, your résumé must help that reader in two key ways. It must enable the reader to find the qualifications you have that are relevant to the job opening. And, it must persuade the reader that your qualifications are superbly well matched to those he or she is seeking. The more specifically you know what qualifications your reader is looking for, the better prepared you will be to write a résumé that achieves these reader-centered objectives.

Identify Employers You'd Like to Work for

To know what an employer wants, you must first know who the employer is. If you haven't identified the jobs, internships, or co-op positions you'd like, that's your first step. You might talk with instructors in your major and with staff at the college placement office. You might also network by asking family members, friends, former employers, and others to help you spot opportunities. As you speak with each person, ask him or her to suggest others who can assist. Other good sources for leads are newspapers, professional organizations, and professional publications directed to people who have graduated in your major. You can also use the web, consulting such sites as CareerOneStop (www.careeronestop.org), commercial boards such as Monster (www.monster.com), and state and local job listings. If you don't know what kind of job you want, there are resources on the web and, most likely, at your college that can help.

Learn What the Employer Wants

Having identified employers to whom you will apply, determine as precisely as you can the specific qualifications they are seeking in a person they wish to hire for the kind of position you want. It can be helpful to begin (but not end) by considering the three general categories of qualifications desired by all employers of college graduates:

WHAT EMPLOYERS SEEK IN NEW EMPLOYEES

- **Technical expertise.** Employers want to hire people who can perform their jobs adeptly with a minimum of on-the-job training.
- **Supporting abilities.** Most jobs require a wide range of abilities beyond the purely technical ones of your degree or specialty. These often include interpersonal, time management, and project management skills, among others. They almost always include communication skills.
- **Favorable personal qualities.** Employers want to hire motivated, self-directed, and responsible individuals. They also want people who will work well with their other employees as well as with customers, vendors, and others outside the organization.

Of course, for any particular job, employers seek specific technical know-how, supporting abilities, and personal attributes. Instead of asking, "Does this applicant have technical expertise?" an employer will ask, "Can this person analyze water samples for hazardous substances?" "Write computer programs in Linux?" "Design a bridge?" Your task is to find out and list the precise set of technical know-how, supporting abilities, and personal attributes sought by the employers to whom you are applying. See Figure 2.1.

To identify these specific qualifications, learn as much as you can about the daily work of people in the position you would like to hold. Interview someone who holds such a position, talk with instructors in your major, and read materials about careers at your library or campus employment center. If you have an advertisement or job description from the employer to whom you are applying, study it carefully. As you identify qualifications the employer wants, put them in a list. The longer and more detailed your list, the better prepared you will be to write a résumé that achieves its persuasive objective, which is to demonstrate that you have the knowledge, skills, and personal qualities that employers are seeking.

LEARN MORE For detailed advice about conducting interview and library research, turn to Chapter 7, pages 165 and 169.

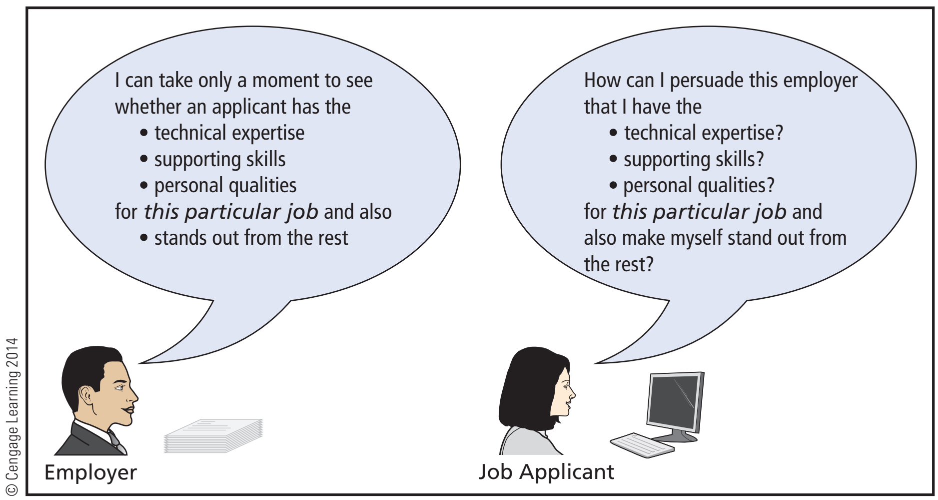


FIGURE 2.1

To Write an Effective Job Application, You Need to Match What You Communicate About Yourself with What the Employer Is Looking for

Determine How Your Readers Will Look for What They Want

When defining the objectives of a communication, remember that people read in different ways in different circumstances, sometimes poring over a page, sometimes skimming through quickly, for instance. Different reading styles are best supported by different writing strategies. To write effectively, you must design your communication to support the particular reading process your readers will use.

Résumés, like many other kinds of workplace communications, typically have several types of readers who will each read in a somewhat different way. Located at three different stages of the hiring process, all will compare the information in your résumé against the requirements of the job and against the qualifications of the other applicants. But at each stage they perform this comparison differently.

Three ways employers read résumés

- **Initial screening.** Many employers receive hundreds, even thousands, of applications a week. One person may be charged with scanning quite quickly through this deluge, hoping to spot promising candidates. Often such initial readers are employees in a personnel office, not specialists in the area where you are seeking a position. They may spend less than a minute on each résumé. Unless they can rapidly spot clear, relevant information about your qualifications, they will set your résumé aside and pick up the next one. To reduce this screening workload, an increasing number of employers first submit all résumés to a computer, often by having applicants apply online. Only those that meet predefined criteria are read by a human.
- **Detailed examination of the most promising applications.** Résumés that pass the initial screening are forwarded to managers and others in the department that wishes to hire a new employee. These readers know exactly what qualifications they desire, and they will examine your résumé for those specific skills and abilities.
- **Preparation for in-depth interviewing.** Applicants whose résumés are persuasive to second-stage readers are invited for interviews. Their résumés are usually read with great care at this stage. Often managers and others will use the résumé as the basis for questions to ask during the interview.

The differing needs of the readers at these three stages mean that you must address the challenge of preparing a résumé that satisfies a first-stage reader's need to find information quickly while also meeting the second- and third-stage readers' need for a substantial amount of specific detail about your qualifications.

Guideline 2 | Plan your résumé by thinking creatively about your qualifications, deciding how long your résumé should be, and choosing the type of résumé you will prepare

Your reader-centered understanding of your résumé's objectives—of who, exactly, your reader is and how, specifically, it must help and persuade this person—will provide a dependable guide throughout the rest of your work on your résumé, beginning with your most basic plans about its content, length, and overall structure.

Think Creatively About the Ways Your Knowledge and Experience Match the Qualifications the Employer Wants

To begin, your knowledge of the particular qualifications the employer is looking for will help you decide what to say specifically about your education, experience, and activities. Of course, you should say where you go to school and what your major is. Your understanding of the employer's focus will, in addition, help you identify the courses and projects to highlight: the ones that most closely match the employer's needs. So that you don't miss any, you might begin with the list you created when detailing the qualifications desired by the employer. Next to each one, write the course, activity, previous job, or other experience through which you gained or demonstrated the desired knowledge or ability. You might list your accomplishments and areas of knowledge, noting the connection each item may have with a qualification for the job you want. Talking with someone who holds the job now could spark additional ideas. Later sections in this chapter suggest some other possibilities. You may later decide not to include some of the ideas you have generated, but don't hold back on exploring possibilities now.

Decide How Long Your Résumé Should Be

In planning, people often ask, "How long should my résumé be?" The answer is that it should be as short as possible while still presenting the facts employers will find most persuasive. For most undergraduates, this is one page. However, some undergraduates have extensive qualifications that justify a second page. Many experienced workers do as well. If your résumé runs past one page by a small amount, redesign your layout, edit your content, or delete something to make it fit on a single page.

Choose the Type of Résumé You Will Prepare

When planning how to organize your résumé, you have two major choices:

- **Experiential résumé.** In an experiential résumé, you organize information about yourself around your experiences, using headings such as "Education," "Employment," and "Activities." Under these headings, you describe your experiences in ways that demonstrate that you possess the qualifications the employers want. An experiential résumé is the best choice for most college students and persons new to their careers. Figures 2.2 and 2.3 (pages 31 and 32) show examples of an experiential résumé.
- **Skills résumé.** In a skills résumé, you create key sections around your abilities and accomplishments, using such headings as "Technical Abilities," "Management Experience," and "Communication Skills." Later, you list the college you attended and jobs you've held. Skills résumés work best for people with enough professional experience to be able to list several on-the-job responsibilities and accomplishments in each of several categories. Figure 2.4 (page 36) shows a skills résumé.

Guideline 3 | Draft your résumé's text to highlight the qualifications that will most appeal to the employer

It's one thing to identify the things you should say in your résumé. It is quite another to figure out how to say them persuasively. On the one hand, your résumé needs to make your qualifications clear by supplying specific, relevant details. On the other hand, employers want to find information about you quickly. No extra words. No long explanations.

The following sections provide advice about the writing style to use and about ways to write persuasively about the major topics you are likely to include. The goal in each case is for you to write your résumé in a way that makes it easiest for your particular reader to see how well your knowledge and experience match the specific qualification he or she is looking for, the ones you identified when defining your résumé's objectives.

Writing Style for Résumés

The best résumés, the ones to which employers respond most favorably, use a crisp, energetic style that conveys many facts with few words.

- **Write concisely**. Typically, résumés contain lists of sentence fragments and phrases, not full sentences. Eliminate every word that you can without losing essential information.

Wordy	Conducted an analysis of the strength of the load-bearing parts
Concise	Analyzed strength of load-bearing parts

- **Be specific.** Employers find generalities to be ambiguous and unimpressive. Give precise details.

General	Proficient on the computer
Specific	Program in Linux, SQL, CAD, and php
General	Reduced breakage on the assembly line
Specific	Reduced breakage on the assembly line by 17%

- **Choose the correct verb tenses.** Use the past tense for activities completed. Use the present tense for those you continue to perform.

Completed activity	Designed automobile suspensions
Continuing activity	Design aircraft landing gear

By convention, the word "I" is used in only one place in résumés: the professional objective.

Name and Contact Information

Help your readers locate your résumé in a stack of applications by placing your name prominently at the top of the page. Enable them to contact you quickly for an interview or with a job offer by including your postal address, e-mail address, and phone number. If you'll be living at another address during the summer or other part of the year, give the relevant information.

Objective

By naming the job you want, you help yourself focus the rest of your résumé on providing evidence that you possess the knowledge and experience needed to do excellent work in the job you've named. You help your reader identify the criteria to apply when reading your résumé: Do you have the qualifications required for the position you identified?

By taking a reader-centered approach to writing your objective, you will gain a decided advantage over most other applicants for the same position. Many job seekers describe the position they want by telling what they will gain if they have it. They will learn. They will have a chance to advance. And so on. But employers aren't looking for people to give things to. They want employees who will help them achieve their objectives. When writing your objective, take the reader-centered approach of telling the employer what you will give, not what you would like to get. Here's a simple procedure for doing that:

1. **Identify the results sought by the department or unit in which you wish to work.** If you don't know what they are, ask a professor, talk with someone in the kind of job you want, or contact your campus employment center for assistance.
2. **State that your objective is to help an employer achieve those results.**

Howard, a senior in health studies, and Jena, a computer science major, used this process to improve the first drafts of their objectives. Their initial drafts read as follows:

> **Howard:** A position where I can extend my knowledge of nutrition and sports studies

> **Jena:** A position as a computer systems analyst in the field of software development with an innovative and growing company

Writer-centered vague objectives

When Howard and Jena considered their statements from their readers' perspective, they realized that they were merely stating what they wanted to gain from their jobs. They said nothing about how they would benefit their employers. Howard and Jena revised their objectives to read as follows:

> **Howard:** To develop nutrition and exercise programs that help athletes achieve peak performance

> **Jena:** To create software systems that control inventory, ordering, and billing

Reader-centered, results-oriented revisions

If you are applying for an internship, co-op, or summer job, tell what you will "help" or "assist" the employer to do.

> An internship helping design high-quality components for the electronics industry

Objective for internship

Some students ask whether they really need to include an objective statement. In fact, an objective may be unnecessary for people advanced enough in their careers to be able to begin with a summary of their qualifications and accomplishments, thereby clearly indicating the specific kind of job they are seeking. For people looking for an entry-level job, the objective is essential. As résumé expert Susan Ireland (2003) says, for a new college graduate to omit an objective is like saying, "Here's what I've done. Now tell me what I should do next." Employers are looking for applicants whose qualifications meet their needs. They are not trying to find jobs for applicants.

Education

Place your education section immediately after your identifying information and objective, unless you have had enough work experience to make the knowledge you gained at work more impressive to employers than the knowledge you gained in classes. Name your college, degree, and graduation date. If your grade point average is good, include it. If your average in your major is higher, give it. But don't stop there. Provide additional details about your education that employers will see as relevant to the job you want. Here are some examples.

You can highlight any of these credentials by giving it a separate heading (for example, "honors" or "internship").

FACTS TO HIGHLIGHT ABOUT YOUR EDUCATION

- Advanced courses directly relevant to the job you want (give titles, not course numbers)
- Courses outside your major that broaden the range of abilities you would bring to an employer
- Internships, co-op assignments, or other on-the-job academic experiences
- Special projects, such as a thesis or a design project in an advanced course
- Academic honors and scholarships
- Study abroad
- Training programs provided by employers

The résumés of Jeannie Ryan (Figure 2.2) and Ramón Perez (Figure 2.3) show how two very different college seniors elaborated on the ways their educations qualify them for the jobs they are seeking.

Work Experience

When drafting your work experience section, list the employers, their cities, your job titles, and your employment dates. Then present facts about your work that will impress employers.

FACTS TO HIGHLIGHT ABOUT YOUR WORK EXPERIENCE

- **Your accomplishments.** Describe projects you worked on, problems you addressed, goals you pursued, products you designed, and reports you helped write. Where possible, emphasize specific results—number of dollars saved, additional units produced, or extra customers served.
- **Knowledge gained**. Be resourceful in highlighting things you learned that increased your ability to contribute to your future employer. Realizing that her duties of stacking ice cream packages neatly in supermarket freezers might not seem relevant to a job in marketing, Jeannie describes the insight she gained in that job: "Learned to see consumer marketing from the perspectives of both the manufacturer and the retailer" (Figure 2.1).
- **Responsibilities given**. If you supervised others, say how many. If you controlled a budget, say how large it was. Employers will be impressed that others have entrusted you with significant responsibility.

Jeannie Ryan

Present Address
325 Foxfire Drive, Apt 214
Denver, Colorado 70962
(303) 532-1401

After May 29, 2013
85 Deitrich Court
Flint, Colorado 73055
(303) 344-7329

ryanja@acs.udenver.edu

Objective To conduct market research in a full-service marketing firm with clients in the electronics industry

Education **B.S. in Marketing**, Minor in Computer Science, University of Denver, May 2013

Specialized Courses
- Analytical Methods for Marketing
- Strategic Marketing Management
- Stochastics
- Programming Computer Games
- Architecture of Small Computers
- Managing Data Sets

Project for Real Client In Advanced Marketing, we used a telephone survey and focus groups to estimate the potential market for a new hand-held learning game for pre-school children.

Work Experience

Interim Manager, Stan's Electronics, Redvale, Colorado, Summer 2012
- Collaborated with buyer to project product sales and advertising
- Sales increased 15% over the previous year

Sales Intern, Ali Ice Cream Company, Wilke, Colorado, Summer 2011
- Built backroom inventories, stocked cases, and secured endcap displays
- Learned to see consumer marketing from the perspectives of manufacturers and retailers

Tels Marquart, Inc., Redvale, Colorado, Summer 2007
- Receptionist
- Learned to work in a fast-paced office environment

Activities Synchronized Swim Team 2009–2013
- Vice President (Senior Year)
- Planned and directed an hour-long public program for this 50-member club

References
Harlan Betrus-Holloway, Professor, Marketing Department, University of Denver, 199 S. University Blvd., Denver, CO 80208, 303-871-3418, betrus-holloway@du.edu
Sheila Cortez, Professor, Computer Science Department, University of Denver, 199 S. University Blvd., Denver, CO 80208, 303-871-1547, scortez87@du.edu
Raphael Tedescue, President, Stan's Electronics, 1176 Sunnyside Avenue, Redvale, CO 79638, 303-461-9872, rtedescue@stans.com

FIGURE 2.2

Experiential Résumé

Jeannie tells where she can be reached before and after graduation.

She includes her e-mail address.

Jeannie states her specific career objective.

Jeannie emphasizes her thorough preparation by listing many relevant courses.

Jeannie describes a special course related to her career objective.

She provides specific details when highlighting her accomplishment.

She uses bullet lists throughout her résumé to enable her readers to scan her qualifications quickly.

Jeannie tells what she learned that would help her succeed in the job she desires.

Jeannie lists references who can verify her knowledge in each of her areas of expertise related to the job she wants.

WEB To see how Jeannie designed her résumé in a word-processing program, go to your English CourseMate at *www.cengagebrain.com.*

FIGURE 2.3

Résumé of a Person Who Completed College While Working Full-Time

Ramón Perez

16 Henry Street
Brooklyn, New York 11231
Work: (212) 374-7631
Home: (718) 563-2291

Professional Objective

A position as a systems analyst where I can use my knowledge of computer science and business to develop customized systems for financial institutions

Education

New York University, *B.S. in Computer Science*
December, 2013
GPA 3.4 overall; 3.7 in major

Computer classes include artificial intelligence and expert systems, computer security, data communication, deterministic systems, and stochastics

Business classes include accounting, banking, finance, and business law

Worked full-time while completing last half of course work

Honors

Dean's List three times
Golden Key National Honor Society

Related Work

Miller Health Spas, New York City, 2011–Present
Data Entry Clerk
- Helped convert to a new computerized accounting system
- Served on the team that wrote user documentation for the system
- Trained new employees
- Earned Employee of the Month Award twice

Meninger Bank, New York City, 2007–2011
Teller
- Performed all types of daily, night-deposit, and bank-by-mail transactions
- Proved the vault, ordered currency, and handled daily cash flow
- Learned how financial computer systems look from tellers' viewpoint

Activities

Juvenile Diabetes Foundation, 2010–Present
Volunteer
- Helped design a major fundraising event two years in a row
- Successfully solicited $2 million in contributions from sponsors

References

Professor Max Dobric
Computer Science Department
New York University
New York, NY 12234
(212) 998-1212
mdobric@nyu.edu

Professor R. Paul Berg
Finance Department
New York University
New York, NY 12234
(212) 998-7635
rpberg@nyu.edu

Wilson Meyerhoff
Senior Accountant
Miller Health Spas
3467 Broadway
New York, NY 12232
(212) 671-9007
wmeyerhoff@millerhealth.com

Ramón tells how he can be reached at work and home.

He tells what he will do to help the employer achieve its goals.

Ramón includes his excellent GPA.

He emphasizes his preparation in both computers and business.

Ramón highlights his achievement in completing his degree while working full-time.

He emphasizes his honors by giving them their own heading.

Ramón lists specific on-the-job accomplishments.

He establishes that he was recognized as a good employee.

Ramón notes substantial responsibilities he was assigned; he uses a technical term of the field ("proved the vault").

Ramón emphasizes a specific achievement, naming the amount of money involved.

He includes his references in his résumé.

WEB To see how Ramón designed his résumé in a word-processing program, go to your English CourseMate at *www.cengagebrain.com.*

When organizing and describing your work experience, follow these guidelines for achieving high impact.

ORGANIZING AND DESCRIBING YOUR WORK EXPERIENCE

- **List your most impressive job first.** If your most recent job is your most impressive, list your jobs in reverse chronological order. To highlight an older job, create a special heading for it, such as "Related Experience." Then describe less relevant jobs in a later section entitled "Other Experience."
- **Put your actions in verbs, not nouns.** Verbs portray you in action. Don't say you were responsible for the "analysis of test data" but that you "analyzed test data." Avoid such weak phrases as "responsibilities included" or "duties were."
- **Use strong verbs.** When choosing your verbs, choose specific, lively verbs, not vague, lifeless ones. Avoid saying simply that you "made conceptual engineering models." Say that you "designed" or "created" the models. Don't say that you "interacted with clients" but that you "responded to client concerns."
- **Use parallel constructions.** When making parallel statements, use a grammatically correct parallel construction. Nonparallel constructions slow reading and indicate a lack of writing skill.

NOT PARALLEL	PARALLEL
• Trained new employees	• Trained new employees
• Correspondence with customers	• Corresponded with customers
• Prepared loan forms	• Prepared loan forms

LEARN MORE For more information about putting actions in verbs, see Chapter 10, page 238.

Changing *correspondence* to *corresponded* makes it parallel with *trained* and *prepared.*

Activities

At the very least, participation in group activities indicates that you are a pleasant person who gets along with others. Beyond that, it may show that you have acquired certain abilities that are important in the job you want. Notice, for instance, how Jeannie Ryan describes one of her extracurricular activities in a way that emphasizes the managerial responsibilities she held (Figure 2.2).

Synchronized Swim Team 2009–2013
- Vice President (Senior Year)
- Planned and directed an hour-long public program for this 50-member club.

Emphasis on management responsibilities

Special Abilities

Let employers know about exceptional achievements and abilities of any sort, using such headings as "Foreign Languages" or "Certifications."

Interests

If you have interests such as golf or skiing that could help you build relationships with co-workers and clients, you may wish to mention them, although a separate section for interests is unnecessary if the information is provided in your activities section.

Personal Data

TRY THIS At a website that offers advice to job seekers, find a "model" résumé. Evaluate it in light of the reader-centered advice given in this chapter; what are its strengths and weaknesses?

In the United States, federal law prohibits employers from discriminating on the basis of sex, religion, color, age, or national origin. It also prohibits employers from inquiring about matters unrelated to the job for which a person has applied. For instance, employers cannot ask if you are married or plan to marry. Many job applicants welcome these restrictions because they consider such questions to be personal or irrelevant. On the other hand, federal law does not prohibit you from giving employers information of this sort if you think it will help to persuade them to hire you. If you include such information, place it at the end of your résumé, just before your references. It is almost certainly less impressive than what you say in the other sections.

References

Your choice of references can be one of the most important decisions you make about your résumé. The names and titles of the accomplished people who will speak favorably about you can create a very positive impression on an employer.

Who would make a good reference? Select persons who can speak about your ability to excel in the job for which you are applying. Professors are good choices, especially ones who taught you skills needed in the job for which you are applying. These may include professors from outside your major who teach career-related subjects. Your technical communication instructor is an example. Former employers can make excellent references, especially if the work was related to the position for which you have applied. Consider also advisers of campus organizations.

Avoid listing your parents and their friends, who (an employer might feel) are going to say nice things about you no matter what.

Be sure to provide titles, business addresses, phone numbers, and e-mail addresses. If one of your references has changed jobs so that his or her business address doesn't indicate how the person knows you, give the needed information in your cover letter: "My supervisor while at Sondid Company."

Obtain permission from the people you want to list as references so they aren't taken by surprise by a phone call. Give your résumé to your references so they can quickly review your qualifications when they receive an inquiry from an employer.

Let's be clear: The process of choosing, getting permission from, and effectively listing each reference requires some work. What about just saying, "References available upon request"? As the preceding discussion indicates, doing so prevents you from taking advantage of a great opportunity to impress the employer. The one situation in which it makes sense to omit the names of references is when you are already employed and don't want your current employer to know that you are looking for another job.

Drafting the Text for a Skills Résumé

A skills résumé has the same aims as an experiential one. The chief difference is that a skills résumé consolidates the presentation of your accomplishments and experience in a special section located near the beginning rather than weaving this information into your sections on education, work experience, and activities. Figure 2.4 shows an example.

For this special section, use a title that emphasizes its contents, such as "Skills" or "Skills and Achievements." Within the section, use subheadings that identify the major areas of ability and experience you would bring to an employer. Typical headings include "Technical," "Management," "Financial," and "Communication." However, the specific headings that will work best for you depend on what employers seek when recruiting people for the kind of job you want. For example, the headings in George Shriver's résumé (Figure 2.4) focus specifically on skills required of managers of technical communication departments.

Because you aggregate your skills and accomplishments in a special "Skills" section, the other sections of your skills résumé should be brief in order to avoid redundancy.

Guideline 4 | Design your résumé's appearance to support rapid reading, emphasize your qualifications, and look attractive

At work, good visual design is crucial to achieving communication goals. Nowhere is that more true than with a résumé, where design must support rapid reading, emphasize your most impressive qualifications, and look attractive. The résumés shown in this chapter achieve these objectives through a variety of methods you can use.

DESIGNING YOUR RÉSUMÉ'S VISUAL APPEARANCE

SHORT, INFORMATIVE HEADINGS

- Lists
- Bullets
- Italics
- Variety of type sizes

DIFFERENT TYPEFACES FOR HEADINGS THAN FOR TEXT

- White space to separate sections
- Ample margins (3/4" to 1")
- Visual balance
- Bold type for headings and key information

You will probably need to experiment with the design of your résumé to create a balanced, attractive page—one that visually emphasizes your qualifications and makes your résumé seem neither too packed nor too thin. To check visual balance, fold your résumé vertically. Both sides should have a substantial amount of type. Neither should be primarily blank.

Do not rely on a computer program's templates or wizards to design your résumé for you. They are generic packages that don't let you create the most favorable presentation of your qualifications. Each of the various designs shown in this chapter's examples are easy to create using the tables in Microsoft Word. For a tutorial on creating your résumé this way, see the Writer's Tutorial on Using Tables to Design a Résumé.

FIGURE 2.4

Skills Résumé

George names the goal that he will help the employer achieve.

In this skills résumé, George highlights his special qualifications in a separate section.

George uses the present tense in his "Management" and "Budgetary" entries because these are continuing duties; he uses the past tense in his entry about "Innovation" because it describes a completed project.

He describes a major accomplishment.

He provides information about the budget's size.

Because he presented information about substantial on-the-job responsibilities and achievements above, he does not elaborate on his jobs here.

Because he has substantial professional experience, George deemphasizes his college experiences by giving only basic facts.

George shows commitment to continued professional development.

WEB To see how George designed his résumé in a word-processing program, go to your English CourseMate at *www.cengagebrain.com.*

GEORGE SHRIVER

Objective

Senior management position where I can lead a technical communication department that assists a computer manufacturer in achieving high quality and productivity

Skills and Accomplishments

Management Supervise a team of six specialists who create print and on-line user documentation and also develop and deliver training programs for in-house use

Innovation Proposed and oversaw the development of an interactive videodisc training program for process engineers in a small factory that manufactures computer components

Technical Expertise Familiar with latest developments in both hardware and software. Programming knowledge of Visual C++, Java, and various proprietary computer languages

Budgetary Responsibility Manage an annual budget of nearly one-half million dollars

Employment History

Training Director, Saffron Computer Technology, Inc., Anaheim, CA, 2008–Present
Training Specialist, Calpon Software Systems, Deer Park, NJ, 2004–2008

Education

B.A. in Technical and Scientific Communication, Miami University (OH), 2004
Numerous professional development courses

Professional Societies

Society for Technical Communication (Chapter President, 2011)
American Society for Training and Development

Special Qualifications

Fluent in German | Trained in conflict resolution | Certified to teach CPR

References available upon request

1734 Everet Avenue Pasadena, CA 91101 (314) 417-7787
GShriver@nettlink.com

George lists additional qualifications that may interest an employer.

George creates a distinctive design for his résumé by putting his address and phone number at the bottom.

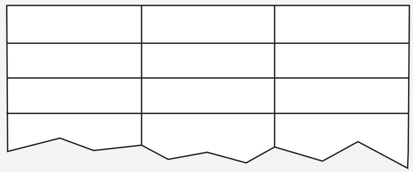
He names a leadership position in his professional society.

WRITER'S TUTORIAL

USING TABLES TO DESIGN A RÉSUMÉ

This tutorial tells how to design a multicolumn résumé with Word for Windows 2010. For instructions on using Word for Macintosh, go to Chapter 2 in your English CourseMate at www.cengagebrain.com. If you use a different word processor or get stuck, click on your program's **Help** menu for assistance. After learning the basic strategies described below, use your creativity to create a résumé that employers will find useful and persuasive.

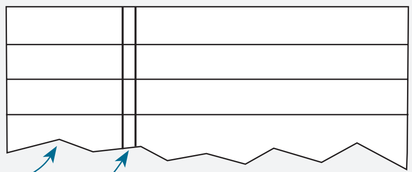
Make a Table to Serve as the Visual Framework for Your Résumé



© Cengage Learning

1. Create a new **Blank Document**.
2. Under the **Page Layout** tab, click on **Margins**.
3. From the dropdown menu, choose **Normal**.
4. Under the **Insert** tab, click on **Table**.
5. In the dropdown window, highlight 3 squares across and 7 down.
   - You can add or delete rows as necessary later.
6. Left click.

Adjust the Widths of the Columns



© Cengage Learning

1. Under the **View** menu, click on **Ruler**.
2. Move the cursor over the vertical line that separates the left and center columns so that the cursor changes to this:
3. Hold down the left mouse button.
4. Slide the vertical line to the left until it is at 1.5 inches on the ruler.
   - This narrow left column is for your topic headings.
5. Release the mouse button.
6. Using the same procedure, move the other vertical as far left as you can.
   - This thin column is a gutter between the heading and text columns.

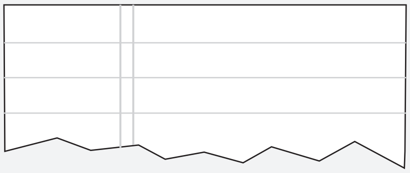
Hide the Table's Borders So They Won't Show When You Print Your Résumé

1. Highlight the entire table (but not anything else).
2. Under the **Table Tools** tab, click **Design**.
3. Click on the arrow next to **Borders**.

(continued)

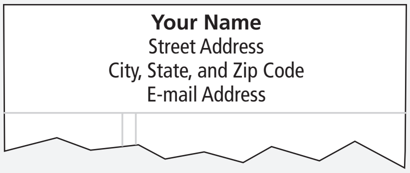
Learn More at the Website

To see tables used to make a variety of résumés, go to Chapter 2 in your English CourseMate at www.cengagebrain.com.



© Cengage Learning

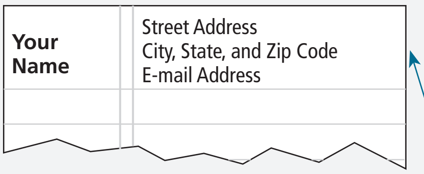
4. In the dropdown menu, click **No Border**.
5. If the borders disappear rather than changing to dashed lines, do the following:
   - Under the **Table Tools** tab, click **Layout**.
   - Click on **View Gridlines** at the left end of the ribbon.
   - The borders show as dashed lines on screen, but will not print.



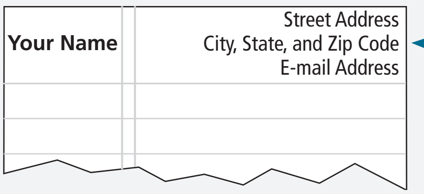
© Cengage Learning

Create a Heading for Your Résumé

1. Highlight all three columns in the table's top row.
2. Under **Table Tools** tab, click **Layout**.
3. Click **Merge Cells**.
4. Still in the **Layout** section, find the set of nine squares in the **Alignment** area.
5. Click on the center square ("Align Center").
6. In this wide cell, enter your name and contact information.
7. Change your name to a larger type and boldface.



© Cengage Learning

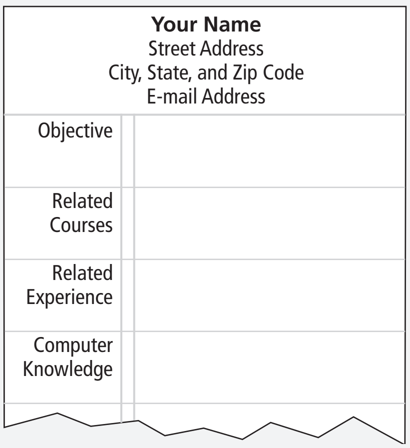


© Cengage Learning

Be Creative

This tutorial's purpose is to teach you to how to use a word-processing program to create an effective résumé, not to suggest that your résumé should look one particular way. Use your creativity.

For example, here are two alternative headings you can make if you don't merge the three cells in the first row. In the bottom example, grid lines for the gutter are moved to the right in the first row only.



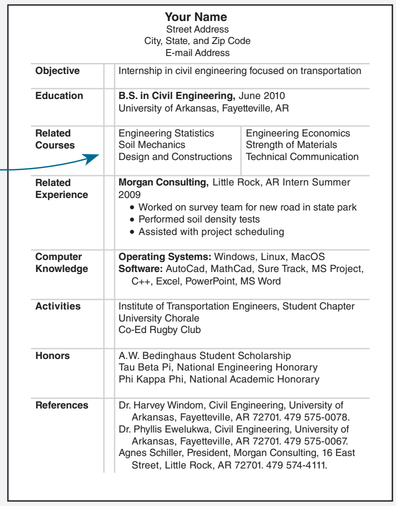
© Cengage Learning

Enter Your Topic Headings

1. In each cell in the left column, enter a topic heading.
   - If the heading has two words, put a **Return** between them.
   - If the column isn't wide enough for the longest word, enlarge the column slightly.
2. Change all the topic headings to bold type.
3. Align the headings on the right side of the column and the tops of their cells.
   - Highlight all the headings.
   - Under **Table Tools**, click **Layout**.
   - Among the **Alignment** squares, click on the top square in the right-hand column ("Align Top Right").

Enter Text

1. In the right-hand column of each row, enter the appropriate text.
2. At the end of each entry, type one **Return**.
   - The **Return** will create a blank line between this entry and the next.
3. If you want to enter multicolumn text in the right-hand column, do the following:
   - Put the cursor in the cell that you want to have columns.
   - Follow the procedure for making a table that is given on the first page of this tutorial.
4. Use bold type, italics, bullets, indentation, and other design elements to create an attractive, easy-to-read design that emphasizes your qualifications.



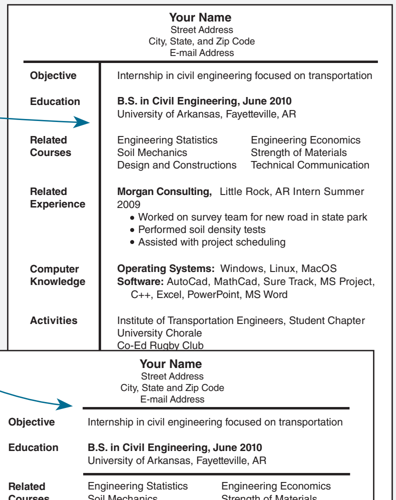
Your Name
Street Address
City, State, and Zip Code
E-mail Address

Objective	Internship in civil engineering focused on transportation	
Education	**B.S. in Civil Engineering,** June 2010 University of Arkansas, Fayetteville, AR	
Related Courses	Engineering Statistics Soil Mechanics Design and Constructions	Engineering Economics Strength of Materials Technical Communication
Related Experience	**Morgan Consulting,** Little Rock, AR Intern Summer 2009 • Worked on survey team for new road in state park • Performed soil density tests • Assisted with project scheduling	
Computer Knowledge	**Operating Systems:** Windows, Linux, MacOS **Software:** AutoCad, MathCad, Sure Track, MS Project, C++, Excel, PowerPoint, MS Word	
Activities	Institute of Transportation Engineers, Student Chapter University Chorale Co-Ed Rugby Club	
Honors	A.W. Bedinghaus Student Scholarship Tau Beta Pi, National Engineering Honorary Phi Kappa Phi, National Academic Honorary	
References	Dr. Harvey Windom, Civil Engineering, University of Arkansas, Fayetteville, AR 72701. 479 575-0078. Dr. Phyllis Ewelukwa, Civil Engineering, University of Arkansas, Fayetteville, AR 72701. 479 575-0067. Agnes Schiller, President, Morgan Consulting, 16 East Street, Little Rock, AR 72701. 479 574-4111.	

© Cengage Learning

Experiment with Your Design

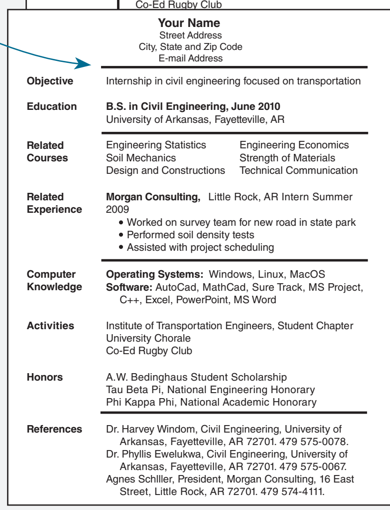
- Try using a different typeface for your name and the headings.
- Try aligning the headings on the left side of their column.
- Try adding a vertical rule (line).
  1. Highlight the text cells in the right-hand column.
  2. Under the **Table Tools** tab, select **Design**.
  3. Click on the arrow next to **Borders**.
  4. In the dropdown menu, click **Left Border**.
- Try adding one or more horizontal rules (lines).
  1. Highlight the cell that has your text.
  2. Under the **Table Tools** tab, select **Design**.
  3. Click on the arrow next to **Borders**.
  4. In the dropdown menu, click **Bottom Border**.



Your Name
Street Address
City, State, and Zip Code
E-mail Address

Objective	Internship in civil engineering focused on transportation	
Education	**B.S. in Civil Engineering, June 2010** University of Arkansas, Fayetteville, AR	
Related Courses	Engineering Statistics Soil Mechanics Design and Constructions	Engineering Economics Strength of Materials Technical Communication
Related Experience	**Morgan Consulting,** Little Rock, AR Intern Summer 2009 • Worked on survey team for new road in state park • Performed soil density tests • Assisted with project scheduling	
Computer Knowledge	**Operating Systems:** Windows, Linux, MacOS **Software:** AutoCad, MathCad, Sure Track, MS Project, C++, Excel, PowerPoint, MS Word	
Activities	Institute of Transportation Engineers, Student Chapter University Chorale Co-Ed Rugby Club	

© Cengage Learning



Your Name
Street Address
City, State and Zip Code
E-mail Address

Objective	Internship in civil engineering focused on transportation	
Education	**B.S. in Civil Engineering, June 2010** University of Arkansas, Fayetteville, AR	
Related Courses	Engineering Statistics Soil Mechanics Design and Constructions	Engineering Economics Strength of Materials Technical Communication
Related Experience	**Morgan Consulting,** Little Rock, AR Intern Summer 2009 • Worked on survey team for new road in state park • Performed soil density tests • Assisted with project scheduling	
Computer Knowledge	**Operating Systems:** Windows, Linux, MacOS **Software:** AutoCad, MathCad, Sure Track, MS Project, C++, Excel, PowerPoint, MS Word	
Activities	Institute of Transportation Engineers, Student Chapter University Chorale Co-Ed Rugby Club	
Honors	A.W. Bedinghaus Student Scholarship Tau Beta Pi, National Engineering Honorary Phi Kappa Phi, National Academic Honorary	
References	Dr. Harvey Windom, Civil Engineering, University of Arkansas, Fayetteville, AR 72701. 479 575-0078. Dr. Phyllis Ewelukwa, Civil Engineering, University of Arkansas, Fayetteville, AR 72701. 479 575-0067. Agnes Schiller, President, Morgan Consulting, 16 East Street, Little Rock, AR 72701. 479 574-4111.	

© Cengage Learning

Guideline 5 | Revise your résumé to increase its impact and to eliminate errors and inconsistencies

No communication you write needs a higher degree of polish than your résumé. Take plenty of time to review and revise it. Read it over carefully, trying to see it as the employer would. Show your draft to other people. Describe the job you want so they can read from your readers' perspective, imagining what the employer will look for and how the employer will respond to each feature. Good reviewers for your résumé include classmates, your writing instructor, and instructors in your major department.

Run your spellchecker again, then proofread carefully for errors that spell-checkers don't catch. Employers say repeatedly that even a single error in spelling or grammar can eliminate a résumé from further consideration. The programs some employers use for initial screening of résumés kick out those with errors.

Check, too, for consistency in the use of italics, boldface, periods, bullets, and abbreviations as well as in the format for dates and other parallel items. Finally, check for consistency in the vertical alignment of information that isn't flush against the margin.

Adapting Your Résumé for Different Employers

The reader-centered process emphasizes the importance of tailoring every feature of a communication to the needs and goals of your readers. Does this mean you need to write a new résumé for every job you apply for? Not necessarily. If you are seeking the same type of position with two employers and if both are seeking the same qualifications, the same résumé will probably work equally well with both. However, the greater the differences between the two positions, the more adjustments you should make. In addition to rewriting your objective, you may need to reshape the descriptions of your education, experience, and activities, as well as reorder your résumé's contents. Even when sending the same résumé to different organizations, tailor each application letter to one specific employer. See page 52.

WEB To see how one student adapted her résumé when applying for two different kinds of jobs, go to your English CourseMate at *www.cengagebrain.com.*

Figure 2.5 shows a Writer's Guide you can use as you prepare your résumé.

Online Job Applications and Electronic Résumés: Special Considerations

Increasingly, job applicants and employers are requesting, even requiring, that job applications be submitted digitally.

Online Employment Applications

Typically, employers who want applications submitted online use a website that has boxes or fields into which you enter your information–a field for education, another for employment, and so on. Typically, these sites ask for the same information that you would put in a résumé but without some of the flexibility you have when creating a résumé yourself.

FIGURE 2.5

Writer's Guide for Résumés

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
RÉSUMÉS

This Writer's Guide describes the basic elements of a résumé. Some of the elements would be organized differently in a chronological résumé than in a skills résumé; see pages 34–35.

Preliminary Research

_____ Determine as exactly as possible what the employer wants.
_____ Learn enough about the job and employer to tailor your résumé to them.
_____ Create a keyword list.

Name and Contact Information

_____ Enable employers to reach you by mail, phone, and e-mail.

Objective

_____ Tailor to the specific job you want.
_____ Emphasize what you will give rather than what you would like to get.

Education

_____ Tell your school, major, and date of graduation.
_____ Provide additional information that shows you are well-qualified for the job you want: academic honors and scholarships, specialized courses and projects, etc.
_____ Use headings such as "Honors" and "Related Courses" to highlight your qualifications.

Work Experience

_____ Identify each employer's name and city, plus your employment dates.
_____ Provide specific details about your previous jobs that highlight your qualifications: accomplishments, knowledge gained, equipment and programs used, responsibilities, etc.

Activities

_____ Describe your extracurricular and community activities in a way that shows you are qualified, responsible, and pleasant.

Interests

_____ Mention personal interests that will help the reader see you as a well-rounded and interesting person.

References

_____ List people who will be impressive to your readers.
_____ Include a mix of references who can speak about your performance in different contexts.
_____ Include title, business address, phone, and e-mail address for each reference.

FIGURE 2.5

(Continued)

Writer's Guide
RÉSUMÉS
(continued)

_____ Include only people who've given permission to be listed.
_____ Omit personal references (family, friends, etc.).

Prose

_____ Present the most impressive information first.
_____ Express the action in verbs, not nouns.
_____ Use strong verbs.
_____ Use parallel constructions.
_____ Omit irrelevant information.
_____ Use correct spelling, grammar, and punctuation.

Visual Design

_____ Look neat and attractive.
_____ Highlight the facts that will be most impressive to employers.
_____ Use headings, layout, and other design features to help readers to find specific facts quickly.

Ethics

_____ List only experiences, accomplishments, degrees, and job titles you've actually had.
_____ Avoid taking sole credit for things you did with a team.
_____ Avoid statements intended to mislead.

© Cengage Learning 2014

The most important advice about completing an online application form is to draft your text in a word-processing program, then review and proofread it carefully before pasting it into the employer's form.

Your online application will almost surely be read by a computer before it reaches a human being, so follow the advice given below for scannable résumés. To find applicants who might be invited for a job interview, employers ask the computer to search its database for résumés that have words—*keywords*—that the employers believe would appear in the résumés of good candidates for the opening they want to fill. The computer displays a list of the résumés with the most matches, called *hits*. These are the only résumés a person would read.

© Cengage Learning

To increase the number of hits your résumé will receive, make a list of keywords that employers are likely to ask their computers to look for. Here are some suggestions.

KEYWORDS FOR ONLINE JOB APPLICATIONS AND RÉSUMÉS

- Words in the employer's ad or job description
- All degrees, certifications, and licenses you've earned: B.A., B.S., R.N. (registered nurse), P.E. (professional engineer license), C.P.A. (certified public accountant)
- Advanced topics you've studied
- Computer programs and operating systems you've mastered: Excel, AutoCAD II, C11, Linux
- Specialized equipment and techniques you've used in school or at work: X-ray machine, PK/PD analysis, ladder-logic
- Job titles and the specialized tasks you performed
- Buzzwords in your field: client server, LAN, low-impact aerobics, TQM (total quality management)
- Names of professional societies to which you belong (including student chapters)
- Other qualifications an employer would desire: leadership, writing ability, interpersonal skills, and such

INCREASING THE NUMBER OF HITS YOUR APPLICATION OR RÉSUMÉ RECEIVES

- Put your keywords in nouns, even if your scannable résumé becomes wordy as a result.
- Be redundant. For instance, write "Used Excel spreadsheet program" rather than "Used spreadsheet program" or "Used Excel." You don't know which term an employer will use, and if both terms are used, you will have two hits.
- Proofread carefully. Computer programs don't catch words that are correctly spelled but are the wrong words (e.g., *in*, *on*, *two*, *too*, *to*).

Scannable Résumés

A scannable résumé is a printed résumé that will be read into a computer by an optical character reader (OCR). Employers who ask for scannable résumés are usually giving computers responsibility for the first reading. Therefore, follow all of the advice above concerning online applications. An additional challenge is that if the OCR misreads your résumé, some of your information will not be considered. To eliminate this risk, prepare and submit two versions of your résumé, including one that is suited for machine reading.

Ramón Perez prepared the scannable résumé, shown in Figure 2.6. This résumé is longer than Ramón's print résumé (Figure 2.3 on page 32), but computers don't care how much they read.

WEB For more on scannable résumés, go to your English CourseMate at *www.cengagebrain.com.*

FIGURE 2.6

Scannable Résumé

Throughout this résumé, Ramón uses 12-point Times, a typeface scanners can read without difficulty.

Ramón includes a list of keywords that don't appear elsewhere in his résumé.

To assure that a scanner could read his résumé, Ramón uses a single-column format rather than the two-column format he created for his print résumé.

He also eliminates the italics that appeared in his print résumé (see page 32).

To make his résumé easy for humans (as well as scanners) to read, Ramón relies on:

- capital letters
- bold type
- bullets
- blank lines

RAMÓN PEREZ
16 Henry Street
Brooklyn, New York 11231
Work: (212) 374-7631
Home: (718) 563-2291
rperez1989@gmail.com

KEYWORDS
Responsible, financial management, banking experience, accounting, auditing, high motivation, communication ability

PROFESSIONAL OBJECTIVE
A position as a systems analyst where I can use my knowledge of computer science and business to develop customized systems for financial institutions

EDUCATION
New York University
B.S. in Computer Science
December 2013
GPA 3.4 overall; 3.7 in major

Computer classes include artificial intelligence and expert systems, computer security, data communication, deterministic systems, and stochastics

Business classes include accounting, banking, finance, and business law

Worked full-time while completing last half of course work

HONORS
Dean's List three times
Golden Key National Honor Society

RELATED WORK
Miller Health Spas, New York City, 2011–Present
Data Entry Clerk
- Helped convert to a new computerized accounting system
- Served on the team that wrote user documentation for the system
- Trained new employees
- Earned Employee of the Month Award twice

Meninger Bank, New York City, 2008–2011
Teller
- Performed all types of daily, night-deposit, and bank-by-mail transactions
- Proved the vault, ordered currency, and handled daily cash flow
- Learned how financial computer systems look from tellers' viewpoint

ACTIVITIES
Juvenile Diabetes Foundation, 2010–Present
Volunteer
- Helped design a major fund-raising event two years in a row
- Successfully solicited two million dollars in contributions from sponsors

To be read by a scanner, Ramón's résumé requires two pages, but that is fine because scanners don't care how many pages they read. (Ramón uses a second page for his references)

PREPARING A SCANNABLE RÉSUMÉ

- Use a standard typeface (e.g., Times, Arial, or Helvetica).
- Avoid italics, underlining, and decorative elements such as vertical lines, borders, and shading. Boldface, all caps, and bullets are okay.
- Use blank lines and boldface headings to separate sections.
- Use a single column of text.
- Put your name at the top of every page, on a line of its own.
- Use laser printing or high-quality photocopying on white paper.
- Mail your résumé flat and without staples.

Résumés Submitted via E-mail

More than one-third of human resource managers prefer e-mailed résumés, according to a survey by the Society for Human Resource Managers. The following advice is based on suggestions by certified career coach Kirsten Dixson (2001).

- Follow the employer's directions about whether to include your résumé in an attachment or in the e-mail itself. In either case, follow the advice given above for online job applications because your résumé may first be read by a computer.
- If you are sending your résumé as an attachment, save it as a pdf file so that it will retain the appearance you designed regardless of the computer and printer used by the employer.
- If you are sending your résumé in the e-mail itself, design it the way you would design a scannable résumé. The formatting you create using your own e-mail program may create an eyesore in the employer's program.
- Write a simple subject line. For example: Résumé—Kelly Borowitz-Rioja: Civil Engineering Major.
- Use a straightforward e-mail address for yourself. Avoid cute names. If necessary, set up a free e-mail account at Hotmail, Google, or a similar service.

Web Page Résumés

Although most employers do not read web page résumés, a few do. If you create a résumé accessible via the World Wide Web, consider the following advice:

- **Provide a link to samples of your work and to fuller descriptions of your experiences and capabilities.**
- **Keep your design simple and uncluttered.** Don't let fancy embellishments distract employers' attention from your qualifications.
- **Include a "mail-to" link to your e-mail address.**
- **Post your online résumé only at secure services.** Some services have no security, making it possible for other people to alter your résumé.

WEB For additional advice about creating web page résumés, go to your English CourseMate at *www.cengagebrain.com.*

LEARN MORE Chapter 22 provides additional advice about creating effective web pages.

A READER-CENTERED APPROACH TO WRITING YOUR JOB APPLICATION LETTER

Your job application letter can be a powerfully persuasive part of the package you submit to employers. In response to a survey of 150 executives from the nation's thousand largest employers, 60 percent indicated that a job application letter is just as or more important than the résumé (Patterson, 1996).

Reflecting the approach of many employers, corporate recruiter Richard Berman reports that if a letter doesn't grab him, he merely gives the enclosed résumé a quick scan to see if it might turn his opinion around. In contrast, when he discovers a particularly effective letter, he goes immediately to colleagues to announce that he's "found a good one" (Patterson, 1996).

Guideline 1 | Define your letter's objectives by identifying the questions the employer wants it to answer, including "Why us?" and "What would you contribute"?

Your job application letter has somewhat different work to do than does your résumé. Although the readers are the same, what employers are looking for and what you will need to persuade them about differ.

When reading your letter, employers will be looking for the answers to the following questions.

WHAT EMPLOYERS ASK WHEN READING APPLICATION LETTERS

- **Why do you want to work for me instead of someone else?** Employers are more responsive to applicants who know about their organization and can express specific reasons for wanting to work for it.
- **How will you contribute to my organization's success?** In the Wells, Spinks, and Hargrave survey, 88 percent of the personnel directors "agreed" or "strongly agreed" that job application letters should tell how the jobseeker's qualifications match the organization's needs.
- **Will you work well with my other employees and the persons with whom we do business?** Because every job involves extensive interactions with co-workers, employers want to hire people who excel in these relationships. Of course, interactions with clients, vendors, and others outside the employer's organization are also important.

The persuasive objectives of your letter also differ from those of your résumé:

- To respond to the employer's questions listed above in ways that make the employer want to hire you.
- To convey a favorable sense of your enthusiasm, creativity, commitment, and other attributes that employers value but can't easily be communicated in your résumé.

Guideline 2 | Plan ways to answer the employer's questions about your interest and potential contributions persuasively

Begin planning your job application letter by conducting the research necessary to answer the reader's first question, "Why do you want to work for me instead of someone else?" Seek things you can praise. You'll find it helpful to categorize the facts you discover as either writer-centered or reader-centered. Examples of *writer-centered facts* are the benefits the organization gives employees or the appealing features of its co-op program. You won't gain anything by mentioning writer-centered facts in your letter because whenever you talk about them you are saying, in essence, "I want to work for you because of what you'll give me." When employers are hiring, they are not looking for people to give things to.

In contrast, *reader-centered facts* concern things the organization is proud of: a specific innovation it has created, a novel process it uses, a goal it has achieved. These are facts you can build on to create a reader-centered letter.

In addition, research the goals and activities of people who hold the job you want. The more you know about that job, the more persuasively you will be able to answer the reader's second question, "How will you contribute to my organization's success?"

Here are several ways to obtain specific, reader-centered information about an employer.

LEARNING ABOUT EMPLOYERS

- **Draw on your own knowledge.** If you've already worked for the company, you may know all you need to know. Remember, however, that you need information related to the specific area in which you'd like to work.
- **Ask an employee, professor, or other knowledgeable person.** People often have information that isn't available in print or online.
- **Contact the company.** It might send publications about itself.
- **Search the web.** Start with the employer's own website. Also use resources such as Business Week Online (www.businessweek.com), LexisNexis (www.lexisnexis.com), and the sites for other major newspapers and magazines.
- **Consult your campus's placement office.**
- **Visit the library.** Business newspapers and magazines, as well as trade and professional journals, are excellent sources of information.

LEARN MORE For more detailed advice about how to conduct research, see Chapters 6 and 7.

WEB For links to other online resources for researching employers, go to Chapter 2 in your English CourseMate at ***www.cengagebrain.com.***

Guideline 3 | Draft a letter that answers the employer's questions clearly and with details

Business letters have three parts: introduction, body, and conclusion. Within this general framework, an effective job application letter does the following:

1. Identifies the job you want
2. Demonstrates your knowledge of the employer's company or organization
3. Explains why you have chosen to apply to this employer

4. Explains how your qualifications enable you to contribute to the employer's success
5. Indicates the next step you will take

There is no single best way to combine these five elements within the three-part framework of a letter. Use your creativity to make your letter distinctive. The following advice will help you write an original letter that observes the general conventions of business correspondence. Figures 2.7 and 2.8 show how Jeannie Ryan and Ramón Perez applied this advice in their letters.

FIGURE 2.7

Job Application Letter to Accompany the Résumé Shown in Figure 2.2

Jeannie addresses a specific person.

She shows specific knowledge of the company and offers praise related to it.

Jeannie states that she wishes to pursue a goal that the employer pursues.

Jeannie explains the relevance of her courses to the job she is seeking.

She describes one way her job experience will benefit the employer.

Jeannie tells how abilities she developed in a college activity will benefit the employer.

She highlights a specific accomplishment.

Jeannie politely requests an interview.

325 Foxfire Drive, Apt. 214
Denver, Colorado 70962
February 8, 2013

Ms. Nancy Zwotny, Manager
Employment and Employee Relations
Burdick Marketing
650 Broadway
Denver, Colorado 70981

Dear Ms. Zwotny:

I was very impressed to read in *Marketing News* that last year Burdick added seven national accounts to its client list. I was especially interested to learn that this success is built upon the power and rapid response of computerized tools for marketing analysis developed by your personnel. Moreover, two of these new accounts are in the electronics industry, a special interest of mine. As a senior marketing major at the University of Denver, I would very much like to work for Burdick as a research assistant, helping clients maximize sales. In particular, I would like to contribute to the success of clients in the electronics industry.

To develop a solid background in computerized decision making, I have taken several classes in data analysis, including two classes in quantitative methods, one in data management, and one in survey sampling. In addition, through my minor in computer science, I have gained technical knowledge to work effectively with Burdick's clients selling computer games and similar consumer products.

To learn the practical application of concepts I've studied in school, I have worked in selling to consumers and to retailers. Both jobs taught me how unreliable our intuitive predictions about consumer behavior can be and how important it is to research the market before introducing a new product. In addition, my service as vice president of the university's synchronized swim team has helped me develop my leadership and communication skills that will help me work effectively with other Burdick clients and employees. Last year, I helped this diverse group of fifty students prepare programs that they presented proudly to the public.

I'm sure you realize that a letter and résumé (which I've enclosed) can convey only a limited sense of a person's motivation and qualifications. Next week, I will call your assistant to see if you are able to grant me an interview. I hope that I may look forward to meeting you to discuss my credentials more fully.

Sincerely yours,

Jeannie Ryan

Jeannie Ryan

Enclosure: Résumé

FIGURE 2.8

Job Application Letter to Accompany the Résumé Shown in Figure 2.3

16 Henry Street
Brooklyn, New York 11231
March 24, 2013

Estelle Ritter
Financial Systems Division
Medallion Software, Inc.
1655 Avenue of the Americas
New York, New York 11301

Dear Ms. Ritter:

About a year ago, I met David Yang, a systems analyst in your department, who told me about Medallion's highly successful efforts to create integrated computer systems for banks and other financial institutions. I was particularly intrigued when he explained that many of the programs you design for international corporations must conform to government banking regulations—which differ from country to country. What a challenge! As a systems analysis major with a considerable interest in meeting the needs of clients in the financial services industry, I would like to be considered for a position in your division.

Since talking with David, I have sought out courses that would prepare me for exactly the kind of work your division performs. This semester, for example, I am taking a course in computer security and another in international finance. In addition, I have gained considerable insight into the structure and uses of two sophisticated financial systems while working as a data entry clerk for the Miller Health Spas chain and as a teller for the Meninger Bank. I have also completed several classes in written and oral communication, which would help me present Medallion effectively to clients. You will find additional details about my qualifications in the enclosed résumé.

I feel that I am a well-disciplined, highly motivated person with a strong desire to excel. I have taken the last half of my college courses while working full-time to support my wife and young son. After I become settled into a permanent job, I plan to begin graduate study in computer science so that I continue to develop my skills in systems analysis and design.

Would it be possible for me to meet with you to discuss what I have to contribute to Medallion? If so, please call me at (212) 374-7631 during the day.

Sincerely,

Ramón Perez

Ramón Perez

Enclosure

Ramón addresses a specific person.

He demonstrates a specific knowledge of the company and conveys his enthusiasm for it.

Ramón states that he wishes to achieve results that the employer desires to achieve.

Ramón conveys his determination to prepare for the job for which he is applying.

Ramón explains how his job experience would benefit the employer.

He also tells how two classes he took would benefit the employer.

He provides specific evidence of personal characteristics he thinks the employer will view favorably.

Ramón asks for an interview.

Introduction

By identifying the job you want in the introduction of your letter, you accommodate the employer's desire to know why you have written. When naming the position, convey your enthusiasm for it.

> I was delighted to see your ad for a chemical engineer in Sunday's newspaper.

To make your enthusiasm credible, explain the *reason* for it. In the following examples, Harlan shaped his explanations to the positions he applied for. To an environmental consulting company, he wrote:

> As an environmental engineering major who will graduate in May, I am eager to help companies assess and remediate hazards.

To a company that makes industrial lubricants, he wrote:

> In my capstone course as a chemical engineering student, I am studying the synthesis of molecules for the same industrial uses that your company's products serve.

Another effective way to begin your letter is to praise an accomplishment, project, or activity you learned about during your research. Praise is almost always welcomed by a reader, provided that it seems sincere. In the following example, Shawana combines the praise with an explanation of her reason for applying to this employer and with her statement of the job she is applying for.

Shawana gives specific praise related to the job she wants.

She introduces herself and expresses her desire to contribute.

She identifies the job she wants.

> While reading the August issue of *Automotive Week,* I learned that you needed to shut down your assembly line for only 45 minutes when switching from making last year's car model to this year's model. This 500 percent reduction in shutdown time over last year is remarkable. As a senior in manufacturing engineering at Western University, I would welcome a chance to contribute to further improvements in the production processes at your plant. Please consider me for the opening in the Production Design Group that you advertised through the University's Career Services Center.

Note that Shawana isn't praising the features of the car or the huge profit the company made. That would be superficial praise anyone could give without having any real understanding of the organization. Instead, Shawana focuses on a specific accomplishment, discovered through her research, that is directly related to her own specialty.

If you have a connection with a current employee or representative of the employer, you might mention it, especially if you can combine this reference with evidence that you are knowledgeable about the organization.

> At last month's Career Fair at the University of Missouri, I spoke with AgraGrow's representative Raphael Ortega, who described your company's novel approaches to no-till agriculture. As an agronomy major, I would welcome the chance to work in your research department.

Body (Qualifications Section)

Sometimes called the *qualifications section,* the body of your letter is the place to explain how your knowledge and experience prepare you to contribute significantly to the employer's organization. Some job applicants divide this section into two parts: one on their education and the other on their work experience or personal qualities. Other applicants devote a paragraph to their knowledge and skills in one area, such as engineering, and a second paragraph to their knowledge and skills in another area, such as communication. Many other methods of organizing are also possible.

No matter how you structure this section, indicate how the specific facts you convey about yourself relate to the demands of the position you want. Don't merely repeat information from your résumé. Instead of simply listing courses you've taken, show also how the knowledge you gained will help you to do a good job for the employer. Rather than reciting previous job titles and areas of responsibility, indicate how the skills you gained will enable you to succeed in the job you are seeking.

What the student learned

> In my advanced physical chemistry course, I learned to conduct fluoroscopic and gas chromatographic analyses similar to those your laboratory uses to detect contaminants in the materials provided by your vendors.

> In one course, we designed a computer simulation of the transportation between three manufacturing facilities, two warehouses, and seventeen retail outlets. Through this class, I gained substantial experience in designing the kinds of systems used by your company.

How this will enable the student to contribute

Conclusion

In the conclusion of your letter, look ahead to the next step. If you are planning to follow up with a phone call, indicate that. In some situations, such a call can be helpful in focusing an employer's attention on your résumé. If you are planning to wait to be contacted by the employer, indicate where you can be reached and when.

TRY THIS At a website that offers advice to job seekers, find a "model" job application letter for someone who has the same amount of work experience that you have. Compare that letter with the ones in Figures 2.7 and 2.8. In what ways could the model letter be improved?

Use a Conventional Format

Finally, when you draft a letter of application, be sure to use a conventional format. Standard formats are described in Chapter 23 and used in this chapter's sample letters.

Guideline 4 | Revise your letter to increase its impact and assure that you project a favorable image of yourself

A job application letter presents some significant challenges. Its success depends heavily on the image the employer has of you after reading it. This person may respond to any feature of your writing, from the personality you project, to the words you choose, and the presence or absence of errors in grammar, punctuation, or spelling. Every detail matters. In addition to asking others to look over your letter very carefully, let them help you determine whether your letter comes across the way you intend.

Review the Personality You Project

Employers will examine everything you say for clues to your personality. When you say what appeals to you about the organization and explain why you are well suited for the job, you are revealing important things about yourself. Notice, for instance, how the first sentence of the second paragraph of Jeannie Ryan's letter (Figure 2.7) shows her to be a goal-oriented person who plans her work purposefully. Also, notice how the first paragraph of Ramón's letter (Figure 2.8) shows him to be an enthusiastic person with a firm sense of direction. When reviewing your own draft, pay special attention to the personality you project. Employers will especially value your enthusiasm for their organization and for the work you would do there.

WEB To see other application letters that follow the advice given in this chapter, go to Chapter 2 in your English CourseMate at ***www.cengagebrain.com.***

Review Your Tone

Some people have difficulty indicating an appropriate level of self-confidence. You want the tone of your letter to suggest to employers that you are self-assured, but not brash or overconfident. Avoid statements like this:

> I am sure you will agree that my excellent education qualifies me for a position in your Design Department.

Overconfident tone

The phrase "I am sure you will agree" will offend some readers. And the sentence as a whole seems presumptuous. It asserts that the writer knows as much as the reader about how well the writer's qualifications meet the reader's needs. The following sentence is more likely to generate a favorable response:

More effective tone

> I hope you will find that my education qualifies me for a position in your Design Department.

Achieving just the right tone in the conclusion of a letter is also rather tricky. You should avoid ending your letter like this:

Ineffective, demanding tone

> I would like to meet with you at your earliest convenience. Please let me know when this is possible.

To sound less demanding, the writer might revise the second sentence to read, "Please let me know *whether* this is possible" and add "I *look forward* to hearing from you."

Finally, remember that you must assure that each sentence states your meaning clearly and precisely. And you must eradicate all spelling and grammatical errors.

Adapting Your Application Letter for Different Employers

If you are applying to different employers for the same type of position, you may be able to adapt your application letter by altering only those places where you demonstrate your knowledge of each specific company and tell why you are applying to it. However, if you are applying for different kinds of jobs, revise also your explanations of the match between your qualifications and the job you want.

WEB To see the different letters one student wrote when applying for two different jobs, go to Chapter 2 in your English CourseMate at *www.cengagebrain.com.*

Figure 2.9 shows a Writer's Guide you can use as you prepare your job application letters.

ETHICAL ISSUES IN THE JOB SEARCH

One of the most interesting—and perplexing—features of workplace writing is that the ethical standards differ from one situation to another. The résumé and job application letter illustrate this point because the expectations that apply to them are significantly different from those that apply to other common types of on-the-job writing.

For instance, when writing a résumé you are permitted to present facts about yourself in a very selective way that would be considered unethical in most other kinds of workplace writing. For example, imagine that you have suggested that your company reorganize its system for keeping track of inventory. Several managers have asked you to investigate this possibility further, then write a report about it, detailing the new system you'd prefer. In this report, your readers will expect you to include unfavorable information about your system as well as favorable information. If you omit the unfavorable information, your employer will judge that you have behaved unethically in order to win approval of your idea. If you were to submit your résumé to these same readers, however, they would not expect you to include unfavorable information about yourself. In fact, they would be surprised if you did.

Furthermore, these readers would expect you to present the favorable information about yourself in as impressive a language as possible, even though they might feel you were ethically bound to use cooler, more objective writing in your

FIGURE 2.9

Writer's Guide for Job Application Letters

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
JOB APPLICATION LETTERS

Preliminary Research

____ Determine as exactly as possible what the employer wants.
____ Learn enough about the job and employer to tailor your letter to them.

Address

____ Address a specific individual, if possible.

Introduction

____ Tell clearly what you want.
____ Persuade that you know specific, relevant things about the reader's organization.
____ Convey that you like the company.

Qualifications

____ Explain how the knowledge, abilities, and experiences described in your résumé are relevant to the specific job for which you are applying.

Closing

____ Sound cordial, yet clearly set out a plan of action.

Prose

____ Use clear sentences with varied structures.
____ Use an easy-to-follow organization.
____ Use a confident, but modest tone.
____ Express the action in verbs, not nouns.
____ Use strong verbs.
____ Use correct spelling, grammar, and punctuation.

Appearance

____ Look neat and attractive.
____ Include all the elements of a business letter.

Ethics

____ Describe your qualifications honestly.
____ Avoid statements intended to mislead.

Overall

____ Show that you are aware of your reader's goals and concerns when hiring.
____ Demonstrate that you are a skilled communicator.

proposal about the inventory system. Here are the ethical guidelines that apply to résumés and job application letters.

GUIDELINES FOR AN ETHICAL RÉSUMÉ AND JOB APPLICATION LETTER

- Don't list degrees you haven't earned, offices you haven't served in, or jobs you haven't held.
- Don't list awards or other recognition you haven't actually received.
- Don't take sole credit for things you have done as a team member.
- Don't give yourself a job title you haven't had.
- Don't phrase your statements in a way that is intended to mislead your readers.

If you are unsure whether you are writing ethically in some part of your résumé, check with your instructor or someone else who is familiar with workplace expectations about this type of communication. (You might also ask for advice from more experienced people whenever you are unsure about the ethical expectations that apply to any communication you write at work.)

WRITING FOR EMPLOYMENT IN OTHER COUNTRIES

WEB For links to websites with information about preparing résumés for jobs in specific countries, go to your English CourseMate at *www.cengagebrain.com.*

In other countries, résumés and job application letters may look very different from those used in the United States. The traditional Japanese job application, the *rirekisho,* includes a significant amount of personal information to indicate that the applicant comes from an environment that makes it likely the person will enjoy long-term success in the organization (Lofving & Kennedy-Takahashi, 2000). Although Japanese employers expect less personal information in applications from persons in other cultures, they still want to know the applicant's nationality, age, and marital status. In France, many employers want job application letters written by hand so they can subject the letters to handwriting analysis (Pensot, 2000). French employers believe that this analysis enables them to learn about the applicant's personal traits, which they weigh heavily when making employment decisions. Employers in many countries, including South Africa, want applications to include grades, copies of diplomas, and reference letters, called *testimonials* (Woodburn Mann, 2000).

Because expectations differ so significantly from country to country, conduct reader-centered research about the country to which you will send applications. Among others, Mary Ann Thompson's *Global Résumé and CV Guide* (2000) is an excellent source.

INTERVIEWING EFFECTIVELY AND DISPLAYING YOUR WORK

WEB For information on job interviews and portfolios, go to Chapter 2 in your English CourseMate at *www .cengagebrain.com.*

Your reward for preparing an effective résumé and application letter is, of course, the opportunity to do some additional reader-centered communicating, this time in a job interview. For advice about ways to interview effectively, go to your English CourseMate for this book at www.cengagebrain.com and click on Chapter 2.

One way to make yourself stand out in an interview is to bring samples of your work. Chapter 22 explains how to create a digital portfolio, and the website for this book provides advice for creating a print portfolio.

SOCIAL MEDIA AND EMPLOYER'S JUDGMENTS ABOUT YOU

Many employers look beyond job applications and statements by references to evaluate applicants. The person who reads your résumé may also visit your social networking sites, such as Facebook, MySpace, LinkedIn, and others. Some even ask applicants for their passwords to the private portions of their websites (*USA Today* article on 3/12/2012 by Shannon McFarland). What does this mean to you? Certainly, when you begin to look for an internship or job, you should review and revise, for employer viewing, the public section of your social media sites, blogs, and similar locations on the Internet. So that you aren't taken by surprise, you might also decide what to do with the private sections, whether to leave them as they are, edit them for viewing by employers who ask to do so, or withdraw your application from employers who ask, a step taken by some job seekers (McFarland, 2012). This last action could be done for your own ethical reasons, not from your feeling guilty or ashamed about anything.

WEB For more information on employers' inspection of job applicants' social media sites, go to your English CourseMate at ***www.cengagebrain.com.***

CONCLUSION

This chapter has demonstrated how the reader-centered approach used by successful workplace communicators can help you create a highly effective résumé and job application letter. The strategies you saw in action here are ones you can use for all your work-related writing:

- Think continuously about your readers.
- Use your knowledge of your readers to guide all your writing decisions.

The rest of this book is devoted to developing your communication expertise by providing detailed reader-centered advice you can use whenever you write at work.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Find a sample résumé at your college's Career Services Center or in a book about résumé writing. Evaluate it from the point of view of its intended reader. How could it be improved?
2. Using the web, newspapers, or journal articles, locate four or more openings that appeal to you. Create a unified list of the qualifications they specify. Then identify your skills and experiences that match each item on the employers' list.
3. Complete the assignment in Appendix B on writing a résumé and a letter of application.

EXPLORE ONLINE

Using the web, find an employer or online job board that asks you to fill out an online résumé form. Evaluate the extent to which the form helps or hinders you from presenting your qualifications in the most persuasive manner.

COLLABORATE WITH YOUR CLASSMATES

Collaborating with another student in your class, work together on developing a keyword list for each of you that you could use when creating a scannable résumé.

APPLY YOUR ETHICS

Using the library or web, read an article that discusses the attitudes of employers toward unethical résumés. Take notes you can share with your class.

CASE Advising Patricia

For additional cases, visit your English CourseMate at www.cengagebrain.com. *Instructors*: The book's website includes suggestions for teaching the cases.

This morning you stopped outside the library to talk with Patricia Norman, a senior who is majoring in marketing. She told you with a mixture of excitement and anxiety that she has finally decided to join the many other seniors who are busily looking for a job. She's even drafted a résumé and begun writing letters to employers listed in a publication she picked up at the Career Services Center.

"Look," she exclaimed. "One of the department store chains I'm writing to is mentioned in this article that Professor Schraff asked us to read." She held out an article from *Retail Management*. "They've begun opening free-standing specialty shops in their stores. The managers order their own merchandise and run their own advertising campaigns. It's been a huge success. This sounds like such a great place to work—a big chain that welcomes innovators." Then her excitement turned to anxiety. "I'm worried they won't like my résumé and application letter, though. I've gone over both again and again, and my roommate has too. But I'm still worried."

As you tried to reassure her, she pulled out her drafts and put them into your hand. "Take a look at them and tell me what you really think. I need all the help I can get." You had to leave for an appointment, but you agreed to look over her drafts and meet her again this evening.

Now it's afternoon, and you've started to read Patricia's résumé and letter. As you do, you think back over some of the things you know about her. She's an active and energetic person, talkative, and fun to be with. Throughout her years in college, she has spent lots of time with a group called Angel Flight, a volunteer organization that sponsors service activities on campus and off. In fact, this past year you've seen less of her because she has spent so much time serving as the organization's president. "As president, I'm responsible for everything," she once told you. "Everything from running meetings, to getting volunteers, to seeing that the volunteers have done what they said they would." While a junior she held some other office, you recall—also a time-consuming one. But she's like that. In the Marketing Club, she edited the newsletter and handled lots of odd jobs, like putting up posters announcing speakers and meetings. She was also treasurer of the Fencing Club, another of her interests. Once when you marveled at how many things she was able to do, she responded, "It's not so much, if you're organized."

Despite all the time she spends on such activities, Patricia earns good grades, a 3.6 average, she told you once. Although she's had to take lots of business courses, she's also squeezed in a few electives in one of her favorite subjects: art history. One Saturday last year, she even got you to travel 200 miles with her to see an art exhibit—a "major" exhibit, she had assured you.

But the trip you most enjoyed with her was to a shopping center, where she spent more time commenting on how the merchandise was displayed than looking for things to buy. She talked a lot about the way they did things at a Dallas department store where she's worked the past three summers. She must have some interesting opportunities there, you note; after all, one of the people she lists as a reference is the store manager. Her other references are professors who've taught classes that you and Patricia have taken together. They were fun. Everything's fun with Patricia.

YOUR ASSIGNMENT

Decide what you will say to Patricia about her letter (Figure 2.10) and résumé (Figure 2.11). What strengths will you praise? What changes will you suggest? What questions will you ask to determine whether she might include additional information? Assume that her résumé will be first read by a person, not by a scanner.

FIGURE 2.10

Job Application Letter for Use with Case

Box 88
Wells Hall
University of Washington
Seattle, Washington 98195
February 12, 2013

Kevin Mathews, Director
Corporate Recruiting
A. L. Lambert Department Stores, Inc.
Fifth and Noble Streets
San Diego, California 92103

Dear Mr. Mathews:

I saw A. L. Lambert's advertisement in the *College Placement Annual*. I was very impressed with your company. I hope that you will consider me for an opening in your Executive Develepment Program.

In June, I will graduate from the University of Washington's retailing program, where I have focused my study on marketing management. I have learned a great deal about consumer behavior, advertising, and innovative sales techniques. Furthermore, I have gained a through overview of the retailing industry, and I have studied successful and unsuccessful retailing campaigns through the case-study method.

In addition to my educational qualifications, I have experience both in retail sales and in managing volunteer organizations. While working in a Dallas department store for the past four summers, I had many opprtunities to apply the knowledge and skills that I have learned in college. Likewise, in my extracurricular activities, I have gained experience working and communicating with people. For instance, I have been the president of Angel Flight, a volunteer service organization at the University of Washington. Like a manager, I supervised many of the organization's activities. Similarly, while holding offices in two campus organizations, I have developed my senses of organization and responsibility.

I would like to talk with you in person about my qualifications. Please tell me how that can be arranged.

Sincerely yours,

Patricia Norman

Patricia Norman

FIGURE 2.11

Résumé for Use with Case

PATRICIA NORMAN
Box 80, Wells Hall
University of Washington
Seattle, Washington 98195
(206) 529-5097

PERSONAL
Born: March 17, 1992
Health: Excellent
Willing to relocate

PROFESSIONAL OBJECTIVE
To work for an innovative and growing retailer.

EDUCATION
University of Washington, Seattle, Washington, B.S. in Retailing,
May 2013.

Earned 23 credit hours in marketing management, obtaining a working knowledge of the factors motivating today's consumer. Also learned how a product is marketed and distributed to the consumer. Took eight credit hours of study focused specifically on principles and problems of retail management.

WORK EXPERIENCE
Danzig's Department Store, Dallas, Texas,
Summers 2009–2012.

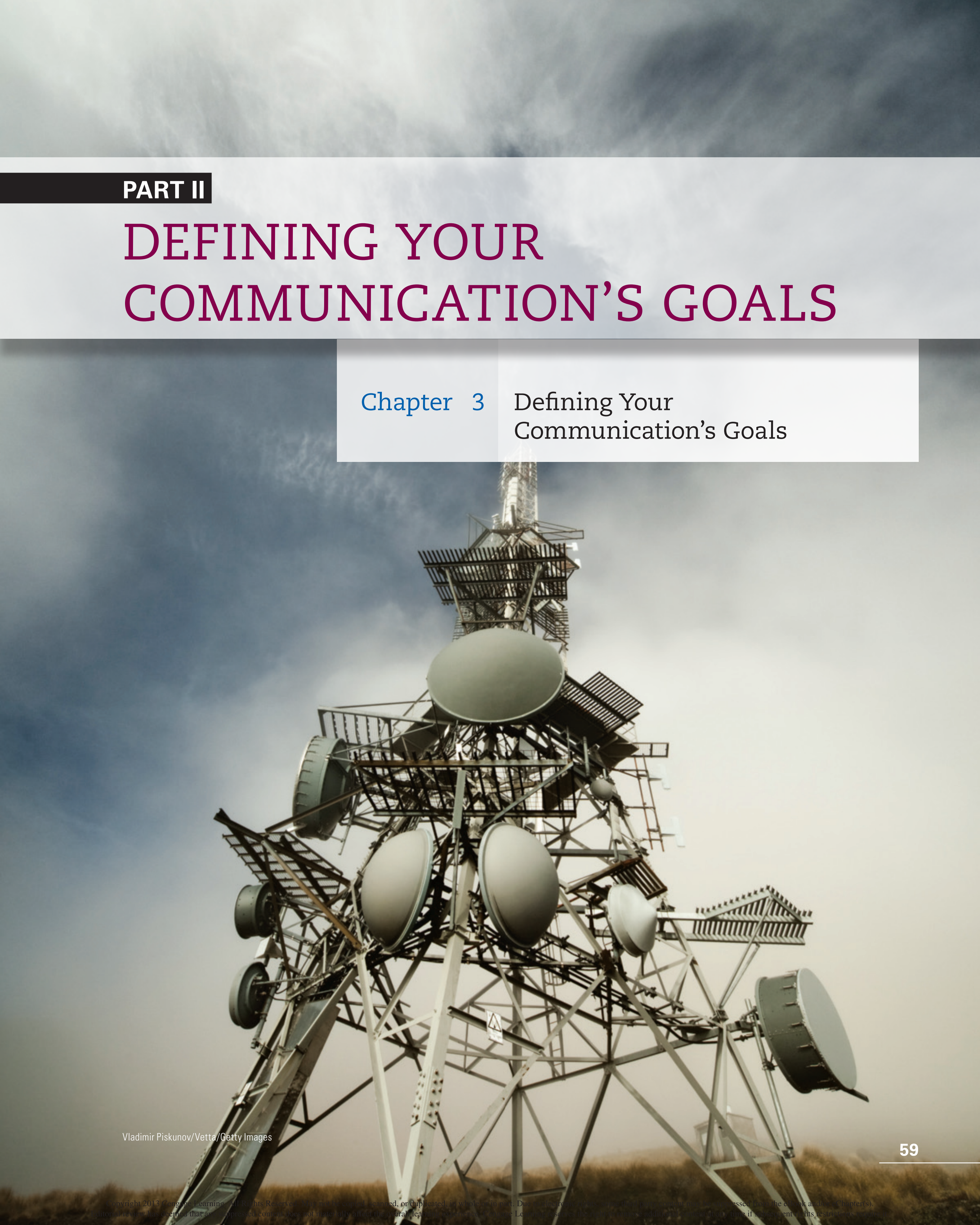
Worked as a sales clerk. Helped customers choose their purchases and listened politely to their complaints. Cash register operation. Stocked shelves and racks. Provided assistance to several department managers.

ACTIVITIES
Fencing Club, served as treasurer.
Angel Flight, President.
Marketing Club, member.

REFERENCES
Derek Yoder, *Store Manager*
Danzig's Department Store
11134 Longhorn Drive
Dallas, Texas 75220
dyoder@danzig.com

Gregory Yule
Pinehurst Hall
University of Washington 98195
(206) 579-9481
gyule@wu.edu

Lydia Zelasko
Putnam Hall
University of Washington
Seattle, Washington 98195
lzelasko@wu.edu



PART II

DEFINING YOUR COMMUNICATION'S GOALS

Vladimir Piskunov/Vetta/Getty Images


Vladimir Piskunov/Vetta/Getty Images

3 | Defining Your Communication's Goals

WEB For additional information and examples related to this chapter's guidelines, go to Chapter 3 in your English CourseMate at *www.cengagebrain.com*.

This is the first of sixteen chapters that support your instructor's aim of helping you develop expertise in the many activities people perform as they write at work. This chapter begins where writing begins—by helping you define what you want your communication to accomplish.

"But wait," you may be thinking. "Why do I need to spend time doing that? Won't my goals for writing at work be obvious? I will write the things my employer asks me to write. Shouldn't I just proceed directly to drafting?"

Your goals may be obvious, but *your communication's* goals may not be. And you can't achieve your goals unless your communication achieves its goals as well.

As explained in Chapter 1, the goals of workplace communications are to help and influence their readers, to be useful and persuasive to particular people with specific needs and desires. But you can't create communications that achieve these goals unless you know what information your readers need and want, and unless you know which strategies for presenting that information your readers will find most useful and persuasive.

Your résumé and job application letter provide perfect examples. Their goal is to persuade an employer that you have qualifications that match the ones it is seeking in a new employee, something the résumé and letter can do only if you know what the employers are looking for. Also, these documents must help employers spot your impressive qualifications quickly because employers typically spend so little time skimming through applicants' submissions that qualifications can be missed altogether if they don't jump off the page—a fact you might easily overlook if you don't take time to learn the way employers read. Finally, they must persuade the employer that, although other applicants also have qualifications that match the specific ones it is seeking, your qualifications make the best match.

When you make defining the goals of a communication a separate step in your writing process, you are simply following the example of engineers, computer scientists, architects, and professionals in other fields who design products to serve practical purposes. They begin a project by creating a *design specification,* which details what their yet-to-be-designed product needs to include and how it needs to be put together. This document guides the rest of their work on the project, just as your definition of your communication's goals help you make every decision, large or small, about your communication. Will your reader find your writing to be more useful and persuasive if you present complex or comprehensive data in the body of your text or in an appendix? If you display your data in a bar graph or table? If you use the abbreviation *ppb* or spell out *parts per billion*? Your definition of your communication's goals will enable you to give good answers to these and the many other questions that arise as you strive to help and influence your reader.

YOUR GOAL: TO ENVISION YOUR READER'S RESPONSE TO EACH SPECIFIC ASPECT OF YOUR COMMUNICATION

How can you convert something as abstract as "a definition of your communication's goals" into a dynamic guide that can help you make good, practical writing decisions? *Answer:* You use the information in your definition to make a mental movie in which you watch your reader react to each aspect of your communication. You can see how he or she responds to your communication's structure, graphics, sentences, word choice, or anything else. In your movie, if your reader responds the way you want, go with it. If not, try something else.

Of course, you can never be absolutely sure how someone will react to anything you write or say. A reader's reactions depend on a complex set of factors. To make your predictions as accurate as possible, focus on developing your ability to do the following as you read this chapter, discuss it in class with your instructor, and apply its advice while working on the writing assignments in your technical communication class.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Determine what your communication must do in order to be *useful* to your reader.
2. Define the way you want your communication to be *persuasive* to your reader.
3. Gather the information about your reader that enables you to predict how he or she will respond.
4. Identify elements of your situation that could influence the way you write and the way your reader responds.
5. Identify your communication's stakeholders: a first step in writing ethically in the workplace.

Figure 3.1 displays a Writer's Guide for Defining Objectives that you can use to apply this chapter's advice. If your instructor asks you to read this chapter when

FIGURE 3.1

Writer's Guide for Defining Your Communication's Goals

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
DEFINING YOUR COMMUNICATION'S GOALS

YOUR PURPOSE
1. What are you writing?
2. What outcome do you desire?
3. Who is your reader?

CREATING A USEFUL COMMUNICATION ‹—— See pages 63–67
1. What task will your communication help your reader perform?
2. What information does your reader want? (What questions will your reader ask?)
3. How will your reader search for the information? (May use more than one strategy.)
_____ Sequential reading from beginning to end
_____ Reading for key points
_____ Reference reading
_____ Other (describe)
4. How will your reader use the information?
_____ Compare alternatives (What will be the points of comparison?)
_____ Determine how the information will affect him or her (or the organization)
_____ Perform a procedure (following instructions step by step)
_____ Other (describe)

CREATING A PERSUASIVE COMMUNICATION ‹—— See pages 67–68
1. What is your reader's attitude toward your subject? What do you want it to be?
2. What is your reader's attitude toward you? What do you want it to be?
3. What is your reader's attitude toward your organization? What do you want it to be?

READER'S PROFILE ‹—— See pages 68–77
1. Job title
2. Familiarity with your topic
3. Familiarity with your specialty
4. Relationship with you
5. Personal characteristics you should take into account
6. Cultural characteristics you should take into account
7. Who else might read your communication?

CONTEXT ‹—— See pages 77–78
1. What features of the context may affect the way your reader reads your communication?
2. What expectations, regulations, or other factors constrain the way you can write?

ETHICAL TREATMENT OF STAKEHOLDERS ‹—— See page 78–79
1. Who, besides your reader, are stakeholders in your communication?
2. How will they view its impact on them?

you are beginning work on a course project, you may find it helpful to complete each section of the guide as you read the relevant parts of the chapter.

At the end of this chapter you will find a description of the way Stephanie, a college student, used the guide to prepare a successful recommendation to her boss at a summer job. Stephanie's completed Writer's Guide is included.

HOW TO DETERMINE WHAT YOUR COMMUNICATION MUST DO TO BE USEFUL

Your communication's usefulness is determined by the degree to which its readers can use it to perform their tasks.

As you learned in Chapter 1, people at work read in order to complete tasks that are part of their job responsibilities. To be effective, communications must help them perform those tasks. That is, they must be *useful*—from the *reader's* perspective. The distinction between less useful and more useful communications can be illustrated by the evolution of computer manuals. Early manuals were organized around a computer's features. For instance, they would tell what each menu choice or each F-key would do. This organization frustrated users. The information was all there, but not in a useful form. Users wanted to know how to accomplish their tasks, not learn what the tasks the computer could perform if the F8 key were pressed. Years later, computer companies made their manuals much more useful by taking the time to learn what the users were trying to do and reorganizing their manuals around those tasks.

The following guidelines will help you identify your reader's tasks in ways that enable you to figure out how to make your communications most useful to your reader.

Guideline 1 | Describe your reader's task

To create a communication that will aid your reader with a task, you must first know what goal it will help your reader achieve. Stick close to his or her *immediate* goal—not the overarching goal of creating the best product ever, but the immediate goal of choosing the best design for one of its parts, deciding which of two companies to buy component parts from, or figuring out how to solve a problem in the manufacturing process for the product.

When naming your reader's goal, use verbs that describe practical actions your reader will perform, such as *choose, decide,* and *solve,* not verbs such as *learn,*

Lisa F. Young/Shutterstock.com

© Jose Luis Pelaez, Inc./Corbis

B2M Productions/Photodisc/Getty Images

Consumers assembling a product, executives making decisions, and supervisors managing factory production need many different things from the communications they read. To write effectively, you must identify and meet the needs of the particular persons to whom you are writing.

know, or *understand* that concern mental states. Readers at work read for practical purposes. While they must sometimes learn something in order to achieve their purposes, you should name the *actions* they will use that knowledge to perform.

By looking at your communication from the perspective of your reader's goals rather than your own, you are acting on the most important fact about workplace writing: In order to achieve your goal, you must help your reader achieve his or hers.

Next, describe the steps by which the reader will pursue his or her goal *while reading.* This description will help you make practical decisions about the content and organization of your communication. Think of yourself as an assistant to a carpenter or a chef. To know which tool to hand this person—whether a hammer or drill, a knife or whisk—you need to know what your reader is trying to do.

Guideline 2 | Identify the major kinds of information your reader wants from your communication

Nothing contributes as much to a communication's usefulness as its ability to give the reader the information he or she needs to use. A particularly powerful way to identify this information is to imagine the questions your reader would ask your communication to answer. For some communications, your reader may have only a few questions—or only one—that are obvious to you. Often, though, you will need to use your creativity and research skills to predict *all* the questions your communication needs to answer. This search may continue throughout your work on your message. When defining your communication's objectives, your goal is to identify the general nature of the reader's questions so that you know where to focus your energies as you proceed.

As a start, you will often find it helpful to decide whether your reader will be reading in the role of a decision maker, advisor, or implementer. Each role leads to a different set of questions.

Decision Makers

The decision maker's role is to say how the organization will act when it is confronted with a particular choice or problem. Decision makers determine what the company should do in the future—next week, next month, next year. They usually ask questions shaped by their need to choose between alternative courses of action.

TYPICAL QUESTIONS ASKED BY DECISION MAKERS

- **What are your conclusions?** Decision makers want your conclusions, not the raw data you gathered or the details about your procedures. Conclusions can serve as the basis for decisions; details cannot.
- **What do you recommend?** Decision makers usually ask you about a topic because you have special knowledge of it. This knowledge makes your recommendation especially valuable to them.
- **What will happen?** Decision makers want to know what will occur if they follow your recommendations—and what will happen if they don't. How much money will be saved? How much will production increase? How will customers react?

Advisers

Advisers provide information and advice for decision makers to consider when deciding what the organization should do. Unlike decision makers, advisers are very interested in details. They need to analyze and evaluate the evidence supporting your general conclusions, recommendations, and projections.

Consequently, advisers ask questions that touch on the thoroughness, reliability, and impact of your work.

TYPICAL QUESTIONS ASKED BY ADVISERS

- Did you use a reasonable method to obtain your results?
- Do your data really support your conclusions?
- Have you overlooked anything important?
- If your recommendation is followed, what will be the effect on other departments?
- What kinds of problems are likely to arise?

Implementers

Decisions, once made, must be carried out by someone. Implementers are these individuals. Their most important questions are the following.

TYPICAL QUESTIONS ASKED BY IMPLEMENTERS

- **What do you want me to do?** Whether you are writing step-by-step instructions, requests for information, or policies that others must follow, implementers want you to provide clear, exact, easy-to-follow directions.
- **Why do you want me to do it?** To produce satisfactory results, implementers often must know the reason for the policy or directive they are reading. Imagine, for instance, the situation of the managers of a factory who have been directed to cut by 15 percent the amount of energy used in production. They need to know whether they are to make long-term energy savings or compensate for a short-term shortage. If the latter, they might take temporary actions, such as altering work hours and curtailing certain operations. However, if the reduction is to be long-term, they might purchase new equipment and modify the factory building.
- **How much freedom do I have in deciding how to do this?** People often devise shortcuts or alternative ways of doing things. They need to know whether they have this freedom or whether they must do things exactly as stated.
- **What's the deadline?** To be able to adjust their schedules to include a new task along with their other responsibilities, implementers need to know when the new task must be completed.

Is it always fruitful to determine which of these three roles your reader will play–decision maker, adviser, or implementer? Certainly not. You may have other ways of identifying your reader's questions. The key point is to identify the information you need to include in your communication, by determining what your reader wants to know.

Guideline 3 | Describe the way your reader will look for the information

To be able to use the information they want from your communication, readers must first be able to find it. Steve Krug has memorably captured readers' desire to spot the information quickly and easily—in his book on website design, *Don't Make Me Think* (2006). Krug emphasizes that readers of a website—or any other communication—want to think about its content. They don't want to take time figuring out where that content is.

To accelerate your reader's search, identify the ways your reader will look for information and design your communication to match his or her search strategy. Here are four search strategies often used on the job, together with writing strategies that aid readers using them.

LEARN MORE For more information on graphics and page design, see Chapters 14, 15, and 16.

FOUR WAYS READERS SEARCH FOR INFORMATION

- **Thorough, sequential reading.** When writing for readers who will read each sentence and paragraph in turn, you can systematically build ideas from one sentence, paragraph, and section to the next. To help your readers understand the larger structure of your topic, you can organize hierarchically and tell readers what the hierarchical structure is before discussing details.
- **Reading instructions.** You can number the steps rather than putting them in bullet lists to help readers quickly find their place as they look back at your communication after completing a step.
- **Reading for key points only.** You can use lists, tables, boldface, headings, and other page-design features to make the key points stand out.
- **Reference reading.** When you write to readers who will seek only specific pieces of information, you can use headings, tables of contents, and indexes to guide your readers rapidly to the information they seek.

Guideline 4 | Describe the way your reader will use the information

To illustrate the practical value of understanding how your reader will pursue his or her goals, here are three common reader tasks, together with the steps readers often take to perform them, and ways you can design your communication to help.

THREE READER TASKS

- **To choose.** Usually, readers make choices by comparing the alternatives in terms of specific criteria. Knowing what the criteria are will help you decide what to include in your communication. Knowing that your readers will most likely compare the alternatives criterion by criterion suggests that you organize your information around those criteria.
- **To determine how certain changes in policy or procedures will affect them and their unit in the organization.** Usually, readers want to imagine what their work will be like after the change. You can help your readers by including a section that addresses each of your readers' concerns, whether they involve budget, efficiency, prestige, or parking spaces.
- **To perform a procedure.** Typically, readers read a step, perform the step, than look back at your instructions to read about the next step. Understanding this reader process suggests that you present your instructions in lists rather than paragraphs so that each step stands alone, making it easy for the reader to find the next one.

HOW TO DETERMINE WHAT YOUR COMMUNICATION MUST DO TO BE PERSUASIVE

The second essential quality of on-the-job-writing is persuasiveness. Your communication's impact on your reader's attitudes is important in *any* on-the-job communication, not just recommendations, proposals, and similar documents people usually think of as persuasive. *Any* communication you write has the potential to affect your reader's attitudes toward you and your employer's organization. Does it lead your reader to view you positively as a competent professional? Does it lead your reader to believe that your employer's organization is capable of addressing his or her needs? Also, persuasion isn't always about changing minds. It can involve reinforcing or shaping as well as reversing your reader's attitudes.

Guideline 1 | Describe your reader's current attitudes and what you want them to be after reading your communication

When defining your communication's persuasive objectives, you will often know what attitudes you want your reader to have after reading. In this situation, it may seem that you don't need to do anything other than specify what that end point is. However, the writing strategies that are most likely to achieve the outcome you desire depend also on the starting point—that is, on the reader's attitude right now, before reading. For example, if the reader's initial attitude toward your topic is positive, your communication's persuasive purpose will be to reinforce that attitude, making it even stronger than before. Because you can build on the reader's existing attitude and expect little resistance, you can probably succeed by presenting only positive points without trying to rebut arguments against your position. In contrast, if your goal is to reverse the reader's initial attitude, you can expect resistance, and you would need to use very different writing strategies, such as expressing—and then addressing—the negative points your readers would raise.

Guideline 2 | Find out why your reader holds his or her current attitudes

When your communication's goal is to reverse your reader's attitudes, it is important to understand why he or she currently holds them. Those reasons tell you the kinds of rationales the reader will find persuasive, and they indicate the specific assumptions, beliefs, and other evidence you need to counter in order to change the reader's attitudes.

HOW TO CREATE A PROFILE OF YOUR READER

As we know from life experience, different people respond differently to the same event or situation. The same goes for writing at work. What one person finds to be highly useful and persuasive, another may not. You can greatly increase your ability to write a useful, persuasive communication if you create a profile of your reader the way a scriptwriter for a movie might.

Guideline 1 | Describe your reader's professional role and characteristics

Start by describing your reader's professional roles and characteristics.

- **Job Title**. People with different titles ask different questions and use the answers differently. When reading a report on the industrial emissions from a factory, an environmental engineer working for the factory might ask, "How are these emissions produced, and what can be done to reduce them?" while the corporate attorney might ask, "Do the emissions exceed Environmental Protection Agency limits; if so, how can we limit our fines for these violations?"
- **Familiarity with Your Topic**. Your readers' familiarity with your topic—company inventory levels, employee morale on the second shift, problems with new software—will determine how much background information you must provide to make your communication understandable and useful to them.
- **Knowledge of Your Specialty.** Readers can use the information you provide only if they understand the terms and concepts you employ. A person unfamiliar with your specialty would want you to explain what *zeroing* and the *Z-axis* are. On the other hand, if you provided those explanations for readers who are familiar with this specialty, they would ask, "Why is this writer making me read about things I already know?" Your goal is to learn enough

TRY THIS Think of a recent letter, e-mail, or instant message you wrote to a friend or family member. How did you adjust your content and style to your purpose, reader, and context? How would you have changed your message if you'd written on the same topic to a different reader? What if your purpose or the context had been different?

about your reader to be able to strike the right balance between too little and too much explanation.

- **Relationship with You.** When you are having a conversation, you adjust your speech according to your relationship with the other person. You talk with a friend more informally than you do with a college instructor you don't know well—and both your friend and your instructor might be startled if you didn't make such adjustments. Similarly, at work you should write in a way that reflects the relationships you have with your reader.

Guideline 2 | Describe your reader's relevant personal characteristics

A variety of personal characteristics can also influence a reader's responses to your writing. You may be addressing an individual with especially high or low reading levels, weak eyesight, or color blindness. Or your reader may detest the use of certain words, insists on particular ways of phrasing certain statements, or wants more details about your topic than most readers would. Your success in writing to these people can depend on your identifying and accommodating these characteristics.

Guideline 3 | Global Guideline: Describe your reader's cultural characteristics

One of the great pleasures for many college graduates is the opportunity to work with persons who live in or have been raised in cultures different from their own. One reason for this is the global reach of international companies and organizations with employees, suppliers, and customers in many other nations. In many countries, even small companies conduct business with people on other continents. In many parts of the world, employees in the same building come from many countries and cultural backgrounds. No matter what country you live in, this diversity will enable you to learn about other ways of life and other ways of knowing and being in the world.

Cultural Differences That Affect Communication

Among the many possible differences among people from different cultures are differences in what they expect in writing communications and how they respond to what they read. When writing to someone from a cultural background different from yours, you may need to use writing strategies different from those that would succeed with persons from your own culture. Consequently, you may need to add cultural information to the profile you use to make your mental movie of your reader in the act of reading your communication.

There's no single set of cultural characteristics that applies in every case. To achieve the necessary understanding of your reader, you may need to conduct some research; a later section in this chapter suggests ways to do that. When conducting research, it can be helpful to know some of the kinds of differences you may find. The following sections discuss six. As you read about these differences, remember that each contains a range of possibilities. Between the poles are many gradations.

Amount of detail expected One of the pioneers in studying intercultural communication, Edward Hall (1976), distinguished among cultures on the basis of the amount of detail they provide in a communication. In countries such as Japan, communications provide a small amount of detail because writers and readers both assume that readers can fill in specifics by drawing on their existing knowledge. Hall labeled these "high-context" cultures because successful communication depends on the large amount of contextual information the readers bring to the message.

In contrast, in "low-context" cultures, such as the United States and much of Northern Europe, writers and readers both assume that readers are responsible for bringing very little contextual knowledge to a communication. Consequently, writers typically provide extensive detail, trying to cover every aspect of their topic thoroughly.

Knowledge of these differences and the ability to tailor communications appropriately is important to you if you are writing from a high- or low-context culture to readers in the other kind of culture. Readers in a high-context culture can be offended if a writer includes more detail than they expect and need. The extra detail would seem to imply that they do not know the things they should know. Similarly, a low-context reader could feel that the writer who has provided a high-context amount of detail was not considering their needs because much of the expected information (even if not truly needed) wasn't provided.

LEARN MORE For information on communicating between high-context and low-context cultures, see Chapter 4, page 98.

Distance between the top and bottom of organizational hierarchies Through research that included the study of managers at IBM facilities in forty countries, Geert Hofstede (2010) distinguished cultures according to the distance they maintain between people at the bottom and the top of an organization's hierarchy. In the United States and in some European cultures, the distance is very small. In other cultures, such as in Japan, the distance is much greater. This information is helpful to writers because Hofstede also found that, in general, where the distance is greatest, communication styles are most formal whether the communications are written by people in lower ranks to people above them or vice versa.

LEARN MORE For more information on communicating between cultures that have different expectations about the appropriate level of formality in written and spoken communications, see Chapter 10, page 235.

Individual versus group orientation Hofstede also distinguished cultures that focus on the individual from those that focus on the group. Individualistic cultures honor personal achievement and expect individuals to take care of themselves. The dominant cultures in the United States and Northern Europe provide examples. In group-oriented cultures, success belongs to the group, and people pursue group goals rather than individual ones. Many Asian cultures are group-oriented.

LEARN MORE For more information on communicating between individualistic and group-oriented cultures, see Chapter 5, page 124.

Writers can often increase their effectiveness by adjusting to the individualistic or group orientation of their readers' culture. For example, in persuasive communications in the U.S. it can be helpful to highlight benefits to the individual, whereas an emphasis on benefits to the readers' organization can be more persuasive to readers in group-oriented cultures.

Preference for direct or indirect statements Cultures also vary in the directness with which people typically make requests, decline requests, and express their opinions, particularly negative ones. For example, in the U.S. and Northern European cultures writers typically decline a request directly. They may apologize and offer an explanation for their decision, but they will state the denial explicitly. In contrast, Japanese and Korean cultures prefer an indirect style (Gudykunst & Ting-Toomey, 1998). Instead of declining a request explicitly, they might say that fulfilling it would be difficult or that they need time to think about how to reply. In this way, they save the requester the humiliation of being explicitly denied, while readers in those cultures understand that the request will not be fulfilled.

Using one culture's style when writing to people in another culture can create troublesome misunderstandings. To many U.S. readers, an indirect refusal might be misinterpreted. Because they didn't hear a direct denial, these U.S. readers could believe that the request might be fulfilled later, so they may persist in asking. On the other hand, readers in the Japanese and Korean cultures may interpret the direct U.S. style as rude and inconsiderate.

LEARN MORE For more information on communicating between cultures that have different preferences about direct and indirect statements, see Chapter 10, page 235.

Basis of business decisions There are also cultural differences in the ways that business decisions are made. In the United States and many European cultures, organizations typically choose among alternatives on the basis of impersonal evaluations and data analyses. In Arab and other cultures, these same decisions are often made on the basis of relationships. For instance, whereas a U.S. company might choose a company to build a new plant or supply parts for its products by carefully studying detailed proposals from the competitors, an Arab company might select the company represented by a person with whom it would like to do business. These are differences that writers in either kind of culture would need to keep in mind when trying to win business, maintain business relationships, and even respond to complaints from organizations in the other kind of culture.

LEARN MORE For more information on communicating between cultures that have different ways of making business decisions, see Chapter 5, page 124.

Interpretation of images, gestures, and words An image, gesture, or word can elicit markedly different responses in different cultures. Even the same words have different meanings in different countries and cultures. Photographs, drawings, and other pictures sometimes depict relationships among people that seem ordinary in one culture but violate the cultural customs of another. Gestures likewise have different meanings in different cultures. When people in the United States signal "Okay" by joining a thumb and forefinger to form a circle, they are making a gesture that is offensive in Germany and obscene in Brazil (Axtell, 1998). To avoid the risk of unintentionally offending others, some experts advise technical communicators to avoid showing hands in graphics that will be viewed by people in other cultures.

LEARN MORE Chapter 14 (page 310) has more information on the interpretation of images, and Chapter 10 (page 248) has more on the interpretation of words.

Applying Cultural Knowledge When You Write

As the preceding discussion indicates, gaining knowledge of your reader's culture can greatly increase your success in creating a communication that your reader will find useful and persuasive. The discussion is not, however, intended to suggest that gaining general knowledge about a culture can provide you with a recipe for adapting your communication strategies to the needs and expectations of your specific reader. As intercultural communication expert Ron Scollon (1999) says, "Cultures don't talk to each other. People do." When writing to people in other cultures, your reader-centered goal is the same as when addressing people in your own culture: to understand as fully as possible the relevant facts about the specific reader you are addressing.

In addition to the fact that every reader is an individual, a primary reason why you can't rely solely on general cultural information is that you are likely to be addressing your readers in their roles as employees of a company, government agency, or other organization. And organizations have cultures, too (Hofstede, 2002; Scollon & Scollon, 2010). In general, organizational cultures reflect the culture of the nation or region in which they are located. However, some organizational cultures have significant features that modify or run counter to the general culture in the region. Subsidiaries and branch facilities in any region of the world are likely to develop some—but not all—characteristics of the corporate headquarters, whether the headquarters are in Asia, the Middle East, or North America.

Researchers have also found that readers are influenced by the culture of their professions. Webb and Keene (1999) found that the worldwide culture of aeronautical engineering and science possesses characteristics that transcend geographical boundaries. Similarly, scientists, doctors, and teachers share many cultural traits with their counterparts around the globe.

LEARN MORE For information about ways that cultural differences can affect writing teams, see Chapter 19, page 404. For information related to oral presentations to people from other cultures, see Chapter 20, page 419.

Finally, when you are writing to individuals or organizations in another culture, there's a good chance that they have also made an effort to learn about your culture and to accommodate their communications to your cultural characteristics. Some researchers maintain that when people and organizations from two cultures communicate regularly, they create a third context as they develop their ways of understanding one another (Bolten, 1999; Steier, 1999).

How to Gain Knowledge About Your Intercultural Readers

A variety of resources can help you learn about your reader's cultural characteristics. The most helpful are people—including your co-workers—who are familiar with your reader's regional and organizational culture.

You can also consult many helpful print and online sources that present broad descriptions of cultures around the world. Often, the information they provide includes topics such as holidays, political systems, and wedding customs, so you may want to focus your attention on issues relevant to writing work-related communications. On the other hand, learning about these social topics can increase your general understanding of other cultures. Research has demonstrated a positive relationship between intercultural communication competence and awareness of the other culture (Wiseman, Hammer, & Nishida, 1989). To gain additional insight into the ways other cultures differ from yours, be sure to consider the information these sources provide people in other cultures about your own. Self-awareness is another characteristic that correlates well with intercultural competence (Gudykunst, Yang, & Nishida, 1987). Here are some sources you can consult:

WEB For references and links to additional sources of information about cultures, go to Chapter 3 in your English CourseMate at *www.cengagebrain.com*.

- Cyborlink website: www.cyborlink.com
- Global EDGE website: www.globaledge.msu.edu
- U.S. Department of State Background Notes: www.state.gov/r/pa/ei/bgn/

You can also learn from the response you receive each time you write to readers in other cultures (Brownell, 1999). If the opportunity arises, ask your readers about their reactions to your communications. When preparing instructions or other communications that will be read by many people in another culture, conduct a user test (described in Chapter 18) with members of your target audience, if at all possible.

Importance of Your Attitudes

Having positive attitudes toward your reader is essential to success in creating reader-centered communications whether the reader is in your own culture or another one. However, your attitudes are especially important when you are writing to readers in other cultures. Research has shown that the ability to succeed in intercultural communication has a strong relationship with open-mindedness (Adler, 1975), a nonjudgmental attitude (Ruben, 1976), empathy toward others (Chen & Tan, 1995; Ruben, 1976), and a positive attitude toward the other culture (Randolph, Landis, & Tzeng, 1977). On the other side, ethnocentrism has a negative effect on competence in intercultural communication (Neuliep & McCroskey, 1997; Nishida, Hammer, & Wiseman, 1998). The more you focus on learning about your reader's culture and the less you engage in judging them, the more successfully you will be able to write.

Guideline 4 | Learn who all your readers will be

So far, this chapter has assumed that you will know, from the start, just who your readers will be. That may not always be the case. Communications you prepare on the job may find their way to many people in many parts of your organization. Numerous memos and reports prepared at work are routed to one or two dozen people—and sometimes many more. Even a brief communication you write to one person may be copied or shown to others. To write effectively, you must learn who *all* your readers will be so you can keep them all in mind when you write. The following discussion will help you identify readers you might otherwise overlook.

Phantom Readers

The most important readers of a communication may be hidden from you. That's because at work, written communications addressed to one person are often used by others. Those real but unnamed readers are called *phantom readers.*

Phantom readers are likely to be present behind the scenes when you write communications that require some sort of decision. One clue to their presence is that the person you are addressing is not high enough in the organizational hierarchy to make the decision your communication requires. Perhaps the decision will affect more parts of the organization than are managed by the person addressed, or perhaps it involves more money than the person addressed is likely to control.

Much of what you write to your own boss may actually be used by phantom readers. Many managers accomplish their work by assigning it to assistants. Thus, your boss may sometimes check over your communications, then pass them along to his or her superiors.

After working at a job for a while, employees usually learn which communications will be passed up the organizational hierarchy. However, a new employee may be chagrined to discover that a hastily written memo has been read by executives at very high levels. To avoid such embarrassment, identify your phantom readers, then write in a way that meets their needs as well as the needs of the less influential person you are addressing. Because communications are so frequently forwarded to other readers, never put on paper or screen comments that you wouldn't want disseminated, such a private criticisms of person or policy.

Future Readers

Your communications may be put to use weeks, months, or even years after you imagined their useful life was over. Lawyers say that the memos, reports, and other documents that employees write today are evidence for court cases tomorrow. Most company documents can be subpoenaed for lawsuits concerning product liability, patent violation, breach of contract, and other issues. If you are writing a communication that could have such use, remember that lawyers and judges may be your future readers.

Your future readers also may be employees of your company who may retrieve your old communications for information or ideas. By thinking of their needs, you may be able to save them considerable labor. Even if you are asked to write something "just for the record," remember that the only reason to have a record is to provide some future readers with information they will need to use in some practical way that you should understand and support.

Complex Audiences

Writers sometimes overlook important members of their audience because they assume that all their readers have identical needs and concerns. At work, audiences often consist of diverse groups with widely varying backgrounds and responsibilities.

That's partly because decisions and actions at work often impact many people and departments throughout the organization. For instance, a proposal to change a company's computer system will affect persons throughout the organization, and people in different areas will have different concerns: some with recordkeeping, some with data communication, some with security, and so on. People in each area will examine the proposal.

Even when only a few people are affected by a decision, many employers expect widespread consultation and advice on it. Each person consulted will have his or her own professional role and area of expertise, and each will play that role and apply that expertise when studying your communication.

When you address a group of people who will be reading from many perspectives, you are addressing a *complex audience.* To do that effectively, you need to write in a way that will meet each person's needs without reducing the effectiveness of your communication for the others. Sometimes you may have to make a tradeoff by focusing on the needs and concerns of the most influential members of your audience. In any case, the first step in writing effectively to a complex audience is to identify each of its members or groups.

Identifying Readers: An Example

To see one way that a writer might identify the members of a complex audience and adjust his or her communication accordingly, consider Thomas McKay's situation. McKay was writing on behalf of his employer, Midlands Research Incorporated, to request compensation from another company, Aerotest Corporation, which had sold Midlands faulty equipment for testing smokestack emissions. McKay addressed his letter to Robert Fulton, Aerotest's Vice President for Sales, but realized that Fulton would distribute copies to many others at Aerotest. To identify these other readers, McKay asked himself who at his own employer's company, Midlands, would be asked to read such a letter if it received one. In this way, McKay identified the following phantom readers:

- Engineers in the department that designed and manufactured the faulty equipment, who would be asked to determine whether Aerotest's difficulties really resulted from flaws in the design.
- Aerotest's lawyers, who would be asked to determine the company's legal liability.
- Personnel in Aerotest's repair shop, who would be asked to examine the costs Midlands said it had incurred in repairing the equipment.

To meet the needs of the diverse readers in his complex audience, McKay created a letter with a modular design, a commonly used workplace strategy in which different, readily distinguishable parts of a communication each address a distinct group of readers. Modular designs are very common at websites, where home pages often have links for different kinds of users. For example, your college's home page may have separate links for current students, prospective students, faculty, and graduates. Figure 3.2 shows the modular design of the home page of a company that makes surgical equipment. To create a modular design for his letter to Aerotest, McKay wrote a one-page letter that provided background information for all his readers (Figure 3.3). He also attached enclosures addressed to specific groups in his complex audience. Two enclosures contained detailed accounts of the problems Midlands

LEARN MORE For more information on modular designs, see Chapter 4, page 96.

FIGURE 3.2

Modular Design of a Website

The National Institute on Drug Abuse designed its website to help each of its major groups of visitors quickly find the information they are seeking.

The site provides a link to a Spanish version for visitors who can read that language more easily than English.

The site has separate areas for five major groups of visitors: researchers, medical and health professionals, patients and their families, parents and teachers, and students and young adults.

The site also provides links for persons who are seeking certain kinds of information, such as details about specific drugs, funding, and news and events.

For persons seeking treatment for themselves or others, the site provides a prominent link to a resource that will help them find a local substance-abuse treatment service.

Scrolling down this page in the section for patients and families, visitors can find links to information on many topics, including prevention, research on treatment, and clinical trials (not shown in this figure).

National Institutes on Health/National Institute on Drug Abuse

FIGURE 3.3

Letter to a Complex Audience (Enclosures Not Shown)

In his letter requesting compensation for expenses caused by faulty equipment, McKay addresses one person (Robert Fulton) but designed his message for the complex audience he knows will read his letter.

In the first two paragraphs, McKay provides background information of interest to all members of his complex audience at Aerotest.

In the third paragraph, McKay discusses his three major points: The equipment failure resulted from faulty design and construction, repairs were costly for his company, and his company wants compensation.

McKay created a modular design by enclosing several items, each useful primarily to one part of his complex audience at Aerotest.

- For Aerotest's engineers and lawyers, two accounts of the problems are intended to persuade that the difficulties really did arise from Aerotest's faulty equipment.
- For Aerotest's repair shop, a statement of the repair expenses intended to persuade that the costs he said his company incurred were reasonable.
- For Aerotest's shipping department, a list of replacement parts to use when sending the parts to McKay's company.

MIDLANDS RESEARCH INCORPORATED
2796 Buchanan Boulevard Cincinnati, Ohio 45202

Mr. Robert Fulton
Vice President for Sales
Aerotest Corporation
485 Connie Avenue
Sea View, California 94024

October 17, 2012

Dear Mr. Fulton:

In August, Midlands Research Incorporated purchased a Model Bass 0070 sampling system from Aerotest. Our Environmental Monitoring Group has been using—or trying to use—that sampler to fulfill the conditions of a contract that MRI has with the Environmental Protection Agency to test for toxic substances in the effluent gases from thirteen industrial smokestacks in the Cincinnati area. However, the manager of our Environmental Monitoring Group reports that her employees have had considerable trouble with the sampler.

These difficulties have prevented MRI from fulfilling some of its contractual obligations on time. Thus, besides frustrating our Environmental Monitoring Group, particularly the field technicians, these problems have also troubled Mr. Bernard Gordon, who is our EPA contracting officer, and the EPA enforcement officials who have been awaiting data from us.

I am enclosing two detailed accounts of the problems we have had with the sampler. As you can see, these problems arise from serious design and construction flaws in the sampler itself. Because of the strict schedule contained in our contract with the EPA, we have not had time to return our sampler to you for repair. Therefore, we have had to correct the flaws ourselves, using our Equipment Support Shop, at a cost of approximately $15,000. Because we are incurring the additional expense only because of problems with the engineering and construction of your sampler, we hope that you will be willing to reimburse us, at least in part, by supplying without charge the replacement parts listed on the enclosed page. We will be able to use those parts in future work.

Thank you for your consideration in this matter.

Sincerely,

Thomas McKay

Thomas McKay
Vice President
Environmental Division

Enclosures: 2 Accounts of Problems
1 Statement of Repair Expenses
1 List of Replacement Parts

© Cengage Learning

encountered with the emissions testing equipment. With these enclosures, McKay provided evidence that the problems encountered by Midlands were, in fact, caused by poor work on Aerotest's part. McKay's third enclosure was a detailed statement of the repair expenses, thereby enabling Aerotest's repair technicians to see that the reimbursement Midlands requested was fully justified. Of course, neither McKay nor the website designers could have developed a modular design if they had been unaware of the complexity of their audiences. When defining your communication's objectives, take similar care to identify all of your readers.

This chapter's main point: When defining your communication's objectives, focus on your reader, not yourself.

HOW TO IDENTIFY RELEVANT ELEMENTS OF THE CONTEXT FOR YOUR COMMUNICATION

The following guidelines will help you identify contextual factors that could affect your reader's response to your communication.

Guideline 1 | Describe the context in which your reader will read

At work, people interpret what they read as a chapter in an ongoing story. Consequently, they respond to each message in light of prior events as well as their understanding of the people and groups involved. Fill out your mental portrait of your reader by imagining how the following circumstances might influence his or her response to your communication:

- **Recent events related to your topic.** Maybe you are going to announce the reorganization of a department that has just adjusted to another major organizational change. You'll need to make a special effort to present the newest change in a positive light. Or maybe you are requesting money to attend an important professional meeting. If your department has just been reprimanded for excessive travel expenses, you will have to make an especially strong case.
- **Interpersonal, interdepartmental, and intraorganizational relationships.** If you are requesting cooperation from a department that has long competed with yours for company resources, you will need to employ special diplomacy. Political conflicts between individuals and groups can also create delicate writing situations in which certain ways of expressing your message can appear to support one faction and weaken another, even if you have no intention of doing so.

Although you should focus primarily on your reader when defining a communication's objectives, it is important for you to think about any constraints that restrict the way you can write and to identify people other than your reader who might be affected by your communication.

Guideline 2 | Identify any constraints on the way you write

So far, this chapter has focused on developing a full understanding of your reader as you define your communication's objectives. As you gather the information that will form the basis for the way you craft your communication, you should also learn about any expectations, regulations, or other factors that may constrain what you can say and how you can say it. In the working world, expectations and regulations can affect any aspect of a communication—even tone, use of abbreviations, layout of tables, size of margins, and length (usually specifying a maximum length, not a minimum).

Some constraints come directly from your employer, reflecting such motives as the company's desire to cultivate a particular corporate image, to protect its legal interests (because any written document can be subpoenaed in a lawsuit), and to preserve its competitive edge (for example, by preventing employees from accidentally tipping off competitors about technological breakthroughs). In addition, most organizations develop their own writing customs or conventions—"the way we write things here." Writing constraints can also originate from outside the company—for instance, from government regulations that specify how patent applications, environmental impact reports, and many other types of documents are to be prepared. Similarly, scientific, technical, or other professional journals have strict rules about many aspects of the articles they publish.

WEB To view sample style guides, go to Chapter 3 in your English CourseMate at *www.cengagebrain.com.*

Some companies publish style guides that describe their regulations about writing. Find out if your employer has one. You can also learn about these constraints by asking co-workers and by reading communications similar to yours that your co-workers have written in the past.

HOW TO IDENTIFY YOUR COMMUNICATION'S STAKEHOLDERS: A FIRST STEP IN WRITING ETHICALLY

There are many strategies for assuring that on-the-job writing is ethical. Some writers use an *alarm bell strategy.* They trust that if an ethical problem arises in their writing, an alarm bell will go off in their heads. Unless they hear that bell, however, they don't think about ethics. Other writers use a *checkpoint strategy.* At a single, predetermined point in the writing process, they review their work from an ethical perspective.

In contrast, this book teaches a more active and thorough *process strategy* for ethical writing. In it, you integrate an ethical perspective into *every* stage of your work on a communication. It's important to follow a process strategy because at every step of writing you make decisions that shape the way your communication will affect other people. Accordingly, at every step you should consider your decisions from the viewpoint of your personal ethical beliefs about the ways you should treat others.

Guideline 1 | Ethics Guideline: Identify your communication's stakeholders

In a process approach to ethical writing, no step is more important than identifying the people you will keep in mind throughout the rest of your writing effort. When you follow the reader-centered approach to writing as explained in this book, you begin by identifying your readers.

To write ethically, you must also identify another group of people: the individuals who will gain or lose because of your message. Collectively, these people are called *stakeholders* because they have a stake in what you are writing. Only by learning who these stakeholders are can you assure that you are treating them in accordance with your own ethical values.

How to Identify Stakeholders

Because communications written at work often have far-reaching effects, it's easy to overlook some stakeholders. If that happens, a writer risks causing accidental harm that could have been avoided if only the writer had thought through all the implications of his or her communications.

To identify the stakeholders in your communications, begin by listing the people who will be directly affected by what you say and how you say it. These individuals may include many other people in addition to your readers. For instance, when Craig was preparing a report for his managers on the development of a new fertilizer, he realized that his stakeholders included not only the managers, but also the farmers who would purchase the fertilizer and the factory workers who would handle the chemicals used to manufacture it.

Next, list people who will be affected indirectly. For example, because fertilizers run off the land into lakes and rivers, Craig realized that the stakeholders of his report included people who use these lakes and rivers for drinking water or recreation. Indeed, as is the case with many communications, the list of indirect stakeholders could be extended to include other species (in this case, the aquatic life in the rivers and lakes) and the environment itself.

Finally, think of the people who may be remotely affected. These people may include individuals not yet born. For example, if Craig's fertilizer does not break down into harmless elements, the residue in the soil and water may affect future generations.

Guideline 2 | Determine how your communication's stakeholders will view its impact on them

A crucial test of the ethical impact of any action is to consider it from the perspective of the persons affected. Sometimes you can do this imaginatively: How would I feel if I were affected this way? But our ability to imagine others' feelings diminishes as we attempt to put ourselves in the position of persons increasingly distant from us in age, experience, and culture. Sometimes, we just need to ask.

To learn how other people will feel about an action or outcome doesn't mean we have to act or write in a way they would prefer. The ethical question for each of us is whether we are treating them fairly and respectfully. What we need to do is to be sure that we have settled on proceeding in ways that meet the ethical standards by which we guide our lives.

HOW TO GATHER ALL THIS INFORMATION ABOUT YOUR COMMUNICATION'S PURPOSE, READER, AND CONTEXT

As this chapter has explained, the ways your readers will respond to communications you prepare at work can depend on many professional, personal, and contextual factors. Learning about them all so you can create an accurate mental portrait of your reader can require a great deal of effort, especially when you are new on the job. After you've been at work for a while, you will become familiar with much or all of the relevant information about the people you work with every day, the supervisor who reviews your work, and the clients with whom you interact regularly. But until then, and whenever you are writing to readers unfamiliar to you, take the time to learn what you don't know. Learning about your readers is an important form of professional research.

Guideline 1 | Ask others for help

Numerous studies of the ways new college graduates learn how to write on the job indicate that they gain information from others, usually a co-worker, supervisor, or manager. To gain the full benefit of what these other persons have to teach you, take the initiative to ask for their help. Employers would rather have you say, "I don't know. Please help." than to have you guess incorrectly—so that your work needs to be redone, thereby stalling progress on your projects.

Guideline 2 | Ask your readers

If you have the opportunity, introduce yourself to the readers themselves. It's better to ask them what they want you to give them than to guess. They are likely to tell you what kinds of information to provide, as well as how they will look for and use it. As you talk with them, listen for indications about their attitudes that can also guide the way you write to them.

PUTTING YOUR DEFINITION INTO ACTION: AN EXAMPLE

© The Nut Graph/www.thenutgraph.com

Silatul Rahim Dahman, who is 100-percent blind, writes and reads at his computer at work. He is Information Communication and Technology Manager at the Malaysian Association for the Blind.

To see how defining the objectives of your communications provides specific, detailed insights that you can use to write successfully on the job, consider how it helped Stephanie at a summer job with a nonprofit organization that provides Braille translations for books and other reading material requested by people who are blind.

All the Braille translations were prepared by volunteers who worked at their homes. Stephanie noted that some urgently needed translations, such as those of textbooks that students required for their courses, weren't completed on time because translations were assigned to volunteers on a rotating basis rather than on their ability to complete a translation rapidly. She decided to write a memo recommending to her boss, Ms. Land, that urgently needed translations be assigned to the fastest volunteers instead of to the next volunteer on the list.

Stephanie began by filling out the Writer's Guide shown on page 62. Her completed worksheet is shown in Figure 3.4.

By completing the worksheet, Stephanie gained many useful insights about the most effective way to write her memo. For example, when responding to the questions about her reader's attitudes, Stephanie realized that Ms. Land would probably react defensively to any recommendation about the current system. Ms. Land had created the system and believed that it worked very well. Furthermore, she was the type of person who resists suggestions. By focusing on her reader's characteristics, Stephanie concluded that Ms. Land might even resist the suggestion that a problem

FIGURE 3.4

Stephanie's Completed Writer's Guide for Defining Your Communication's Goals

Writer's Guide
DEFINING YOUR COMMUNICATION'S GOALS

YOUR PURPOSE

1. What are you writing?
   A proposal for completing more urgent translations on time.

2. What outcome do you desire?
   Adoption of a system that assigns urgent translations to the quickest volunteers.

3. Who is your reader?
   Ms. Land.

CREATING A USEFUL COMMUNICATION ‹—— **See pages 63–67**

1. What task will your communication help your reader perform?
   Deciding which system for assigning translations is best.

2. What information does your reader want? (What questions will your reader ask?)
   What evidence do you have that there is a problem?
   Who would determine which translations are urgent?
   How would we decide which translators are assigned urgent translations?
   Will your system really work? Are other agencies using it successfully?

3. How will your reader search for the information? (May use more than one strategy)

__X__ Sequential reading from beginning to end
______Reading for key points
__X__ Reference reading
______Other (describe)

4. How will your reader use the information?

__X__ Compare alternatives (what will be the points of comparison?)
Cost, efficiency, and impact of the change on office staff and volunteers.

_____ Determine how the information will affect him or her (or the organization)
_____ Perform a procedure (following instructions step by step)
_____ Other (describe)

CREATING A PERSUASIVE COMMUNICATION ‹—— **See pages 67–68**

1. What is your reader's attitude toward your subject? What do you want it to be?
   She believes the current system is the best possible. I want her to see that mine is better.

(*Continued*)

FIGURE 3.4

(*Continued*)

2. What is your reader's attitude toward you? What do you want it to be?
   Ms. Land thinks I am a good summer employee but that, like all summer employees, I am not knowledgeable enough to make recommendations worth serious consideration.

3. What is your reader's attitude toward your organization? What do you want it to be?
   Not relevant since I work in Ms. Land's department.

READER'S PROFILE ← **See pages 68–77**

1. Job title
   Manager of the Translation Department.

2. Familiarity with your topic
   Very familiar.

3. Familiarity with your specialty
   Very familiar.

4. Relationship to you
   Ms. Land is my boss. She likes to maintain a formal superior-subordinate relationship.

5. Personal characteristics you should take into account
   She designed the current system and may feel defensive if I suggest it can be improved.

6. Cultural characteristics you should take into account
   None.

7. Who else might read your communication?
   A few experienced employees. They will have the same perspective as Ms. Land.

CONTEXT ← **See pages 77–78**

1. What features of the context may affect the way your reader reads your communication?
   Ms. Land may have been told that it is time for her to retire.

2. What expectations, regulations, or other factors constrain the way you can write?
   None.

ETHICAL TREATMENT OF STAKEHOLDERS ← **See page 78–79**

1. Who, besides your reader, are stakeholders in your communication?
   Persons requesting urgent translations. Volunteers.

2. How will they view its impact on them?
   Persons making urgent requests will appreciate the better service. Volunteers who aren't selected for the top group may feel that they aren't valued.

existed. To write effectively, Stephanie would have to demonstrate that the current system could be improved—without seeming to criticize Ms. Land.

The worksheet also reminded Stephanie of Ms. Land's belief that student employees like Stephanie didn't understand the complex issues involved in running a nonprofit organization. Therefore, Stephanie predicted, Ms. Land would immediately hunt for holes in Stephanie's knowledge. Consequently, she decided to demonstrate her grasp of the situation by addressing many issues she hadn't previously thought to include: Who would determine which translations were urgent? What criteria would be used? How would the most productive translators be identified? How would the work of the office staff be altered? What would be the impact on their other work?

Similarly, when she filled out the Writer's Guide's section on context, Stephanie remembered that two months earlier Ms. Land had successfully resisted pressure from several members of the agency's board of directors to force her to retire so that a younger person might take over. Stephanie realized that while a reference to the board members' desire for more streamlined operations might be persuasive for some readers, it would likely arouse hostility from Ms. Land.

Finally, while trying to fill out the section concerning stakeholders, Stephanie realized that, so far, she had thought about her plan only from the perspective of persons requesting rapid Braille translations. She had neglected to consider her plan's impact on the volunteer translators themselves. By talking with a few, she learned that those who might be judged less reliable and less speedy would be deeply offended. To avoid causing them to lose self-esteem, she modified her proposal: The agency would ask all the translators how many pages they could commit to translating in a week. Urgent translations would go to those who made the largest commitments. Translators who failed to meet their original commitment would be invited to specify a lower commitment that would better suit their personal schedules.

Because of her expertise at defining objectives, Stephanie was able to write a detailed, diplomatic, four-page memo. After several months of deliberation, Ms. Land accepted Stephanie's proposal. Stephanie's example illustrates the many *immediate* insights you can gain by taking this reader-centered approach. But the benefits will continue. The rest of this book's chapters tell how you can use your reader-centered understanding of a communication's objectives throughout all your work on it.

CONCLUSION

The major lesson to take away from this chapter is simple: You can greatly increase your ability to write successfully if you define your communications' objectives by focusing on your reader, not yourself. Imagine the tasks your reader will want to perform while reading. Helping your reader perform these tasks is the first of your communication's purposes. Think too about the ways you want your communication to alter your reader's attitudes. Bringing about these changes is your communication's second purpose. Next, learn enough about your reader and your reader's context to make a mental movie of him or her in the act of reading. You can use the movie to predict the way your reader is likely to respond to ways you might write your communication. Using your imagination and creativity in the same way, you can ensure that you are writing ethically: Identify your communication's stakeholders and the ways your communication might affect them.

USE WHAT YOU'VE LEARNED

For additional exercises, go to Chapter 3 in your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Find an example of a communication you might write in your career. Following the guidelines in this chapter, define its objective. Be sure to identify each of the following items:

   - The readers and their characteristics
   - The stakeholders and the ways they might be affected by the communication
   - The final result the writer desires
   - What the communication must do to be useful to its readers
   - What the communication must do to be persuasive to its readers

   Then explain how the communication's features have been tailored to fit its objectives. If you can think of ways the communication might be improved, make recommendations.

2. Using the Writer's Guide shown in Figure 3.1, define the objectives of an assignment you are preparing for your technical communication class. To download a copy of the guide, go to Chapter 3 in your English CourseMate at www.cengagebrain.com.

EXPLORE ONLINE

Find a web page that could be used as a resource for a person in the profession you're preparing to enter. Describe the target readers, what the web page's creators wanted to help these readers do, and the ways they wanted to influence the readers' attitudes and actions. Evaluate their success in achieving these objectives.

COLLABORATE WITH YOUR CLASSMATES

Working with another student, pick a technical or scientific topic that interests you both. Next, one of you should locate an article on the topic in a popular magazine such as *Time* or *Discover,* and the other should locate an article on the topic in a professional or specialized journal. Working individually, you should each study the ways your article has been written so that its target audience will find the article to be useful and persuasive. Consider such things as the way your article opens, the language used, the types of details provided, and the kind of visuals included. Next, meet together to compare the writing strategies used to meet the needs and interests of the two audiences. Present your results in the way your instructor requests.

APPLY YOUR ETHICS

A variety of websites present case studies that describe ethical issues that arise in business, engineering, science, and other fields. Locate, read, and respond to one such case. For links to ethics cases, go to Chapter 3 in your English CourseMate at www.cengagebrain.com.

CASE Announcing the New Insurance Policy

For additional cases, go to Chapter 3 in your English CourseMate at www.cengagebrain.com. The book's website includes suggestions for teaching the cases.

As you sit in your office in the large, one-story building owned by your employer, you look up from the draft of an e-mail message that company owner C.K. Mitchell sent you a few minutes ago. He asked you for your editorial suggestions.

The e-mail announces a new policy concerning the health insurance premiums for your company's 250 employees. To reduce its health insurance costs by reducing the number of illnesses caused by first- and second-hand smoke, C.K. announced last year that he was forbidding smoking anywhere on company property.

Despite the ban, the company's health care costs have risen substantially again this year, and the anticipated decline in sick days did not occur.

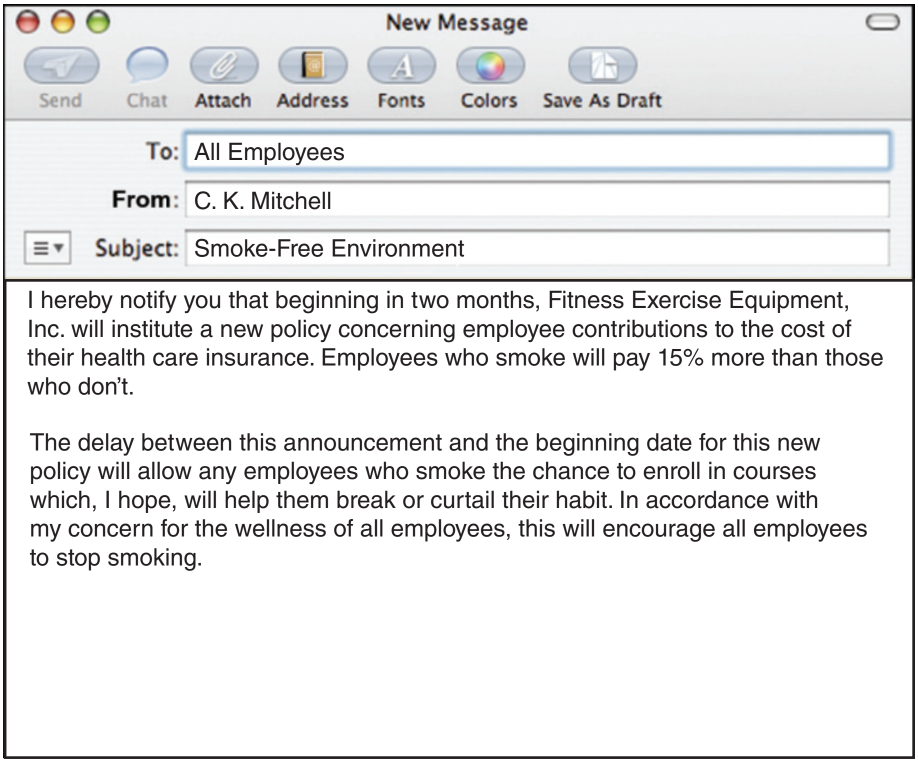
To identify other ways to reduce his company's health care costs, C.K. appointed a committee of managers, including you. At present, the company pays 80 percent of the cost of health care insurance for each employee. Employees pay the rest. Yesterday, after two months of research and deliberation, your committee gave C.K. its recommendation: Smokers should contribute a larger amount than nonsmokers toward the cost of their health insurance.

"C.K.'s e-mail announcing this policy had better be good," you think as you prepare to read his draft. The policy, which is certain to be unpopular with many employees, will come as a complete surprise. The existence of a committee considering health care policy has been kept secret. After last year's ban on smoking on company property, a few employees quit. Others may follow now. Even if they don't, the policy will deal a blow to employee morale, which has declined over the past year. While many nonsmokers were pleased by last year's ban, the ban has been a source of dissatisfaction with many employees, even some who do not smoke. C.K announced it in a way many perceived to be insensitive, and he put it into effect quickly, leaving little time for smokers to adjust or engage in smoking-cessation programs. Then, just two months ago C.K. reduced the company's contribution to the company's profit-sharing plan despite a steady rise in revenues. He is using the money saved to buy the building next door. Although the purchase will save money and increase profits in the long run, C.K.'s action is widely viewed as yet another example of his insensitive style.

YOUR ASSIGNMENT

First, fashion a reasonable set of objectives for C.K.'s e-mail message (Figure 3.5) by filling out a Writer's Guide for Defining Your Communication's Objectives (Figure 3.1; a downloadable copy is available in your English CourseMate at www.cengagebrain.com).

Second, in light of the objectives you have established, list four ways C.K. could increase the effectiveness of his draft announcement. Be prepared to explain your revisions to C.K.



To: All Employees

From: C. K. Mitchell

Subject: Smoke-Free Environment

I hereby notify you that beginning in two months, Fitness Exercise Equipment, Inc. will institute a new policy concerning employee contributions to the cost of their health care insurance. Employees who smoke will pay 15% more than those who don't.

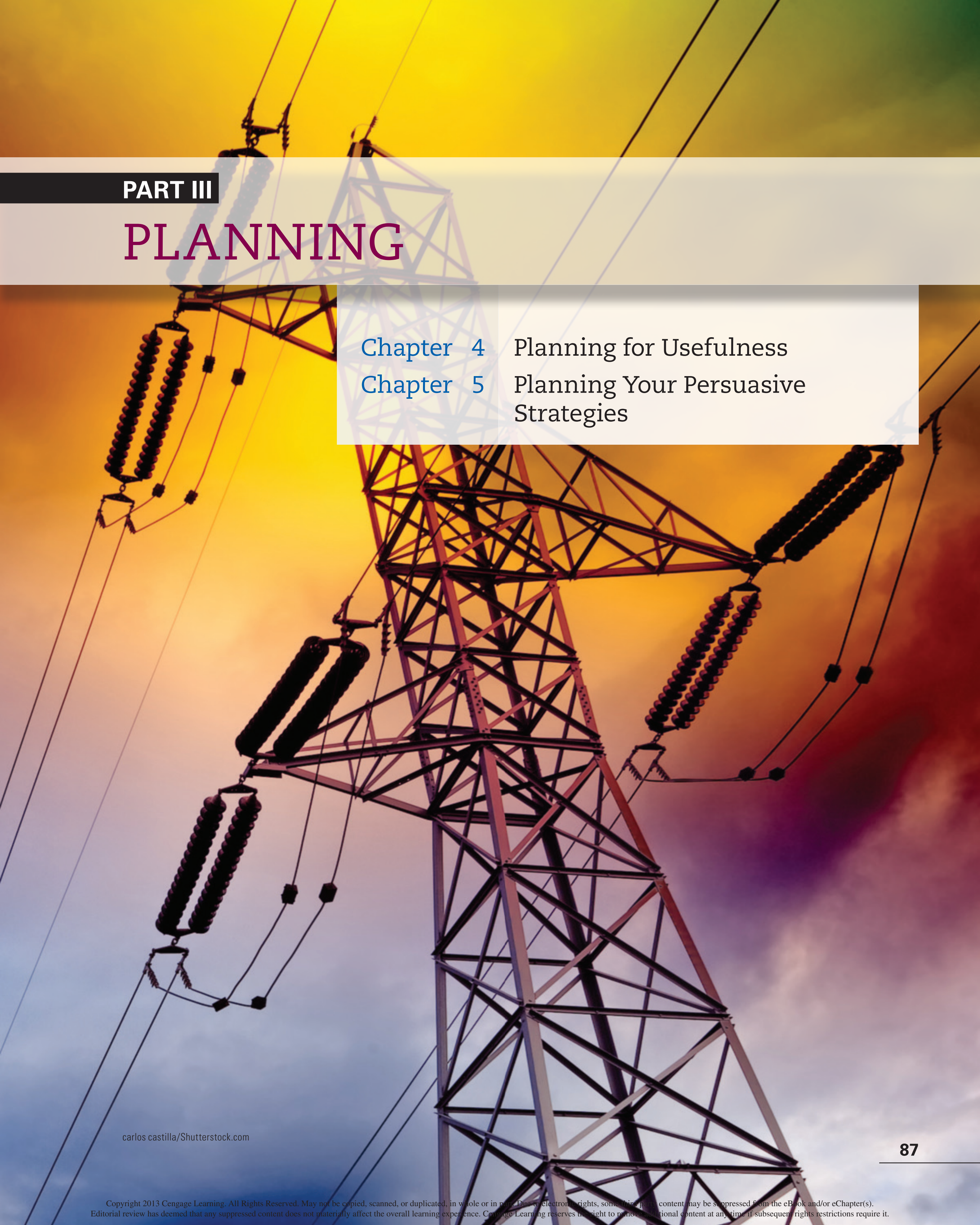
The delay between this announcement and the beginning date for this new policy will allow any employees who smoke the chance to enroll in courses which, I hope, will help them break or curtail their habit. In accordance with my concern for the wellness of all employees, this will encourage all employees to stop smoking.

FIGURE 3.5

Draft E-mail for Use with Case

PART III

PLANNING



carlos castilla/Shutterstock.com

4 | Planning for Usefulness

This chapter and the next one address a question that you and all writers face when taking a reader-centered approach to writing at work. Let's let Toni answer the question for us. A recent college graduate, she's just been asked by her employer, a large construction company, to prepare a report that evaluates several high-end computer programs it's considering distributing to all of its civil engineers. Toni understands that she must make her report both useful and persuasive *in her readers'* eyes. That is, she knows that her task is to create a report that her readers can easily *use* as they compare the computer programs, and she knows that the report must *persuade* her readers that she has provided all the information they need to be able to select the best program. "Now," she asks, "what's the best way for me to move from knowing what my report must do to actually creating the report I need to write?"

This chapter begins to answer her question by describing strategies she and you can use to plan communications your readers will praise for being very useful and very helpful to them. The next chapter completes the answer by focusing on planning for persuasiveness.

WEB For additional information and examples related to this chapter's guidelines, go to Chapter 4 in your English CourseMate at *www.cengagebrain.com.*

WHAT TO LEARN ABOUT HOW TO CREATE USEFUL COMMUNICATIONS

All features of a communication have an impact on its usefulness. However, when you are planning, some deserve more attention than others. This chapter provides advice about them, including the content and organization needed to help the reader, as well as strategies you can use to enable the reader to grasp your meaning quickly. As you read this chapter, discuss it in class with your instructor, and apply its advice to writing projects your instructor has assigned, focus on developing your ability to do the following:

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Provide the exact content your readers need.
2. Organize in a way that helps your readers perform their tasks.
3. Help your readers quickly find what they want.
4. Help your readers quickly understand what you are saying.
5. Treat your communication's stakeholders ethically.
6. Test the likelihood that your plans will succeed.

HOW TO PROVIDE THE EXACT CONTENT YOUR READERS NEED

Readers can't use what isn't there. Consequently, your first job when planning for usefulness is to ensure that your communication will be *complete*, that it will include all the information your readers need in order to perform their tasks.

LEARN MORE For detailed advice about identifying the information your readers need, see Chapter 3, pages 64–66.

Guideline 1 | Identify your readers' questions and subquestions

Begin by listing the major questions your readers will bring to your communication or will ask while reading it. To make your communication useful to them, include the answers, as suggested by Chapter 3. But also imagine and answer their *subquestions*. For example, Toni knows that her readers will want to know the total cost of each computer program. By thinking more about the kinds of questions they would ask, she realized that they would also want to know the components of that price. How much of the cost is the purchase price? How much is for customization? How much for support?


Alistair Berg/Digital Vision/Getty Images


iStockphoto.com/Yuri_Arcurs


Marcin Balcerzak/Shutterstock.com

People use communications written at work to perform a wide variety of tasks.

Guideline 2 | Go beyond your readers' questions

Sometimes your readers need more information than they know to ask for. While evaluating the high-end computer programs her employer might distribute to its engineers, Toni learned that the company that produces one program might soon be purchased by a larger rival. When such takeovers occur, the smaller company's products often languish—they are still sold, but are no longer upgraded, a distinct problem for clients who rely on them. Although her readers are not likely to ask about takeover possibilities, this information is relevant to the decision Toni's readers will make. She should include it in her report.

Guideline 3 | Find a superstructure that suggests questions your readers will ask

When you write at work, your situation will closely resemble circumstances encountered by many other people many times before. Toni is not the first person who ever needed to write a report to help her employer compare competing products when deciding which to buy. Over the years, millions of others around the world have done the same. The same is true with almost any communication Toni—or you—create. Maybe it's a report on a business trip, instructions for operating a piece of equipment, or a request for funds for a project. For many of these recurring situations, workplace writers follow conventional patterns when constructing their communications. These patterns are sometimes called *genres*. Here, they are named *superstructures* (van Dijk, 1980).

At work, you will encounter many superstructures: the trip report, budget report, computer manual, project proposal, feasibility report, and environmental impact statement, to name a few. Carolyn R. Miller (1984), Herrington and Moran (2005), and other researchers suggest that each superstructure exists because writers and readers agree that it provides an effective pattern for meeting a particular communication need that repeatedly occurs. Figure 4.1 shows how the superstructure for proposals helps workplace writers decide what to say by identifying the questions their readers will have.

LEARN MORE Later in this chapter, you will learn about an additional way superstructures can help you create useful communications. See page 94.

Guideline 4 | Avoid including information your readers don't need

In a reader-centered communication, it's just as important to omit information your readers don't need as it is to provide all that they do. Toni should avoid including information just because she finds it interesting or wants to demonstrate how much she knows or how hard she worked. Such information only makes it more difficult for readers to locate and use the information they require.

HOW TO ORGANIZE IN A WAY THAT HELPS YOUR READERS PERFORM THEIR TASKS

A useful communication not only includes the information your readers need but also makes it easy for them to use that information. As explained in Chapter 1, reading involves a moment-by-moment interaction between reader and text. In

SUPERSTRUCTURE FOR PROPOSALS		
TOPIC	**READERS' QUESTION**	**HOW THE WRITER WILL ANSWER**
Introduction	What is this communication about?	Provide an overview of the proposed project.
Problem	Why is the proposed project needed?	Describe the problem, need, or goal the project will address.
Objectives	What features will a solution to this problem need in order to be successful?	Identify the features a solution must possess if it is to succeed.
Product or Outcome	How do you propose to do those things?	Describe in detail what the writer will create.
Method	Are you going to be able to deliver what you describe here?	Describe the writer's plan of action; the facilities, equipment and other resources the writer will use; project schedule; the writer's qualifications to conduct the project; and the writer's project management plan.
Costs	What will it cost?	Provide details about the cost.

FIGURE 4.1

Superstructure for Proposals

Each topic in the superstructure for proposals answers a particular question by the reader in a way that readers will find useful.

this interaction, readers perform a sequence of mental tasks. In some cases, these mental tasks are mixed with physical tasks, as when people read instructions. Your communications will be most useful if you organize them to mirror and support the readers' tasks.

Of course, these tasks vary from situation to situation. Consequently, you should think about your specific readers' tasks each time you write. However, some mental tasks are common enough that certain organizational strategies almost always increase usefulness. The following guidelines discuss three of them and provide additional suggestions for devising the most useful way to put the parts of your communication together.

Guideline 1 | Group together the items your readers will use together

What, in essence, do you do when you organize? You decide how to arrange the various pieces of information or advice and the other content of your communication. A variety of arrangements are always possible. To choose the one that will be most *useful* to your readers, focus on the way readers will use what you include: Put the things your readers will use together in the same place.

Daniel followed this strategy when preparing a report that summarized hundreds of research studies on the effects of sulfur dioxide (SO_2) emissions from automobiles and factories. Daniel could have grouped his information in several ways, all of which seemed quite logical. For instance, he could have grouped together all the research published in a given year or span of years. Or he could have discussed all the studies conducted in Europe in one place, all conducted in North America in another place, and so on. However, Daniel is employed by a federal task force. His report would be read by members of the U.S. Congress as they decided how to structure legislation on SO_2 emissions. Daniel knew that, as they considered the adequacy of the current emission standards, these readers would want to read about the impacts of SO_2 emissions on human health separately from the effects on the environment. Therefore, he organized his report around *kinds* of impacts, not around the dates or locations of the studies.

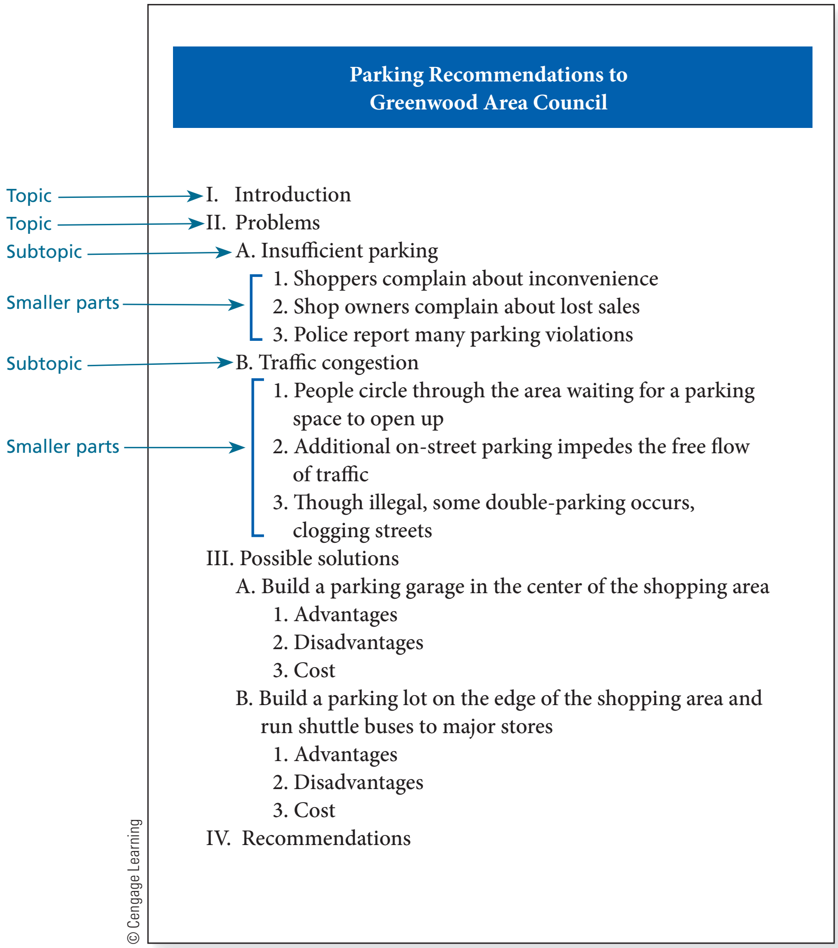
Like Daniel, you can organize your communications in a useful, task-oriented manner by understanding how your information will be used and then grouping together the information your readers will use together.

Guideline 2 | Organize hierarchically

When we read, we encounter small bits of information one at a time: First, what we find in this sentence, then what we find in the next sentence, and so on. One of our major tasks is to build these small bits of information into larger structures of meaning that we can store and work with in our own minds. Represented on paper, these mental structures are hierarchical. They look like outlines (Figure 4.2) or tree

FIGURE 4.2

Outline Showing the Hierarchical Organization of a Report



© Cengage Learning

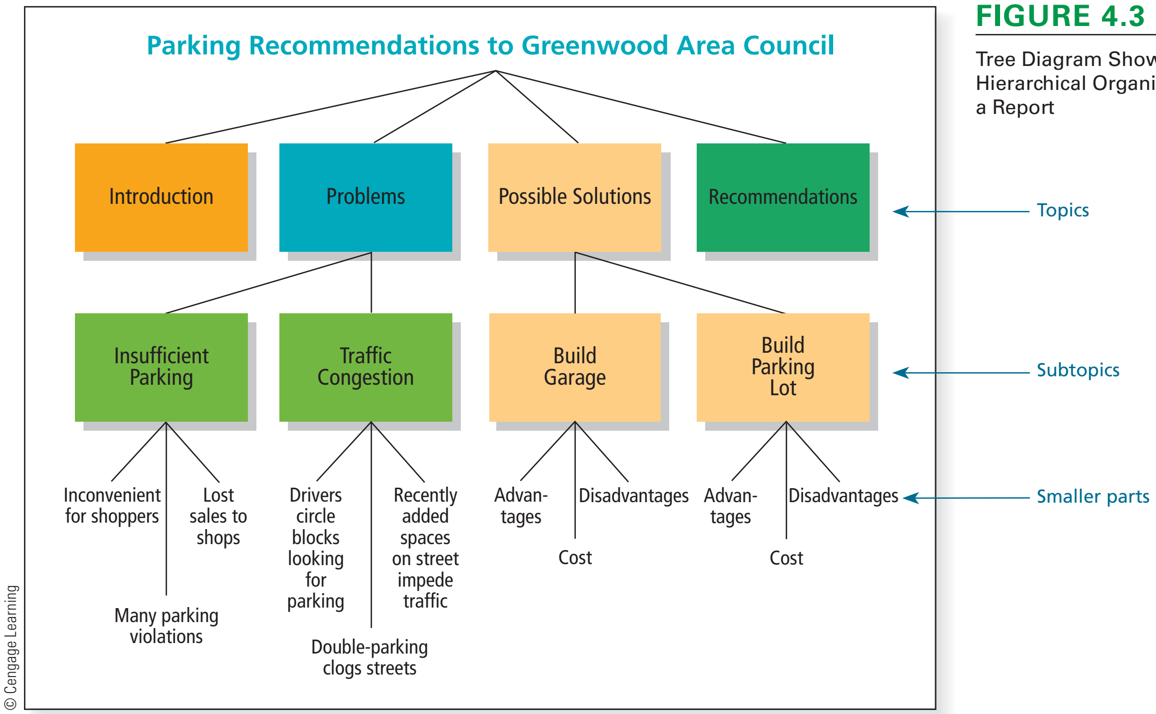


FIGURE 4.3

Tree Diagram Showing the Hierarchical Organization of a Report

diagrams (Figure 4.3), with the overall topic divided into subtopics and some or all of the subtopics broken down into still smaller units. For readers, building these hierarchies can be hard work, as we've all experienced when we've had to reread a passage because we can't figure out how its sentences fit together.

The easiest and surest way to help your readers build mental hierarchies is simply to present your information organized in that way. This doesn't mean that you need to start every writing project by making an outline (see Guideline 5). Often, you may be able to achieve a hierarchical organization without outlining. But you should always organize hierarchically.

LEARN MORE For advice about imagining your readers' tasks, see Chapter 1, page 17, and Chapter 3, page 61.

Guideline 3 | Give the bottom line first

Readers at work often say that their most urgent reading task is to find the writer's main point. The most obvious way to make it easy for them to find your main point is to put it first. Indeed, this strategy for task-oriented organization is the subject of one of the most common pieces of advice given in the workplace: "Put the bottom line first." The bottom line, of course, is the last line of a financial statement. Literally, the writers are being told, "Before you swamp me with details on expenditures and sources of income, tell me whether we made a profit or took a loss." However, this advice is applied figuratively to many kinds of communications prepared at work.

Of course, you don't always need to place your main point in the very first sentence, although this is sometimes the most helpful place for it. When appropriate, you can always provide relevant background information before stating your main point. But don't keep your readers in suspense. As soon as possible, get it out: Is the project on schedule, or must we take special action to meet the deadline? Will the proposed design for our product work, or must it be modified?

Focus on use, not logic, when you organize.

To some writers, it seems illogical to put the most important information first. They reason that the most important information is generally some conclusion they reached fairly late in their thinking about their subject. Consequently, they think, it is logical to describe the process by which they arrived at the conclusion before presenting the conclusion itself. However, such a view is writer-centered. It assumes that information should be presented in the order in which the writer acquired it. In most workplace situations such an organization runs counter to the sequence that readers will find most helpful.

There are, nevertheless, some situations in which it really is best to withhold the bottom line until later in a communication. You will find a discussion of such situations in Chapter 5 (see pages 119–122). As a general rule, however, you can increase your readers' satisfaction and reading efficiency by creating a task-oriented organization in which you give the bottom line first.

Guideline 4 | Adapt an appropriate superstructure

If you look again at Figure 4.1, you will see that it not only helps you determine what to include in a reader-centered proposal but it also provides a framework for organizing. In fact, all superstructures include general outlines that you can adapt to your specific purpose, readers, and context.

However, using these frameworks always requires some creativity and judgment on your part. They are not surefire recipes for success. Each represents a general framework for constructing messages in a typical situation. But no two situations are exactly alike. Moreover, for many situations no superstructure exists. To use superstructures effectively, look for an appropriate one; if you find one, adapt it to your particular purpose and readers.

Chapters 23 through 28 describe the general superstructures for letters, memos, reports, proposals, and instructions. They also describe ways of adapting the superstructures to specific readers and purposes. At work, you may encounter more specialized superstructures developed within your profession or industry— or even within your own organization.

Guideline 5 | Outline, if this will be helpful

When they talk about planning a communication, many people mention outlining and ask, "Is outlining worth the work it requires?" No single answer to this question is valid for all writers and all situations.

On the job, outlining is rarely used for short or routine messages. However, many writers find outlining helpful for longer, more complex communications, especially if they expect to have difficulties in organizing. They use outlining as a way of experimenting with alternative ways of structuring their message before they start drafting. Similarly, if they encounter problems when drafting, some writers will try to outline the troublesome passage.

Also, writers sometimes wish to—or are required to—share their organizational plans with a superior or co-worker. Outlining provides them with a convenient way of explaining their plans to such individuals.

Finally, outlining can help writing teams negotiate the structure of a communication they must create together (see Chapter 19, page 397).

Using Computers to Outline

Some word processing programs include special tools for outlining that enable you to convert your topics immediately into the headings for your document. They also allow you to convert from the normal view of your document to an outline view, so you can review the structure that is evolving as you write. When you move material in the outline, the program automatically moves the corresponding parts of your full text, which can sometimes make for an extremely efficient way to revise a draft. Figure 4.4 shows some features of one widely used desktop publishing program's outlining tool.

TRY THIS How useful are the syllabi for your courses? Why not evaluate one? How easily can you find each day's assignment? Due dates for your papers and projects? Instructions for assignments? What features would increase the syllabus's usefulness for you? What revisions would you recommend?

HOW TO HELP YOUR READERS QUICKLY FIND WHAT THEY WANT

At work, readers often want to find a particular piece of information without reading the entire document that contains it. Perhaps they are reading a communication with many kinds of information, only some of which are relevant to their responsibilities. Perhaps they've previously read the entire document and now want to refresh their memories concerning certain facts. In these and similar situations, one of the reading tasks is to locate the desired information.

Guideline 1 | Create pathways and signposts that direct readers to the content they want

To help your readers quickly locate the information they want, turn once again to your mental portrait of your readers. Picture the various circumstances under which they would want to locate some particular subpart of your overall message. What will they be looking for and what words would they use to describe what they want? With these two pieces of information, you can create a pathway for them, together with signposts to guide them along the way. In shorter communications, you can include headings and subheadings that use the words your readers will use as they search for what they want. In longer documents, you can add tables of contents that will get them to the right sections, where they can use headings to find the exact information they are searching for.

These strategies for helping readers quickly locate information are discussed in detail elsewhere in this book. The important point now is that when planning your communication, even before you begin drafting, you should begin devising ways to make your communication accessible to your readers.

Guideline 2 | Create a modular design if you have a complex audience

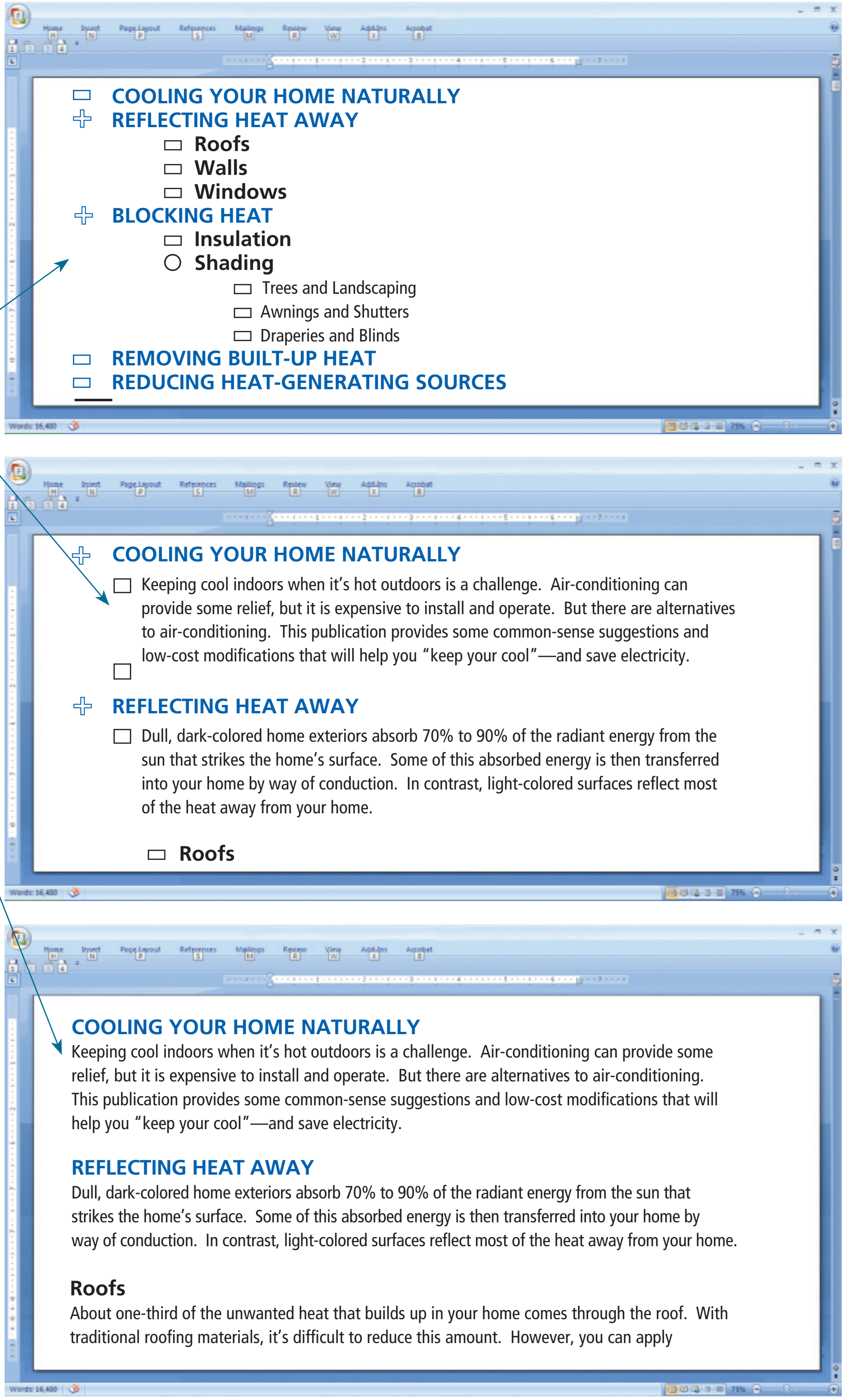
If your communication has a complex audience, one that includes readers whose responsibilities and interests differ, you can also increase accessibility by planning a modular design. In a modular communication, different parts are addressed to different readers or groups of readers.

LEARN MORE For more on modular designs, see Chapter 3, page 75.

Long reports and proposals often use a modular design. Usually such reports have two parts: (1) a very brief summary—called an *executive summary* or

FIGURE 4.4

Outlining Functions of a Desktop Publishing Program



The outlining function of Microsoft Word enables you to:

- Create your outline.
- Add text under your headings.
- Shift instantly to a finished communication.

You can easily switch between viewing the outline and the full text.

You can reorganize your communication simply by moving a heading; the subheadings and text automatically move also.

Text, © Cengage Learning; image © 2012 Microsoft

FIGURE 4.5

Website Showing Modular Design

To help each visitor find quickly the information most relevant to him or her, the Epilepsy Project used a modular design for its website.

The row of colored links provide "Information For" five different groups of readers, ranging from "kids" to "seniors."

There is also a separate link for professionals who work with persons who have epilepsy.

This very useful, reader-centered site also provides readers with access to answers to questions they may have.

- These links help readers who have questions about the condition, its diagnosis, and treatment.
- This link helps readers who want to know about the clinical trials they may be able to join.

abstract—at the beginning of the report, designed for decision makers who want only the key information; and (2) the body of the report or proposal, designed for advisers and implementers, who need the details. Typically, the executive summary is only a page or two long, whereas the body may exceed a hundred pages. The body of the report might be divided into still other modules, one addressed to technical experts, one to accountants, and so on.

Website creators often use modular designs. For example, the Epilepsy Project knew that its website would be visited by several distinct groups of people: adults with epilepsy, their family members, kids and teens with epilepsy, and professionals who treat persons with epilepsy, among others. For each group, the Project created a special area with appropriate information. All of these areas can be accessed from links on the home page (see Figure 4.5).

LEARN MORE For advice on creating modular websites, see Chapter 22.

HOW TO HELP YOUR READERS QUICKLY UNDERSTAND WHAT YOU ARE SAYING

What can you do to help your readers quickly understand the information once they've found it? You already know that you should write clearly and precisely. The following three guidelines identify three additional actions you can take that are especially relevant to workplace writing.

Guideline 1 | Identify the background your readers need about the topic

When you are writing in your courses, you are usually writing to your instructor, who, by the very nature of education, knows more about your topic than you do. That is rarely the case at work. There's no point in telling people what they already know. As Chapter 3 explained, an important element in your portrait of your readers is the amount they know about your topic. When planning your communication, determine exactly what additional information you need to present to your readers to enable them to be able to use the information you are providing. If you don't give all of the necessary information, they will have to do the additional work of asking you or someone else. If you give more than they need, you will have slowed their path to the information they can use.

Guideline 2 | Identify the background your readers need about the situation

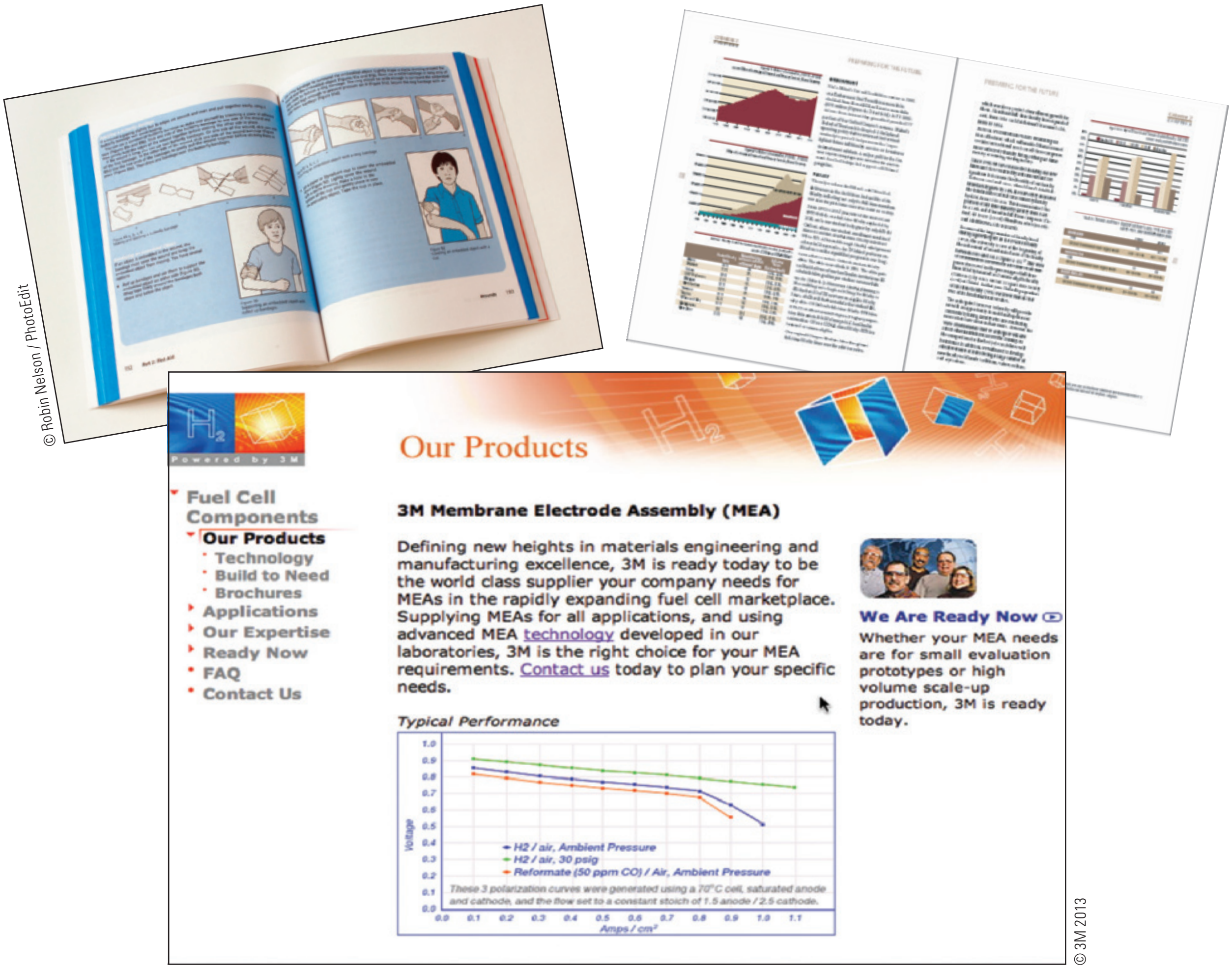
When picking up a report, proposal, or other document, your readers are likely to ask, "What practical question is it going to help me answer?" "What practical problem is this going to help me solve?" These are questions your college instructors don't usually ask. In contrast, at work your co-worker, supervisor, or client wants to know how your communication will assist him or her. Figuring the amount and kind of situational background you need to provide is an essential step in planning effective workplace communications.

Guideline 3 | Identify your readers' cultural expectations

Different cultures have different assumptions about what makes a communication useful. For example, as explained in Chapter 3, writers in some cultures provide a large amount of detail to spell out their meaning fully. Today, researchers follow Edward T. Hall (1976) in calling these *low-context* cultures. German, Scandinavian, and U.S. cultures are examples. Typical readers in low-context cultures expect plenty of detail. If they don't find it, they are likely to feel that the writer has ignored their needs.

In other cultures, writers omit many details. Both they and their readers expect the readers to supply the necessary details by drawing on their knowledge of the situation, the relevant facts and cultural conventions, and the history and nature of their relationship with the writer. These are *high-context* cultures. Arab and Asian cultures are examples. If a communication is filled with details that readers could supply on their own, the readers may feel insulted because the writer appears to assume that they lack the appropriate knowledge.

To illustrate the difference between technical communications written in high- and low-context cultures, researcher Daniel Ding (2003) compared Chinese and U.S. instructions for installing a water heater. The U.S. instructions meet the expectations of a low-context culture by telling the user how to perform each step and substep in the installation process. For instance, to explain how to connect the hot and cold water pipes to the heater, the instructions say: "Put two or three turns of teflon tape or pipe joint compound around the threaded ends of the 3/4" × 3" nipples and, using a pipe wrench, tighten the nipples into the 'HOT' and 'COLD' fittings of the water heater."



Reports, instructions, and web pages are among the many kinds of technical communications that use graphics extensively.

In contrast, the Chinese instructions meet the expectations of readers in a high-context culture by explaining the outcomes of each major step but not the actions needed to achieve the outcome. For instance, the Chinese instructions say that the heater should be connected to the water pipes, but they don't describe the actions necessary to connect them. There's no mention of turning the teflon tape three times, using pipe joint compound, or tightening with a pipe wrench. These details are considered to be part of the contextual knowledge the reader possesses.

Before writing to readers from another culture, learn what you can—through reading and asking others—about the cultural assumptions that may differ from your own, so that you can write in a way these readers will find to be useful.

LEARN MORE For more advice on writing to readers in other cultures, see Chapter 3, page 69, and the Global Guidelines throughout the rest of this book.

Guideline 4 | Plan your graphics

On-the-job communications often use graphics such as charts, drawings, and photographs rather than text to convey key points and information. Graphics convey certain kinds of information more clearly, succinctly, and forcefully than words.

When planning a communication, look for places where graphics provide the best way for you to explain a process (flowcharts), make detailed information readily accessible (tables), clarify the relationship among groups of data (graphs), or show how something looks (drawings or photographs).

Chapter 14 provides detailed advice about where to use graphics and how to construct them effectively. However, don't wait until you read that chapter to begin planning ways to increase your communication's usefulness with graphics.

HOW TO TREAT YOUR COMMUNICATION'S STAKEHOLDERS ETHICALLY

As Chapter 3 explained, the first step in writing ethically is to identify your communication's stakeholders—the people who will be affected by what you say and how you say it. The next step is to learn how your communication will impact these people, so that you can take their needs and concerns into account as you write. Learning how stakeholders feel does not guarantee that they will all be happy with what you ultimately write. But it does guarantee you the opportunity to assure that you are treating them in a way that is consistent with your values.

Guideline 1 | Ask stakeholders directly

The best way to learn how your communication will affect its stakeholders is to talk to these individuals directly. In many organizations, such discussions are a regular step in the decision-making process that accompanies the writing of reports and proposals. When an action is considered, representatives of the various groups or divisions that might be affected meet together to discuss the action's potential impact on each of them.

Similarly, government agencies often solicit the views of stakeholders. For example, the federal agencies that write environmental impact statements are required to share drafts of these documents with the public so that concerned citizens can express their reactions. The final draft must respond to the public's comments.

Even in situations that are traditionally viewed as one-way communications, many managers seek stakeholder input. For instance, when they conduct annual employee evaluations, some managers draft an evaluation, then discuss it with the employee before preparing the final version.

If you are writing a communication for which there is no established process for soliciting stakeholders' views, you can initiate such a process on your own. To hear from stakeholders in your own organization, you can probably just visit or call. To contact stakeholders outside your organization, you may need to use more creativity and also consult with your co-workers.

If you already know the stakeholders well, you may be able to find out their views very quickly. At other times, an almost impossibly large amount of time would be needed to thoroughly investigate stakeholders' views. When that happens, the decision about how much time to spend can itself become an ethical decision. The crucial thing is to make as serious an attempt as circumstances

LEARN MORE For an additional discussion of ways to address an organization's reluctance to consider ethical issues, see pages 265–266.

will allow. Also, you may need authorization from your managers to seek stakeholder views. If you encounter reluctance to grant you this permission, you have an opportunity to open a conversation with your managers about the ethical dimensions of the communication you are writing. Even if they aren't swayed this first time, you will have introduced the issue into the conversation at your workplace. There is a vast difference between doing everything you can do to investigate stakeholders' views, no matter how limited the possibilities are, and failing to consider all the people your communication might affect for better or worse.

Guideline 2 | Imagine what your communication's stakeholders would say

When you are unable to talk with stakeholders directly, you might *imagine* their response to your communication in much the same way that you imagine your readers' likely responses. Of course, we can never know exactly what others are thinking. The greater the difference between you and the stakeholders—in job title, education, and background—the less likely you are to guess correctly. So it's always best to let stakeholders speak for themselves, whenever possible.

HOW TO TEST THE LIKELIHOOD THAT YOUR PLANS WILL SUCCEED

At the heart of the guidelines you have just read is one common strategy: Focus on your readers while you plan. For that reason, the guidelines urged you to refer continuously to various sources of insight into what will make your communication useful to your readers' eyes. Such planning necessarily involves guesswork about what will really work with your readers. In some circumstances, you can test your ideas before you even begin drafting by asking your readers, "Here's what I'm planning. Is this what you'd like?" If it isn't feasible to check your plans with your readers, share them with someone who understands your readers well enough to help you find possible improvements. For projects in your technical communication course, you can check with your instructor. The better your plans, the better your final communication.

CONCLUSION

This chapter has described the reader-centered strategies that successful workplace communicators use in order to plan communications that are highly useful. As you have seen, to develop expertise in using these strategies you must possess the detailed knowledge of your readers that you gained by following Chapter 3's reader-centered advice for defining your communication's objectives. The Writer's Guide shown in Figure 4.6 summarizes this chapter's advice for using your knowledge of your readers to plan communications that are useful (complete, task-oriented, and accessible) as well as ethical.

FIGURE 4.6

Writer's Guide for Planning for Usefulness

To download a copy of this Writer's Guide, go to Chapter 4 in your English CourseMate at www.cengagebrain.com.

Writer's Guide

PLANNING FOR USEFULNESS

Plan Content

1. What questions and subquestions will your readers want your communication to answer?
2. What additional information do your readers need?
3. Is there a superstructure you and use? If so, content does it include?

Organize

1. What will be your readers' reading tasks?
2. What organization will best support your readers as they perform these tasks?
   - ☐ Group together the information your readers will use together.
   - ☐ Create a hierarchical organization.
   - ☐ Adapt the organization of an appropriate superstructure, if one exists.
   - ☐ Give the bottom line first.
   - ☐ Outline your organizational plan, if this will be helpful.

Provide Quick Access to Information

1. What headings and other signposts would help your readers find the information they want?
2. Would a modular design help, if you have readers with different needs?

Help Your Readers Quickly Understand Your Meaning

1. What background information about your topic do they need?
2. What background information about the situation do they need?
3. What cultural expectations should you take into account?
4. What tables, drawings and other graphics would increase your readers' understanding?

Write Ethically

1. Who, besides your readers, are the stakeholders in your report?
2. How might they be affected by it?
3. What do you need to do to treat your readers and other stakeholders ethically?

USE WHAT YOU'VE LEARNED

For additional exercises, go to Chapter 4 in your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

Imagine that you are employed full-time and have decided to take a course at a local college. First, name a course you might like to take. Next, by following Guideline 1 on page 89, list the questions and subquestions your employer would want you to answer in a memo in which you ask the employer to pay your tuition and permit you to leave work early two days a week to attend class.

EXPLORE ONLINE

Develop a list of questions that high school students might ask about studying in your major at your college. Then try to answer these questions by going to your college's website. How accessible are the answers? How complete are they from the viewpoint of high school students? How could the website be made more useful for these students?

COLLABORATE WITH YOUR CLASSMATES

Imagine that you have been hired to create a brochure or website that presents your college department in a favorable light to entering first-year students and students who are thinking of changing their majors. Working with another student and following the guidelines in this chapter, generate a list of things that you and your partner would want to say. How would the two of you group and order this information?

APPLY YOUR ETHICS

Think of a policy of your college or employer that you would like to change. Imagine that you are going to write a report recommending this change. After identifying all the stakeholders, tell how you could gain a complete understanding of the relevant concerns and values of each stakeholder or stakeholder group. Which stakeholders' concerns and values would be most difficult for you to learn about? Why? Would you have more difficulty listening sympathetically to some stakeholders than others? If so, who and why? How would you ensure that you treat these stakeholders ethically?

CASE Filling the Distance Learning Classroom

For additional cases, visit Chapter 4 in your English CourseMate at www.cengagebrain.com. *Instructors*: The book's website includes suggestions for teaching the cases.

You knock on the office door softly, unsure why the Chair of the English Department has asked to meet with you.

"Welcome," Professor Rivera says, immediately putting you at ease. "I'm glad you could come. Professor Baldwin suggested you might be able to help me with a sort of marketing project."

What a relief. At least you haven't done anything wrong.

"Have you heard about our new distance learning classroom?" Professor Rivera asks. You tell her you know that a large room in the English building is being redesigned as a computerized classroom.

"Well, in addition to computers, the room will have video cameras, projection equipment, special software, and a very large screen. By means of this equipment, it can be paired with a similar classroom elsewhere in the world so that students in both locations can become part of the same class.

"In fact, we're getting ready to conduct a few experimental sections of First-Year English in which students here will be paired with students in a similar course at a university in Brazil. A team of faculty from both schools has planned a common syllabus and paired sections here and in Brazil to meet at the same hours. When the Brazilian instructor or students speak, the students and instructor here will be able to see and hear them, and vice versa. Also, students in the two locations will exchange drafts via the Internet, and they will even be able to project a draft of a student's paper in both locations so that all the students can talk jointly about it."

"But isn't Portuguese the native language of Brazil?" you ask.

"Yes," Professor Rivera replies. "All of the Brazilian students will be studying English as a second language, although they will also have studied several years of it before attending their university. Of course, English is a second language for many students here at our own university as well."

"What an interesting project," you observe.

"Yes," Professor Rivera responds. "The faculty members involved think it will have several benefits for students. It's increasingly important for college graduates to be able to work in an international economic and intellectual environment. This course will help prepare them for such work. In addition, many businesses are now using exactly the kind of technology we have placed in the distance learning classroom to hold meetings that involve employees or clients located at various points around the globe. Students in the experimental classes will gain experience with such technology that could give them a tremendous boost in the job market."

"Sounds great," you say. "But what does it have to do with me? I've already completed that course."

"What we'd like you to do is to write a pamphlet we can send this summer to incoming students to entice some of them to sign up for the experimental distance learning sections of First-Year English."

"Sounds easy," you say.

"Well, there are some complications," Professor Rivera explains. "This is an experiment of sorts. Many tests will be run to determine the effects of the distance learning environment. The experiment is important because some faculty members are skeptical about the program, worried that it might focus on technology in ways that will detract from the quality of the writing instruction.

"Because this is an experiment, the faculty members who designed the program want the students in the distance learning sections to represent a cross section of students in First-Year English. It can't be populated with just students who have a high interest in technology or international studies. Therefore, they have asked the Admissions Office to generate a list of 240 randomly selected incoming students to whom the pamphlet will be sent. The aim of the pamphlet is to persuade at least half of the recipients to enroll in six special sections."

"In that case, writing the pamphlet will be a challenge," you agree.

"Will you accept the challenge?" Professor Rivera asks.

"Sure. Why not?"

YOUR ASSIGNMENT

Following the guidelines in Chapter 3, define the objectives for your pamphlet. Then, by following the guidelines in this chapter, list the things you would say in the pamphlet to the incoming students. Identify the things you would need to investigate further before writing.

carlos castilla/Shutterstock.com

5 | Planning Your Persuasive Strategies

Every communication you write at work will have a persuasive dimension, as Chapter 1 explained. Always, for instance, you will want to persuade your readers that you are a careful, intelligent, and knowledgeable professional. Why else will you strive so diligently to eliminate even the occasional misspelling, grammatical mistake, or factual error from your work? But in some communications, persuasion will play a much more central and challenging role: Your primary aim will be to influence your readers' *actions*. This chapter's goal is to work together with your instructor in helping you learn to write these communications effectively.

WEB For additional information about persuasion, go to your English CourseMate at *www.cengagebrain.com*.

THE COMPETITIVE AND COLLABORATIVE USES OF PERSUASION

The purpose of one type of persuasion is to influence other people's actions.

On the job, you will prepare these primarily persuasive communications in two distinct situations. The first involves *competition*. You may write proposals that enable your company to win contracts that other organizations also want. Perhaps you will work for a nonprofit organization where you will write reports to persuade readers to support better policies for accomplishing some goal, such as protecting the environment or endangered species. You may also write to readers in your own organization to advocate improvements in products or policies that others believe should not be changed. As described in Chapter 3, Stephanie was engaged in this kind of persuasion when she urged her employer to change the way it assigned urgently needed Braille translations.

Less obvious, but equally important, will be situations where you will use your persuasive abilities to contribute to *collaborative* and *cooperative* efforts. They occur when scientists gather to discuss ways to interpret new data, when engineers team up to solve a technical problem, and when medical personnel confer about the best way to respond to the outbreak of an illness. You and your co-workers will work together to explore ideas or possible courses of action. While you won't be competing, you will each use your persuasive skills to "argue" back and forth to assure that the advantages of each alternative are fully understood and the weaknesses of each are fully probed.

The goal of another type of persuasion is to enable people to collaborate while exploring ideas and possible courses of action.

WHAT TO CONCENTRATE ON WHEN READING THIS CHAPTER

To help you develop the persuasive skills used in both kinds of persuasive situations, this chapter draws on studies of persuasion that cover more than 2,500 years, beginning with the Greek philosopher Aristotle and extending to scientific studies conducted very recently. These studies, ancient and contemporary, agree that persuasion requires attention to both thought and feeling, logical and nonlogical (subjective and personal) elements. This chapter provides advice about both. But it begins where all effective workplace writing begins: by looking at all persuasive situations from the perspective of the reader. As you read the chapter, discuss it in class, and apply its advice on the projects your instructor assigns, concentrate on developing your ability to do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Focus on your readers' goals and values.
2. Reason soundly.
3. Build an effective relationship with your readers.
4. Organize to create a favorable response.
5. Appeal, when appropriate, to your readers' emotions.
6. Adapt to your readers' cultural background.
7. Persuade ethically.

HOW PERSUASION WORKS

More than twenty-five years ago, researchers Petty and Cacioppo (1986) examined the process by which we influence one another in both competitive and cooperative situations. The key, they demonstrated, is to concentrate on shaping our readers' attitudes.

To persuade, concentrate on shaping your readers' attitudes

At work, you will be concerned with your readers' attitudes toward a wide variety of subjects, such as products, policies, actions, and other people. As Chapter 3 explains, you may use your persuasive powers to change your readers' attitudes in any of the following three ways:

Ways to change readers' attitudes

- **Reverse** an attitude you want your readers to abandon.
- **Reinforce** an attitude you want them to hold even more firmly.
- **Shape** their attitude on a subject about which they currently have no formed opinion.

What determines a person's attitude toward an idea, object, or action? Petty and Cacioppo (1981, 1986) have found that it isn't a single thought or argument, but the sum of the various thoughts a person associates with the idea, object, or action under consideration. Imagine the following.

Edward is considering the purchase of a particular copy machine for his department. Various thoughts cross his mind: the amount of money in his department's budget, the machine's special features (such as the ability to make copies directly from computer files), its appearance and repair record, his experience with another product made by the same company, and his impression of the manufacturer's marketing representative. Each of these thoughts will make Edward's attitude more positive or more negative. He may think his budget has enough money (positive) or too little (negative); he may like the salesperson (positive) or detest the salesperson (negative); and so forth.

The sum of a reader's positive and negative thoughts about an object, action, or person determines his or her attitude.

Some of these thoughts will probably influence Edward's attitude more than others. For instance, Edward may like the machine's special features and color, but those two factors may be outweighed by reports that the machine's repair record is very poor. If the sum of Edward's thoughts associated with the machine is positive, he will have a favorable attitude toward it and may buy it. If the sum is negative, he will have an unfavorable attitude and probably not buy it.

HOW TO FOCUS ON YOUR READERS' GOALS AND VALUES

Easily the most powerful way to prompt your readers to experience favorable or positive thoughts about the ideas, actions, process, or product you advocate is to tell them how it will help them accomplish some goal they want to achieve. For instance, if Edward's goal is to be sure that his department produces polished copies, a writer could influence him to experience favorable thoughts toward a particular copier by pointing out that it reliably prints high-quality images. If his goal is to keep costs low, a writer could influence him to view the copier favorably by emphasizing that it is less expensive to purchase and run than other models.

Similarly, at work you can increase the persuasiveness of communications on any topic by focusing on the goals that guide your readers' decisions and actions. Here is a three-step process for doing so:

Process for developing persuasive strategies based on your readers' goals

1. Identify your readers' goals.
2. Determine how the ideas or actions you are recommending can help your readers achieve their goals.
3. In your communication, focus on the ways your recommended actions and ideas can help your readers achieve their goals.

The most challenging of these steps is often the first. You know, of course, how what *you* want will benefit you. Figuring out how it will help your readers get something important to them often requires both systematic thinking and creativity. The following guidelines suggest the systematic part of the approach. The creativity is something you bring to the table yourself and develop through practice with the guidance of your instructor as you discuss practical situations and work on your course projects.

Guideline 1 | Listen—and respond flexibly to what you hear

The best source of information about your readers' goals is the readers themselves. In some situations, especially collaborative ones, you can ask them. You can also infer their aims by listening to them and to people who tell you about them. When drawing inferences, you may find it helpful to know that the goals of workplace readers are usually business-related, values-related, or achievement-and-growth-related. These three categories of goals are discussed in the next three guidelines.

Successful persuasion can depend as much on how well you listen as on how well you write or speak.

Just as important to the way you listen is the way you respond to what you hear. Be flexible. The things you hear may not only help you determine how to strengthen your communication, but may also suggest ways to improve the action or idea you are advocating.

Guideline 2 | Identify business-related goals you can help your readers achieve

On the job, you will often write to co-workers and employees in other organizations. Because they are hired to advance their employer's interests, employees usually adopt their employer's goals as their own. Consequently, one way to identify your readers' goals is to examine the goals of the organization for which they work.

In any organization, some goals are general and some specific. At a general level, many organizations share the same goals: to increase revenue, operate efficiently, keep employee morale high, and so on. However, each company also has its own unique goals. A company might be seeking to control 50 percent of its market, to have the best safety record in its industry, or to expand into ten states in the next five years. Moreover, each department within a company has specific objectives. Thus, the research department aims to develop new and improved products, the marketing department seeks to identify new markets, and the accounting department strives to manage financial resources prudently. When identifying goals to serve as the basis for persuasion, choose specific goals over general ones.

Organizations have goals at many levels.

Also, as you uncover an organization's various goals, focus on the ones that are most closely related to the specific idea, action, or process you are advocating. Then craft your communication to emphasize the ways that doing what you recommend will help your readers achieve the specific outcomes they desire.

Figure 5.1 shows a marketing brochure that uses organizational objectives to persuade its intended readers (purchasing managers for supermarkets and supermarket chains) to carry a certain product. Notice the boldface statements that proclaim how the product will build sales volume, stimulate impulse buying, and deliver profits.

WEB To view additional communications that employ persuasive strategies described in this chapter, go to Chapter 5 in your English CourseMate at ***www.cengagebrain.com***.

Guideline 3 | Identify values-based goals you can help your readers achieve

Most companies have goals that involve social, ethical, and aesthetic values not directly related to profit and productivity. For instance, Google's *Code of Conduct* famously begins with "Don't be evil" and goes on to detail its obligations to users,

FIGURE 5.1

Brochure That Stresses Organizational Objectives

In this brochure, Welch's tells food retailers how selling one of its products will help them achieve three organizational goals: greater sales volume, more impulse purchases, and increased profits.

Courtesy of Welch's Foods Inc.

employees, business partners, and even competitors. Johnson & Johnson's *credo* spells out its commitment to treating the company's employees respectfully and fostering their growth and advancement, to supporting the communities in which it has facilities, to protecting natural resources, and (lastly) to providing stockholders with a fair return on their investments. Even in companies that do not have an official credo, broad human and social values may provide an effective foundation for persuasion, especially when you are advocating a course of action that seems contrary to narrow business interests. For example, by pointing to the benefits to be enjoyed by a nearby community, you might be able to persuade your employer to strengthen its water pollution controls beyond what is required by law.

In addition, individual employees bring to work personal values that can influence their decisions and actions. Especially when writing to only one or a few readers, learn whether they have personal values that are related to what you are recommending.

Guideline 4 | Identify achievement and growth goals you can help your readers reach

Deficiency needs are needs that disappear when satisfied, as the need for higher pay is satisfied with a pay raise.

In studies of employee motivation that are still highly respected today, Abraham Maslow (2000) and Frederick Herzberg (2003) highlight another type of benefit you can use to persuade. Both researchers confirmed that, as everyone knew, employees are motivated by such considerations as pay and safe working conditions. However, the studies also found that after most people feel they have an adequate income and safe working conditions, they become less easily motivated by these factors. Consequently, such factors are called *deficiency needs:* They motivate principally when they are absent.

Once their deficiency needs are met—and even before—most people are motivated by so-called *growth needs,* including the desire for recognition, good relationships at work, a sense of achievement, personal development, and the enjoyment of work itself.

Growth needs are needs that are always present, like the need for personal development and enjoyment in one's work.

Many other studies have confirmed these findings. For instance, a study of supervisors showed that achievement, recognition, and personal relationships are much more powerful motivators than money (Munter, 1987). Another found that computer professionals are less motivated by salary or status than by the opportunity to gain new skills and knowledge in their field (Warren, Roth, & Devanna, 1984).

These studies demonstrate that one powerful persuasive strategy is to show how the decisions or actions you are advocating will help your readers satisfy their desires for growth and achievement. When you request information or cooperation from a co-worker, mention how much you value his or her assistance. When you evaluate a subordinate's performance, discuss accomplishments as well as shortcomings. When you ask someone to take on additional duties, emphasize the challenge and opportunities for achievement that lie ahead.

Figure 5.2 shows a web page that Chrysler uses to attract new employees. It appeals to college graduates by emphasizing the opportunities they would have with the company to assume responsibility, take on challenges, and grow professionally.

HOW TO REASON SOUNDLY

When you are attempting to influence others, it's impossible to overstate the importance of sound reasoning. For Aristotle, who called it *logos,* logical reasoning was one of the three powerful strategies for persuasion. In today's workplace, as in ancient Greece, one of the most favorable thoughts your readers or listeners could possibly have is, "Yeah, that makes sense." One of the most unfavorable is, "Hey, there's a flaw in your reasoning."

Sound reasoning is especially important when you are trying to influence your readers' decisions and actions. In addition to identifying potential benefits that will appeal to your readers, you also must persuade them that the decision or action you advocate will actually bring about these benefits—that the proposed new equipment really will reduce costs enough to pay for itself in just eighteen months or that the product modification you are recommending really will boost sales 10 percent in the first year.

Sound reasoning is also essential when you are describing conclusions you have reached after studying a group of facts, such as the results of a laboratory experiment or consumer survey. In such cases, you must persuade your readers that your conclusions are firmly based on the facts or data, and that all sensible readers would reach the same conclusions.

Notice that in each of the situations just mentioned (as well as in any other you might encounter on the job), you must not only use sound reasoning, but also convince your readers that your reasoning is sound. The ability to do so is one of the most valuable writing skills you can develop.

Stephen Toulmin developed a way of thinking about reasoning that will help you reason soundly and also show your readers that you do (Toulmin, Rieke, & Janik, 1984). You will also find Toulmin's concepts useful when you are analyzing and evaluating the reasoning in other people's communications.

FIGURE 5.2

Page from a Recruiting Website That Focuses on Growth Needs

On this webpage from its recruiting website, Chrysler Corporation appeals to potential job applicants by promising to give them substantial challenges and significant opportunities for growth.

Note emphasis on challenge and growth in the following quotations.

"What makes the culture at Chrysler so distinctive? All the things that empower you to bring your best."

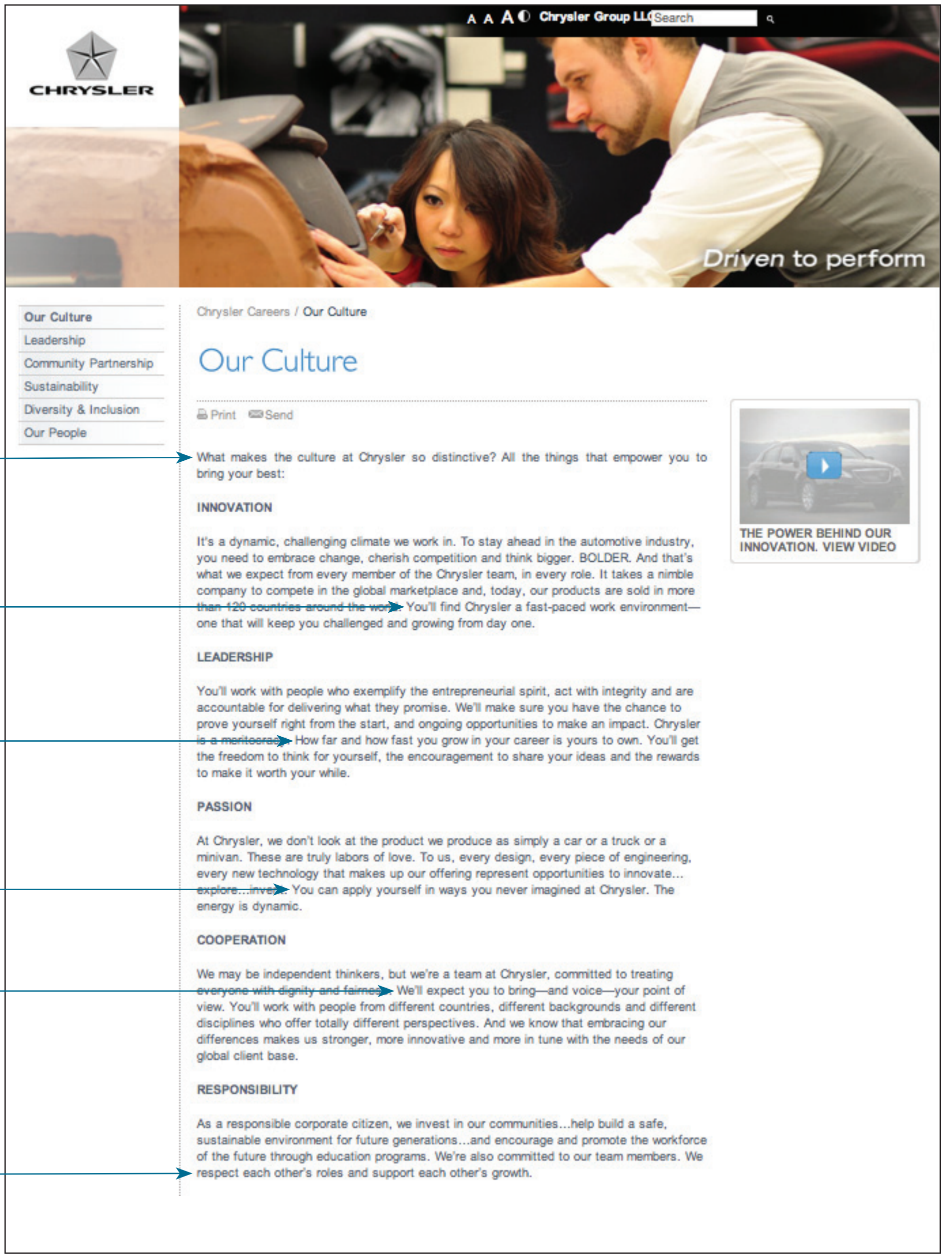
"You'll find Chrysler a fast-paced work environment—one that will keep you challenged and growing from day one."

"How far and how fast you grow in your career is yours to own."

"You can apply yourself in ways you never imagined at Chrysler."

"We expect you to bring—and voice—your point of view."

"We respect each other's roles and support each other's growth."



A A A Chrysler Group LLC Search

CHRYSLER

Driven to perform

Our Culture
Leadership
Community Partnership
Sustainability
Diversity & Inclusion
Our People

Chrysler Careers / Our Culture

Our Culture

Print Send

What makes the culture at Chrysler so distinctive? All the things that empower you to bring your best:

INNOVATION

It's a dynamic, challenging climate we work in. To stay ahead in the automotive industry, you need to embrace change, cherish competition and think bigger. BOLDER. And that's what we expect from every member of the Chrysler team, in every role. It takes a nimble company to compete in the global marketplace and, today, our products are sold in more than 120 countries around the world. You'll find Chrysler a fast-paced work environment—one that will keep you challenged and growing from day one.

LEADERSHIP

You'll work with people who exemplify the entrepreneurial spirit, act with integrity and are accountable for delivering what they promise. We'll make sure you have the chance to prove yourself right from the start, and ongoing opportunities to make an impact. Chrysler is a meritocracy. How far and how fast you grow in your career is yours to own. You'll get the freedom to think for yourself, the encouragement to share your ideas and the rewards to make it worth your while.

PASSION

At Chrysler, we don't look at the product we produce as simply a car or a truck or a minivan. These are truly labors of love. To us, every design, every piece of engineering, every new technology that makes up our offering represent opportunities to innovate... explore...invent. You can apply yourself in ways you never imagined at Chrysler. The energy is dynamic.

COOPERATION

We may be independent thinkers, but we're a team at Chrysler, committed to treating everyone with dignity and fairness. We'll expect you to bring—and voice—your point of view. You'll work with people from different countries, different backgrounds and different disciplines who offer totally different perspectives. And we know that embracing our differences makes us stronger, more innovative and more in tune with the needs of our global client base.

RESPONSIBILITY

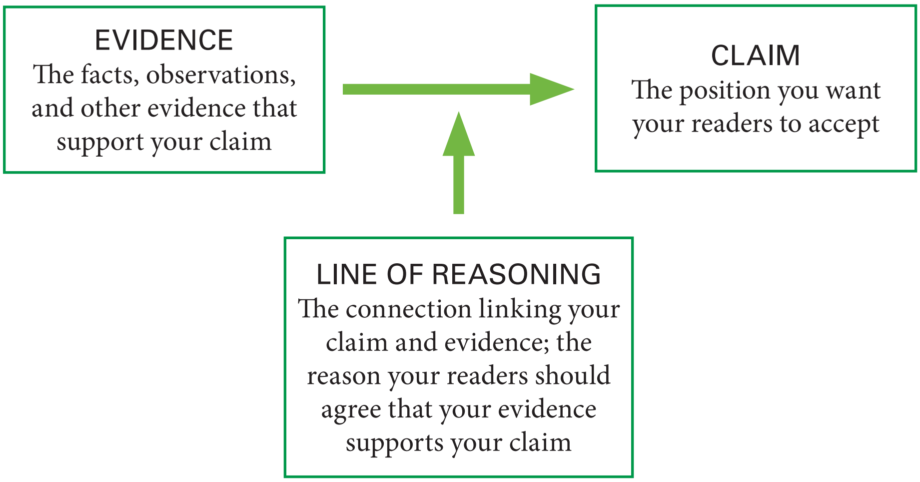
As a responsible corporate citizen, we invest in our communities...help build a safe, sustainable environment for future generations...and encourage and promote the workforce of the future through education programs. We're also committed to our team members. We respect each other's roles and support each other's growth.

THE POWER BEHIND OUR INNOVATION. VIEW VIDEO

© 2012 Chrysler Group LLC.

Sound reasoning involves a *claim*, *evidence*, and a *line of reasoning*. The following diagram illustrates the relationship among them.

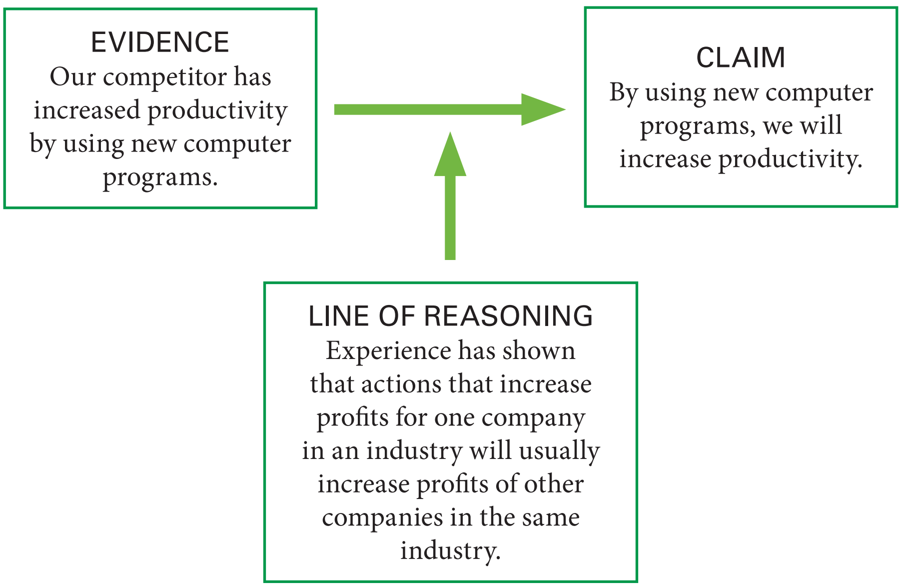
Relationship among claim, evidence, and line of reasoning



© Cengage Learning

Imagine that you work for a company that manufactures cloth. You have found out that one of your employer's competitors recently increased its productivity by using newly developed computer programs to manage some of its manufacturing processes. If you were to recommend that your employer develop similar programs, your argument could be diagrammed as follows:

The line of reasoning explains why the evidence provides support for the claim.



© Cengage Learning

To accept your claim, readers must be willing to place their faith in both your evidence and your line of reasoning. The next two sections offer advice about how to persuade them to do so.

Guideline 1 | Present sufficient and reliable evidence

First, you must convince your readers that your evidence is both sufficient and reliable.

Your evidence is sufficient if it includes all the details your readers want.

To provide *sufficient* evidence, you must furnish all the details your readers will want. For instance, in the example of the textile mills, your readers would probably regard your evidence as skimpy if you produced only a vague report that the other company had somehow used computers and saved some money. They would want to know how the company had used computers, how much money had been saved, whether the savings had justified the cost of the equipment, and so forth.

Your evidence is reliable if your readers will accept it as a valid type of evidence.

To provide *reliable* evidence, you must produce the type of evidence your readers are likely to accept. The type of evidence varies greatly from field to field. For instance, in science and engineering, certain experimental procedures are widely accepted as reliable, whereas common wisdom and unsystematic observation usually are not. In contrast, in many business situations, personal observations and anecdotes provided by knowledgeable people often are accepted as reliable evidence. In general, the following three types of evidence are widely accepted:

The types of evidence readers accept as valid differ from context to context.

- **Data.** Readers typically respond very favorably to claims that are supported by numerical data.
- **Expert testimony.** People with advanced education, firsthand knowledge, or extensive experience related to a topic are often credited with special understanding and insight.
- **Examples.** Specific instances can effectively support general claims.

Guideline 2 | Explicitly justify your line of reasoning where necessary

To argue persuasively, you must not only present sufficient and reliable evidence, but also convince your readers that you are using a valid line of reasoning to link your evidence to your claim. Writers often fail to justify their line of reasoning in the belief that the explanation will be obvious to their readers. In fact, that is sometimes the case. In the construction industry, for example, people generally agree that if an engineer uses the appropriate formulas to analyze the size and shape of a bridge, the formulas will accurately predict whether or not the bridge will be strong enough to support the loads it must carry. The engineer doesn't need to justify the formulas themselves.

Readers sometimes look aggressively for weaknesses in the writer's line of reasoning.

In many cases, however, readers search aggressively for a weak line of reasoning. In particular, they are wary of arguments based on assumptions that may prove to be false. For example, your readers may agree in principle that if another textile mill like yours saved money by computerizing, then your mill would probably enjoy the same result; however, they may question the assumption that the other mill in actuality is like yours. Maybe it makes a different kind of product or employs a different manufacturing process. If you think your readers will suspect that you are making a false assumption, offer whatever evidence or explanation you can to dispel their doubts.

Readers also look for places where writers have overgeneralized by drawing broad conclusions from too few specific instances. If you think your readers will raise such an objection to your argument, mention additional cases. Or, narrow your conclusion to better match the evidence you have gathered. For example, instead of asserting that your claim applies to all textile companies in all situations, argue that it applies to specific companies or specific situations.

Guideline 3 | Respond to—and learn from—your readers' concerns and counterarguments

Although it is tempting to focus your attention on the reasons that your readers should agree with you, you can benefit from learning why they may be reluctant to do so.

In fact, learning your readers' reasons for their concerns and counterarguments can help you improve the project you are proposing or refine the position you are advocating. That's because some of these concerns and counterarguments may be valid. By taking time to evaluate the validity of your readers' position, you might identify ways to strengthen your own.

Your readers' counterarguments can help you improve the project or position you are advocating.

When you are satisfied that your proposed idea or action is as sound as possible, use your insights into your readers' concerns and your understanding of their actual or possible counterarguments to help you increase your communication's persuasiveness. Gaining additional insights into the nature of persuasion will help you do so.

Research shows that when people read, they not only pay attention to the writer's statements, but also generate their own thoughts. Whether these thoughts are favorable or unfavorable can have a greater influence on your readers' attitudes than any point you make in the communication itself (Petty & Cacioppo, 1986). Consequently, when you are trying to persuade, avoid saying anything that might prompt negative thoughts in your readers.

One way to avoid arousing negative thoughts is to answer all the important questions your readers are likely to ask while they are reading your communication. If you neglect to address questions that seem obvious to them—"What are the costs of doing as you suggest?" "What do other people who have looked into this matter think?"—they may believe that you have failed to conduct thorough research or that you are hiding facts that would weaken your position.

In addition to asking questions while reading, your readers may generate arguments against your position. For example, if you say there is a serious risk of injury to workers in a building used by your company, your readers may think to themselves that the building has been used for three years without an accident. If you say a new procedure will increase productivity by at least 10 percent, your readers may think to themselves that some of the data on which you are basing your estimate are inaccurate. Readers are especially likely to generate counterarguments when you attempt to reverse their attitudes. Research shows that people resist efforts to persuade them that their attitudes are incorrect (Petty & Cacioppo, 1986).

TRY THIS Think of a policy or regulation at your school or workplace that you want to see changed. List the good reasons someone supporting the policy or regulation could have for retaining it.

To deal effectively with counterarguments, you must offer a reason for relying on your position rather than on the opposing one. For example, imagine that you are proposing the purchase of a certain piece of equipment and that you predict your readers will object because it is more expensive than a competitor's product they believe to be its equal. You might explain that the competitor's product, though less expensive to purchase, is more expensive to operate and maintain.

One way to learn about the questions and counterarguments your readers might raise while reading is to ask them about their reasons for holding their present attitudes. Why do they do things the way they do? What arguments do they feel most strongly support their present position? You can also follow Chapter 3's advice for identifying your readers' questions, but, in this regard, remember focus specifically on questions that skeptical readers might pose.

Figure 5.3 shows a letter in which the writer skillfully anticipates and then addresses two counterarguments. The writer is the marketing director of a radio station who is attempting to persuade the owner of a web design company to switch some of its ads to her station.

HOW TO BUILD AN EFFECTIVE RELATIONSHIP WITH YOUR READERS

While reasoning is important in persuasion, it is rarely the only factor that influences readers' attitudes and actions. Another very important factor in the success of a persuasive communication is how your readers feel about you. Even at work, communications are always interpersonal interactions. If your readers feel well disposed toward you, they are likely to consider your points openly and without bias. If they feel irritated, angry, or otherwise unfriendly toward you, they may immediately raise counterarguments to every point you present, making it extremely unlikely that you will elicit a favorable reaction, even if all your points are clear, valid, and substantiated. Good points rarely win the day in the face of bad feelings.

The following sections describe two ways you can present yourself to obtain a fair—or even a favorable—hearing from your readers at work: Present yourself as a credible person, and present yourself as a partner, a supporter, not a critic or opponent.

Guideline 1 | Establish your credibility

The more credible you seem to be, the more open your readers will be to your message.

Your credibility rests on whether or not your readers believe you are a good source of information and ideas. If people believe you are credible, they will be relatively open to what you say. They may even accept your judgments and recommendations without inquiring very deeply into your reasons for making them. If people do not find you credible, they may refuse to give you a fair hearing no matter how soundly you state your case.

Because people's response to a message can depend so greatly on their views of the writer or speaker, Aristotle identified *ethos,* which corresponds roughly to credibility, as the second of the three major elements of persuasion.

In a classic experiment, researchers H. C. Kelman and C. I. Hovland (1953) demonstrated how greatly readers' perception of your credibility affects the way they respond to your message. They asked two groups to listen to a taped speech advocating lenient treatment of juvenile delinquents. Before playing their tape for one group, they identified the speaker as an ex-delinquent out on bail. They told another group that the speaker was a judge. Only 27 percent of those who heard the "delinquent's" talk responded favorably to it, while 73 percent of those who heard the "judge's" talk responded favorably.

FIGURE 5.3

Letter That Addresses Counterarguments

In this letter, Ruth Anne attempts to persuade the owner of a web design company to switch some of its radio advertising to her station.

WGWG *12741 Vienna Boulevard*
Philadelphia, PA 19116

August 17, 2013

Mr. Roger L. McGuffey, President
WEB DESIGNERS, Inc.
1200 Langstroth Avenue
Philadelphia, Pennsylvania 19131

Dear Mr. McGuffey:

Thank you for inviting me to discuss the advantages WEB DESIGNERS would enjoy by switching a portion of your current radio advertising to WGWG.

The switch will increase your audience considerably. According to Arbitron Market Analytics, the 30 spots per week that you buy from WSER and WFAC reach 63% of your target market—small business owners who might purchase your web services. Switching 10 spots to WGWG would increase your reach to 73%. While this change would reduce from 16 to 13 the number of times the average listener hears your message, there would still be ample repetition. In exchange, you would reach 8% more of your target audience. Also, your costs from decrease significantly because we charge less than the other stations.

Ruth Anne states the first counterargument she expects Mr. McGuffey to raise: a reduction in the number of times listeners hear the advertisements.

She addresses the counterargument by saying the benefit more than offsets the perceived disadvantage.

You said that you have seen data showing that WGWG has a higher portion of "unemployed" listeners than either WSER or WFAC. We discovered that in those statistics, "unemployed" means "unemployed outside the home." The vast majority are housewives, who, according to a recent survey, represent a large portion of the entrepreneurs starting at-home companies that do business on the web. Thus, these "unemployed" persons include a key market for WEB DESIGNER's services.

Ruth Anne states a second counterargument, that many of her station's listeners are "unemployed."

She responds by explaining that these "unemployed" individuals are part of Mr. McGuffey's target market.

I suggest that we meet soon to schedule your advertising on WGWG.

Cordially,

Ruth Anne Peterson
Marketing Director

Several factors that influence credibility

Researchers have identified the factors that affect peoples' impression of someone else's credibility. In a summary of this research, Robert Bostrom (1981) identified five such factors: expertise, trustworthiness, group membership, dramatic appeal, and power. By using the following writing strategies, each associated with one of Bostrom's factors, you can build your credibility with your readers.

STRATEGIES FOR BUILDING CREDIBILITY

1. **Expertise.** Expertise is the knowledge and experience relevant to the topic of your communication that your readers believe you possess. *Strategies you can use:*
   - Mention your credentials.
   - Demonstrate a command of the facts.
   - Avoid oversimplifying.
   - Mention or quote experts so their expertise supports your position.
2. **Trustworthiness.** Trustworthiness depends largely on your readers' perceptions of your motives. If you seem to be acting from self-interest, your credibility is low; if you seem to be acting objectively or from goals shared by your readers, your credibility is high. *Strategies you can use:*
   - Stress values and objectives that are important to your readers.
   - Avoid drawing attention to ways you will benefit.
   - Demonstrate knowledge of the concerns and perspectives of others.
3. **Group membership.** You will gain credibility if you are a member of the readers' own group or a group admired by your readers. *Strategies you can use:*
   - If you are associated with a group admired by your readers, allude to that relationship.
   - If you are addressing members of your own organization, affirm that relationship by showing that you share the group's objectives, methods, and values.
   - Use terms that are commonly employed in your organization.
4. **Dynamic appeal.** An energetic, enthusiastic person has much higher credibility than a passive, guarded one. *Strategies you can use:*
   - State your message confidently and directly.
   - Show enthusiasm for your ideas and subject.
5. **Power.** For example, simply by virtue of the position, a boss acquires some credibility with subordinates. *Strategies you can use:*
   - If you are in a position of authority, identify your position if your readers don't know it.
   - If you are not in a position of authority, associate yourself with a powerful person by quoting the person or saying that you consulted with him or her or were assigned the job by that individual.

In Figure 5.4, the president of a biometric security company uses these strategies when requesting an opportunity to demonstrate a new security system. Figure 5.5 shows how the Land Trust Alliance uses the strategies on its website to persuade people to participate in and support its efforts to preserve farm and natural lands from housing or commercial development.

Guideline 2 | Present yourself as a partner, not a critic

Psychologist Carl Rogers (1952) identified another important strategy in fostering open, unbiased communication: Reduce the sense of threat that people often feel when others are presenting ideas to them. According to Rogers, people are likely to feel threatened even when you make *helpful* suggestions. As a result, your readers may see you as an adversary even though you don't intend at all to be one.

FIGURE 5.4

Letter That Uses Several Strategies for Building Credibility

ABS Alpha Biometric Systems

17 Western Boulevard
Houston, TX 77002

November 12, 2013

Mr. Jeffrey Rajkumar, Security Chief
Antonio Chemicals
22898 Rockland Avenue
Dallas, TX 75226

Dear Mr. Rajkumar:

You can significantly improve security at Antonio Chemicals with our new biometric system, the Eye-C2. On the market for only six months, the Eye-C2 has already been ordered by several federal agencies and major corporations. It received a 2010 Innovation Award from the International Electronics Society.

Why this rapid success? As those of us in the security profession know, criminals have been gaining unauthorized access to high-security areas protected by biometric security systems that read fingerprints. After lifting an authorized person's fingerprint from a glass or other smooth surface, the criminals make a gelatin copy of it. When no one is around, they then have the fingerprint security system scan the gelatin copy, which the system cannot distinguish from a real fingerprint.

In contrast, our patented Eye-C2 scans the blood vessels in a person's retina. The blood vessels form a pattern that is unique to each person and inaccessible to criminals.

I am eager to demonstrate the Eye-C2 for you. Please let me know how I might arrange a meeting.

Sincerely,

Cameron Franks

Cameron Franks
President

In this letter, Cameron Franks uses several strategies for building credibility.

Trustworthiness
He aligns his goal with his reader's goal: to improve security.

He reports that his product has been ordered by organizations whose security knowledge is assumed to be great.

Expertise
He indicates that his product is so technically innovative that it has won an award and a patent (third paragraph).

Group membership
He uses the word "us" to identify himself as a member of the same group as his reader: security professionals.

Power
He indicates that he holds a powerful position in his own company.

Here are four methods, based on the work of Rogers, that you can use to present yourself as nonthreatening to your readers.

STRATEGIES FOR PRESENTING YOURSELF AS A PARTNER

1. **Praise your readers.**
   - When writing to an individual, mention one of his or her recent accomplishments.
   - When writing to another organization, mention something it prides itself on.
   - When praising, be sure to mention specifics. General praise sounds insincere.
2. **Highlight the goals you share.**
   - Identify some personal or organizational goal of your readers that you will help them attain.
   - If you are already your readers' partner, mention that fact and emphasize the goals you share.
3. **Show that you understand your readers.**
   - Even if you disagree with your readers, state their case fairly.
   - Focus on areas of agreement.

FIGURE 5.5

Website That Uses Several Strategies for Building Credibility

This website by the Land Trust Alliance uses several techniques for building its credibility. The Alliance seeks to preserve farm and natural lands from development.

Dynamic Action
The Alliance devotes a major section to "Policy Action."

Trustworthiness
The Alliance has existed long enough to be celebrating its 30th anniversary.

Expertise
The Alliance has the expertise to provide training to others.

Courtesy of Land Trust Alliance

Power
The Alliance has enough power to have persuaded the US Senate to reject two amendments that were hostile to its goals.

Group membership
Photos at the top right show people from whom the organization hopes to win support.

4. **Maintain a positive and helpful stance.**
   - Present your suggestions as ways of helping your readers do an even better job.
   - Avoid criticizing or blaming.

To see how to apply this advice, consider the following situation. Marjorie Lakwurtz is a regional manager for a company that hires nearly 1,000 students in various cities during the summer months to paint houses. The company requires each student to pay a $250 deposit to cover the cost of lost equipment. Noting that the equipment isn't worth even $100, the students believe the company demands the deposits so it can invest the money and keep the interest for itself.

Marjorie agrees with the students and decides to write a memo suggesting that the company change its policy. She could argue for the change in a negative way by telling the company that it should be ashamed of its greedy plot to profit by investing the students' money. Or she could take a positive approach, presenting her suggestion as a way the company can better achieve its own goals. In the memo shown in Figure 5.6, she takes the latter course. Notice how skillfully she presents herself as her reader's partner.

HOW TO ORGANIZE TO CREATE A FAVORABLE RESPONSE

The way you organize a communication may have almost as much effect on its power to persuade as what you say in it. That point was demonstrated by researchers Sternthal, Dholakia, and Leavitt (1978), who presented two groups of people with different versions of a talk urging that a federal consumer protection agency be established. One version *began* by saying that the speaker was a highly credible source (a lawyer who graduated from Harvard and had extensive experience with consumer issues); the other version *ended* with that information.

The order in which you present information can affect the reader's response to your overall message.

Among people initially opposed to the speaker's recommendation, those who learned about his credentials at the beginning responded more favorably to his arguments than did those who learned about his credentials at the end. Why? This outcome can be explained in terms of two principles you learned in Chapter 1. First, people react to persuasive messages moment by moment. Second (and here's the key point), their reactions in one moment will affect their reactions in subsequent moments. In this experiment, those who learned of the speaker's credentials before hearing his arguments were relatively open to what he had to say. But those who learned of the speaker's credentials only at the end worked more vigorously at creating counterarguments as they heard each of his points. After those counterarguments had been recorded in memory, they could not be erased simply with new information about the speaker's credibility.

Thus, it's not only the array of information that is critical in persuasion, but also the way readers process the information. The following sections suggest two strategies for organizing to elicit a favorable response: Choose carefully between direct and indirect organizational patterns, and create a tight fit among the parts of your communication.

FIGURE 5.6

Memo in Which the Writer Establishes a Partnership with the Reader

PREMIUM STUDENT PAINTERS, INC.

TO Martin Speed

FROM Marjorie Lakwurtz ML

DATE October 7, 2014

RE **Protecting Company Profits**

During my first year with Premium Student Painters, I have learned an enormous amount about what contributes to our company's incredible success. One key factor is our ability to hire 1000 college students who are willing to work so energetically and diligently all summer long on the house-painting jobs we arrange. In fact, the students' positive attitude is indispensable to our success. If they slack off, our profits drop. If they become careless, splattering and spilling paint, for instance, we lose profits on cleaning up and compensating customers.

Because the students' commitment is so crucial to our success, I have a suggestion for keeping it strong. Students in several cities have complained to me about the $250 equipment deposit we require. They believe the company requires the deposit so it can invest their money during the summer, keeping the profits for itself. Why else, they ask, would the deposit be so much larger than the value of the equipment we give them to use?

I realize that we have good reason for setting the deposit at $250, but I worry that the students' belief could reduce their commitment to us, thereby threatening our profits and customer relations. To avoid this risk, I suggest that we include the interest earned when we return the deposits at summer's end. It would be difficult, I know, to calculate the precise amount of interest earned by each student. All deposits are placed in one account and different students work different numbers of weeks. However, we could pay a flat amount to each student: for example, the interest one deposit would earn in three months.

Returning the interest would create some extra work for our office staff, but it could pay off handsomely in the students' productivity, which is the source of our profits.

Marjorie writes her memo's subject to align with her reader's goal profit.

She opens by praising the company.

Marjorie links the student employees' attitudes with Speed's goal of making a profit.

She uses "we" and "our" throughout the memo to reinforce the sense of partnership with Speed.

Marjorie presents herself as Speed's partner in the mutual goal of keeping student commitment (and company profits) strong.

She shows that she understands Speed's reason for the high deposit.

She states the problem in terms of Speed's concern with profits.

She states a counterargument to her suggestion.

She addresses the counterargument by offering an alternative.

Marjorie closes on a positive note that focuses on Speed's goal of making a profit.

Guideline 1 | Choose carefully between direct and indirect organizational patterns

As you learned in Chapter 4, the most common organizational pattern in the workplace begins with the bottom line—the writer's main point. Communications organized this way are said to use a *direct pattern* of organization because they go directly to the main point and only afterward present the evidence and other information related to it. For example, in a memo recommending the purchase of a new computer program, you might begin with the recommendation and then explain why you think the new program is desirable.

In the direct pattern, you state the main point up front, before presenting the supporting evidence.

The alternative is to postpone presenting your main point until you have presented your evidence or other related information. This is called the *indirect pattern* of organization. For example, in a memo recommending the purchase of a new computer program, you might first explain the problems created by the current program, withholding until later your recommendation that a new one be purchased.

In the indirect pattern, you postpone the main point.

To choose between the direct and indirect organizational patterns, focus your attention on your readers' all-important initial response to your message. The direct pattern will start your readers off on the right foot when you have good news to convey: "You're hired," "I've figured out a solution to your problem," or something similar. By starting with the good news, you put your readers in a favorable frame of mind as they read the rest of your message.

The direct pattern also works well when you are offering an analysis or recommending a course of action that you expect your readers to view favorably—or at least objectively—from the start. Leah is about to write such a memo, in which she will recommend a new system for managing the warehouses for her employer, a company that manufactures hundreds of parts used to drill oil and gas wells. Leah has chosen to use the direct pattern shown in the left-hand column of Figure 5.7. This is an appropriate choice because her readers (upper management) have expressed dissatisfaction with the present warehousing system. Consequently, she can expect a favorable reaction to her initial announcement that she has designed a better system.

Use the direct pattern of organization when you expect a favorable response from your readers.

The direct pattern is less effective when you are conveying information your readers might view as bad, alarming, or threatening. Imagine, for example, that Leah's readers are the people who set up the present system and that they believe it is working well. If Leah begins her memo by recommending a new system, she

Direct Pattern	Indirect Pattern
I. Leah presents her recommended strategy.	I. Leah discusses the goals of the present system from the *reader's point of view.*
II. Leah explains why her way of warehousing is superior to the present way.	II. Leah discusses the ways in which the present system does and does not achieve the reader's goals.
III. Leah explains in detail how to implement her system.	III. Leah presents her recommended strategy for achieving those goals more effectively, focusing on the ways her recommendation can overcome the shortcomings of the present system.
	IV. Leah explains in detail how to implement her system.

FIGURE 5.7

Comparison of Direct and Indirect Organizational Patterns for Organizing Leah's Memo

The direct pattern presents the recommendation first.

The indirect pattern delays recommendation; it's for use where the reader may react unfavorably.

Consider using the indirect pattern when you believe your readers will respond negatively to your main point unless you prepare them for it beforehand.

might put her readers immediately on the defensive because they might feel she is criticizing their competence. Then she would have little hope of receiving an open and objective reading of her supporting information. By using an indirect pattern, however, Leah can *prepare* her readers for her recommendation by first getting them to agree that it might be possible to improve on the present system. The right-hand column of Figure 5.7 shows an indirect pattern she might use.

You may wonder why you shouldn't simply use the indirect pattern all the time. It presents the same information as the direct organization (plus some more), and it avoids the risk of inciting a negative reaction at the outset. The trouble is that this pattern frustrates the readers' desire to learn the main point first.

In sum, the choice between direct and indirect patterns of organization can greatly affect the persuasiveness of your communications. To choose, you need to follow the basic strategy suggested throughout this book: Think about your readers' moment-by-moment reactions to your message.

Guideline 2 | Create a tight fit among the parts of your communication

When you organize a communication, you can also strengthen its persuasiveness by ensuring that the parts fit together tightly. This advice applies particularly to longer communications, where the overall argument often consists of two or more subordinate arguments. The way to do this is to review side by side the claims made in the various parts of a communication.

To create a tight fit, be sure all parts of your communication work together to support your overall position.

For example, imagine that you are writing a proposal. In an early section, you describe a problem your proposed project will solve. Here, your persuasive points are that a problem exists and that the readers should view it as serious. In a later section, you describe the project you propose. Check to see whether this description tells how the project will address each aspect of the problem that you described. If it doesn't, either the discussion of the problem or the discussion of the project needs to be revised so the two match up. Similarly, your budget should include expenses that are clearly related to the project you describe, and your schedule should show when you will carry out each activity necessary to complete the project successfully.

Of course, the need for a tight fit applies not only to proposals but also to any communication whose various parts work together to affect your readers' attitudes. Whenever you write, think about ways to make the parts work harmoniously together in mutual support of your overall position.

HOW TO APPEAL TO YOUR READERS' EMOTIONS

Of Aristotle's three types of persuasive strategies, the appeal to emotions (*pathos*) is used least in workplace communications. In many communications, it makes no appearance at all. In fact, readers would usually consider appeals to emotion in scientific research reports, test reports, and many other types of documents to be highly inappropriate.

In others, appeals to emotion are important. For example, documents on either side of public policy often include them. Organizations that advocate opening new sections of federal land for oil and mineral exploration sometimes include photographs of animals in natural settings to emphasize the measures to be taken to protect them. Organizations opposed to opening the lands sometimes include photographs of damage accompanying such exploration in other areas.

As they advocate healthy life styles, government agencies and private health providers use emotional appeals, as do nonprofit foundations that support research for conditions such as arthritis, breast cancer, and AIDS. See Figure 5.8.

To recruit college graduates in engineering, science, and other specialized fields, employers often include photographs of happy employees to emphasize the pleasures of employment with them.

Base your decisions about whether—and how strongly—to appeal to your readers' emotions on your knowledge of your readers and their likely response. Situations in which you are using emotional appeals are ones in which it can be especially helpful to ask others to review your drafts.

LEARN MORE For more on having other people review your drafts, turn to pages 365–367.

FIGURE 5.8

Websites That Appeal to the Reader's Emotions

Courtesy of National Cancer Institute

On its home page, the National Cancer Institute (NCI) appeals to the emotions of cancer patients, their families, and friends.

In two ways, the site suggests the NCI understands these emotions and offers hope and relief.

1. The large photo portrays an individual overcome by emotions that many people feel when they visit the site. Another photo farther to the right shows three people on a beach, all apparently healthy and strong. Between these images are the NCI employees who will create this transformation: a researcher and a caregiver who looks directly at the reader.
2. The website identifies in words what many of its readers fear: "suffering and death due to cancer." It also promises to "eliminate" them.

In addition, the site also appeals to the readers' emotions by promising assistance to those who "need help." The NCI employees who will provide this help are represented by a smiling person who seems happy to hear from callers.

HOW TO ADAPT TO YOUR READERS' CULTURAL BACKGROUND

Whenever you are writing to readers in a culture other than your own, you will need to learn about the persuasive practices that succeed there. Like all other aspects of communication, every aspect of persuasion can differ from one culture to another.

What people in your culture consider to be persuasive may not be persuasive in another culture.

Consider, for example, the advice conveyed earlier in this chapter: Focus on your readers' goals and values. In different cultures, people's goals and values often differ. The benefits you highlight for readers in one culture will not necessarily appeal to readers in another culture. Marketing specialists are well aware of these differences. To appeal to car buyers, Volvo focuses on safety and durability in the United States, status and leisure in France, and performance in Germany (Ricks, 2000).

Cultural differences in goals and values influence persuasion in the workplace as well as in consumer marketing. For example, in Japan, where group membership is highly valued, the most effective way to influence the attitudes of individual employees is to talk about the success the proposed action will bring to the group. In the United States, where individual achievement is highly valued, appeals to personal goals can be effective in ways they would not be in Japan.

Similarly, different cultures have different views of what counts as evidence or what constitutes credibility. International communication experts Farid Elashmawi and Philip R. Harris (1998) report that in some Arab cultures people support their positions through appeals to emotions and through personal relations, whereas in North America and much of Europe people generally base their arguments on evidence and logic.

You must adapt to your readers' culture even when following advice given earlier in this chapter: Listen—and respond flexibly to what you hear. Imagine that you have sent an e-mail to members of your target audience to find out how they feel about an idea you are planning to propose. If your readers are in the United States, they are likely to tell you directly. However, in many Asian cultures, they are not likely to respond in that way because they would not want you to lose face (Lustig & Koester, 1993). In this case, you may need to listen to their silence, which is an indirect way of indicating disagreement in many Asian cultures.

HOW TO PERSUADE ETHICALLY

The ethical dimensions of on-the-job writing are never more evident than when you are trying to persuade other people to take a certain action or adopt a certain attitude. Here are four guidelines for ethical persuasion that you might want to keep in mind: Don't mislead, don't manipulate, open yourself to your readers' viewpoint, and argue from human values.

Guideline 1 | Don't mislead

When you are writing persuasively, respect your readers' right to evaluate your arguments in an informed and independent way. If you mislead your readers by misstating or suppressing facts, using intentionally ambiguous expressions, or arguing from false premises, you deprive your readers of their rights.

Guideline 2 | Don't manipulate

The philosopher Immanuel Kant originated the enduring ethical principle that we should never use other people merely to get what we want. Whenever we try to influence our readers, the action we advocate should advance their goals as well as our own.

Under Kant's principle, for instance, it would be unethical to persuade readers to do something that would benefit us but harm them. High-pressure sales techniques are unethical because their purpose is to persuade consumers to purchase something they may not need or even want. Persuasion is ethical only if it will lead your readers to get something they truly desire.

TRY THIS Have you ever felt manipulated by a salesperson or someone urging you to take a certain action? What was it about that individual's arguments that made you feel that you were being manipulated to do something you didn't want to do?

Guideline 3 | Open yourself to your readers' viewpoint

To keep your readers' goals and interests in mind, you must be open to understanding their viewpoint. Instead of regarding their counterarguments as objections to be overcome, try to understand what lies behind their concerns. Consider ways of modifying your original ideas to take your readers' perspective into account.

Rather than treat your readers as adversaries, accept them as your partners in a search for a course of action acceptable to all (Lauer, 1994). Management experts call this the search for a "win–win" situation—a situation in which all parties benefit (Covey, 1989).

Guideline 4 | Argue from human values

Whenever you feel that human values are relevant, don't hesitate to introduce them when you are writing to persuade. Many organizations realize the need to consider these values when making decisions. In other organizations, human values are sometimes overlooked—or even considered to be inappropriate topics—because the employees focus too sharply on business objectives. However, even if your arguments based on human values do not prevail, you will have succeeded in introducing a consideration of these values into your working environment. Your action may even encourage others to follow your lead.

CONCLUSION

This chapter has focused on writing persuasively in both competitive and cooperative situations. As you can see, nearly every aspect of your communication affects your ability to influence your readers' attitudes and actions. Although the guidelines in this chapter will help you write persuasively, the most important persuasive strategy of all is to keep in mind your readers' needs, concerns, values, and preferences whenever you write.

Figure 5.9 provides a guide you can use when planning your persuasive strategies.

FIGURE 5.9

Writer's Guide for Planning Your Persuasive Strategies

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide

PLANNING YOUR PERSUASIVE STRATEGIES

Understand Your Readers' Goals ← See page 106

1. What organizational goals affect your readers and are related to your topic?
2. What are your readers' values-based goals that are related to your topic?
3. What are your readers' achievement and growth goals?

Reason Soundly ← See page 109

1. What kinds of evidence will your readers consider to be reliable and persuasive support for your claims?
2. Where will you need to justify your line of reasoning?
3. Where do you need to be cautious about avoiding false assumptions and overgeneralizations?

Respond to Your Readers' Concerns and Counterarguments ← See page 113

1. What concerns or counterarguments might your readers raise?
2. How can you respond persuasively to these concerns and counterarguments?
3. Where do you need to be careful about inspiring negative thoughts?

Build a Relationship with Your Readers ← See page 115

1. What strategies can you use to present yourself as a credible person?
2. What strategies can you use to present yourself as a partner, not a critic?

Organize to Create a Favorable Response ← See page 119

1. Would a direct or indirect organizational pattern be most effective?
2. What specific strategies can you use to create a tight fit among the parts?

Appeal to Your Readers' Emotions ← See page 122

1. Will your readers think that an appeal to their emotions is appropriate?
2. If so, what kind of emotional appeal would be effective in this situation with your readers?

Adapt to Your Readers' Cultural Background ← See page 124

1. Do you need to check your draft with people who share your readers' cultural background?

Persuade Ethically ← See page 124

1. Avoid misleading or manipulative statements.
2. Consider your readers' viewpoint openly.
3. Assure that the relevant human values are considered.

USE WHAT YOU'VE LEARNED

For additional exercises, go to Chapter 5 in your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Find a persuasive communication that contains at least 25 words of prose. It may be an advertisement, marketing letter, memo from school or work, or a web page. What persuasive strategies are used in the prose and any images that are included? Are the strategies effective for the intended audience? Are all of them ethical? What other strategies might have been used? Present your responses as requested by your instructor.
2. Do the "Unsolicited Recommendation" assignment given in Appendix B.

EXPLORE ONLINE

Study the website of a company or organization related to your major or career. What attitudes toward the organization and its products or services does the site promote? What persuasive strategies are used in the text and images in order to persuade readers to adopt the desired attitudes? How effective are these strategies? Are all of them ethical?

COLLABORATE WITH YOUR CLASSMATES

Working with one or two other students, analyze the letter shown in Figure 5.10, identifying its strengths and weaknesses. Relate your points to the guidelines in this chapter. The following paragraphs describe the situation in which the writer, Scott Houck, is writing.

Before going to college, Scott worked for a few years at Thompson Textiles. In his letter, he addresses Thompson's Executive Vice President, Georgiana Stroh. He is writing because in college he learned many things that made him think Thompson would benefit if its managers were better educated in modern management techniques. Thompson Textiles could enjoy these benefits, Scott believes, if it offered management courses to its employees and filled job openings at the managerial level with college graduates. However, if Thompson were to follow Scott's recommendations, it would have to change its practices considerably. Thompson has never offered courses for its employees and has long sought to keep payroll expenses low by employing people without a college education, even in management positions. (In a rare exception to this practice, the company has guaranteed Scott a position after he graduates.)

To attempt to change the company's policies, Scott decided to write a letter to one of the most influential people on its staff, Ms. Stroh. Unfortunately for Scott, throughout the three decades that Stroh has served as an executive officer at Thompson, she has consistently opposed company-sponsored education and the hiring of college graduates. Consequently, she has an especially strong motive for rejecting Scott's advice: She is likely to feel that, if she agreed that Thompson's educational and hiring policies should be changed, she would be admitting that she had been wrong all along.

APPLY YOUR ETHICS

Find an online or print communication you feel is unethical. Identify the specific elements in the text or images that you feel are untrue, misleading, or manipulative. Present your analysis as your instructor requests.

FIGURE 5.10

Letter for "Collaborate with Your Classmates" Exercise

616 S. College #84
Oxford, Ohio 45056
April 16, 2013

Georgiana Stroh
Executive Vice President
Thompson Textiles Incorporated
1010 Note Ave.
Cincinnati, Ohio 45014

Dear Ms. Stroh:

As my junior year draws to a close, I am more and more eager to return to our company, where I can apply my new knowledge and skills. Since our recent talk about the increasingly stiff competition in the textile industry, I have thought quite a bit about what I can do to help Thompson continue to prosper. I have been going over some notes I have made on the subject, and I am struck by how many of the ideas stemmed directly from the courses I have taken here at Miami University.

Almost all of the notes featured suggestions or thoughts I simply didn't have the knowledge to consider before I went to college! Before I enrolled, I, like many people, presumed that operating a business required only a certain measure of common sense ability—that almost anyone could learn to guide a business down the right path with a little experience. However, I have come to realize that this belief is far from the truth. It is true that many decisions are common sense, but decisions often only appear to be simple because the entire scope of the problem or the full ramifications of a particular alternative are not well understood. A path is always chosen, but is it always the BEST path for the company as a whole?

In retrospect, I appreciate the year I spent supervising the Eaton Avenue Plant because the experience has been an impetus to actually learn from my classes instead of just receiving grades. But I look back in embarassment upon some of the decisions I made and the methods I used then. I now see that my previous work in our factories and my military experience did not prepare me as well for that position as I thought they did. My mistakes were not so often a poor selection among known alternatives, but were more often sins of omission. For example, you may remember that we were constantly running low on packing cartons and that we sometimes ran completely out, causing the entire line to shut down. Now I know that instead of haphazardly placing orders for a different amount every time, we should have used a forecasting model to determine and establish a reorder point and a reorder quanitity. But I was simply unaware of many of the sophisticated techniques available to me as a manager.

I respectfully submit that many of our supervisory personnel are in a similar situation. This is not to downplay the many contributions they have made to the company. Thompson can directly attribute its prominent position in the industry to the devotion and hard work of these people. But very few of them have more than a high school education or have read even a single text on management skills. We have always counted on our supervisors to pick up their

FIGURE 5.10

(*Continued*)

Georgiana Stroh Page 2

management skills on the job without any additional training. Although I recognize that I owe my own opportunities to this approach, this comes too close to the common sense theory I mentioned earlier.

The success of Thompson depends on the abilities of our managers relative to the abilities of our competition. In the past, EVERY company used this common sense approach, and Thompson prospered because of the natural talent of people like you. But in the last decade, many new managerial techniques have been developed that are too complex for the average employee to just "figure out" on his or her own. For example, people had been doing business for several thousand years before developing the Linear Programming Model for transportation and resource allocation problem-solving. It is not reasonable to expect a high school graduate to recognize that his or her particular distribution problem could be solved by a mathematical model and then to develop the LP from scratch. But as our world grows more complex, competition will stiffen as others take advantage of these innovations. I fear that what has worked in the past will not necessarily work in the future: We may find out what our managers DON'T know CAN hurt us. Our managers must be made aware of advances in computer technology, management theory, and operations innovations, and they must be able to use them to transform our business as changing market conditions demand.

I would like to suggest that you consider the value of investing in an in-house training program dealing with relevant topics to augment the practical experience our employees are gaining. In addition, when management or other fast-track administrative positions must be filled, it may be worth the investment to hire college graduates whose coursework has prepared them to use state-of-the-art techniques to help us remain competitive. Of course, these programs will initially show up on the bottom line as increased expenses, but it is reasonable to expect that, in the not-so-long run, profits will be boosted by newfound efficiencies. Most important, we must recognize the danger of adopting a wait-and-see attitude. Our competitors are now making this same decision; hesitation on our part may leave us playing catch-up.

In conclusion, I believe I will be a valuable asset to the company, in large part because of the education I am now receiving. I hope you agree that a higher education level in our employees is a cause worthy of our most sincere efforts. I will contact your office next week to find out if you are interested in meeting to discuss questions you may have or to review possible implementation strategies.

Sincerely,

Scott Houck

CASE Debating a Company Drug-Testing Program

For additional cases, go to Chapter 5 in your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the cases.

"Have you read your e-mail yet this afternoon?" Hal asks excitedly on the telephone. The two of you started working at Life Systems, Inc. in the same month and have become good friends even though you work in different departments. By now you've both risen to management positions.

"Not yet. What's up?"

"Wait 'til you hear this," Hal replies. "Tonti's sent us all a message announcing that she's thinking about starting a company drug-testing program." The person Hal calls "Tonti" is Maria Tonti, the company president, who has increased the company's profitability dramatically over the past five years by spurring employees to higher productivity while still giving them a feeling they are being treated fairly.

"A what?"

"Drug testing. Mandatory urine samples taken at unannounced times. She says that if she decides to go ahead with the program, any one of our employees could be tested, from the newest stockroom clerk to Tonti herself."

"You're kidding!" you exclaim as you swivel around and look out your window and across the shady lawn between your building and the highway.

"Nope. And she wants our opinion about whether she should start the program or not. In the e-mail she says she's asking all of her 'key managers' to submit their views in writing. She wants each of us to pick one side or the other and argue for it, so that she and her executive committee will know all the angles when they discuss the possibilities next week."

Hal pauses, waiting for your reaction. After a moment, you say, "Given the kinds of products we make, I suppose it was inevitable that Tonti would consider drug testing sooner or later." Life Systems, Inc. manufactures highly specialized, very expensive medical machines, including some that keep patients alive during heart and lung transplant operations. The company has done extremely well in the past few years because of its advanced technology and—more important—its unsurpassed reputation for reliable machines.

You add, "Does she say what started her thinking about drug testing? Has there been some problem?"

"I guess not. In fact, she says she hasn't had a single report or any indication that any employee has used drugs. I wonder what kinds of responses she'll get."

You speculate, "I bet she gets the full range of opinions—all the way from total support for the idea to complete rejection of it."

Just then someone knocks at your door. Looking over your shoulder, you see it's Scotty with some papers you asked him to get.

"I've got to go, Hal. Talk to you later."

"Before you hang up," Hal says, "tell me what you're going to say in your reply to Tonti."

"I don't know. I guess I'll have to think it over."

YOUR ASSIGNMENT

Write a reply to Maria Tonti's e-mail message. Begin by deciding whether you want to argue for or against the drug-testing program. Then think of all the arguments you can to support your position. Next, think of the strongest counterarguments that might be raised against your position. In your memo, argue persuasively on behalf of your position, following the guidelines in Chapters 4 and 5. Remember to deal with the arguments on the other side.

PART IV

CONDUCTING RESEARCH

Jaroslav74/Shutterstock.com

Jaroslav74/Shutterstock.com

6 | Conducting Reader-Centered Research: Gathering, Analyzing, and Thinking Critically About Information

At work, good writing often depends on effective research. And effective research always depends on good writing. In fact, the two are really different aspects of the same thing. While we might say that the purpose of good writing is to present research results effectively, we could say with equal validity that the purpose of research is to develop the content we need in order to make our communications useful and persuasive for our readers.

WEB For additional information about research, go to your English CourseMate at *www.cengagebrain.com.*

Most chapters in this book focus on the skills needed to present research results effectively. In contrast, this chapter and the next describe strategies for conducting the research that provides the information and ideas that readers need—including the content we need to retrieve from our files and memory and the content we need to locate from other sources or develop through other means, such as conducting a survey or experiment.

Because you have taken other classes that taught research skills, you may be asking whether you really need to study this chapter. If your instructor asked you to read it, the answer is, "Yes"—for more reasons than the obvious one. Most college courses teach research without reference to the practical nature of research in the workplace. This chapter focuses directly on that context, where research differs in three ways from the research taught in school.

First, the *purposes* differ. In school, instructors typically assign research in order to help you and other students develop knowledge or skills that will be useful to *you* sometime *in the future*. In contrast, at work you will usually conduct research to help *others*—managers, co-workers, or clients—answer questions or solve problems they face *right now*.

Second, *efficiency* is much more important in workplace research than in school research. While research almost always involves side trips, dead ends, and other frustrations, you will need to avoid them as much as possible at work. Your readers will have an immediate need for your results, and you will have many other responsibilities and tasks that you also need to address.

Third, many (not all) of the *ethical principles* for research at work differ from those that apply in school.

WHAT TO FOCUS ON LEARNING IN THIS CHAPTER

As you read this chapter, discuss it in class, and apply its advice to projects your instructor has assigned, focus on learning how to do the following. Pay special attention, though, to your instructor's guidance. He or she knows best the specific kinds of research that are most important for you and will be able to emphasize, explain, and supplement this chapter's advice in ways that will be most helpful to you.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Define the reader-centered goals of your research.
2. Gather the information and data your readers want and need.
3. Analyze your results for relationships and patterns your readers will find useful.
4. Draw conclusions that are focused on your readers' needs.
5. Explain the significance of your conclusions to your readers.
6. Recommend actions based on your conclusions that will benefit your readers.
7. Think critically throughout your research process.
8. Observe intellectual property laws and document your sources.

As you read the first six learning objectives for this chapter, you may have noticed that the activities they describe appear to flow together in a very straightforward manner, with each activity neatly following the previous one. In some situations, that happens. Just as often, you'll find yourself going back and forth among the activities, following hunches and leads into dead ends, and encountering similar setbacks. Research is more often like hunting for something in a partially known territory than like taking a quick trip down a superhighway to your destination. Flexibility is foremost among the qualities that will enable you to conduct research efficiently, minimize the inevitable frustrations, and maximize the pleasure from your search.

FIGURE 6.1

Relationship Between the Six Major Activities of Research and the Elements of a Typical Research Report

RELATIONSHIP BETWEEN MAJOR ACTIVITIES OF RESEARCH AND REPORT ELEMENTS

RESEARCH ACTIVITIES		SECTIONS OR CHAPTERS OF A TYPICAL RESEARCH REPORT
Define the goals of your research (page 135)	→	Introduction
Gather the information and data • Plan sources and methods you will use to gather information (page 136) • Collect the information (pages 136–140)	→	Methods
Analyze your results (page 142) • Arrange your information and data in analyzable form (page 142) • Find meaningful relationships in the information (page 143) • Examine subgroups of information (page 143)	→	Results
Interpret the relationships for your readers (page 144)	→	Discussion
Explain the significance of the relationships for your readers (page 145)	→	Conclusions
Recommend actions based on your conclusions (page 146)	→	Recommendations

INTERDEPENDENCE OF RESEARCH AND WRITING

The beginning of this chapter emphasized the close relationship between research and writing. The relationship is so tight that six of the major research activities each creates the content for one of the six major parts of a typical research report. See Figure 6.1.

Because each research activity involves its own set of skills, your instructor may ask you to read the rest of this chapter in chunks rather than all at once. This schedule will allow you to focus on and receive feedback on each activity when it is most relevant to a course project on which you are currently working.

HOW TO DEFINE READER-CENTERED GOALS FOR RESEARCH

At bottom, research is an adventure, a hunt in which you help solve a problem—not by finding the solution yourself but by finding, interpreting, and presenting information, data, and ideas that help your readers solve it. To reach a successful outcome, you need to achieve two overarching goals: 1) find the information that your readers need and 2) find it in a way that enables your readers to feel that they can confidently use your results as the basis for their decisions and actions.

Guideline 1 | Identify the information and ideas your readers want, need, and will find persuasive

One set of goals for your research match the goals of your communication:

- to provide your readers with information they can use to achieve some goal of their own
- to find information that will influence their attitudes and actions in the ways you desire

Thus, the most productive place to begin defining your research goals is to review the goals you identified for your communication when following Chapter 3's guidelines.

Base your research goals on your communication's usefulness and persuasive goals.

- **Identify the information you need in order to write a communication your readers will find to be highly useful.** Review the questions your readers will ask about your topic. The questions you can't answer immediately are the ones you need to research. Also review the kinds of answers your readers will want you to provide. Will they want general information or specific details, introductory overviews or technical explanations? In addition, consider the point of view from which your readers will read your communication. Are they going to want it to meet their needs as engineers or accountants, consumers, or producers? The answers to these questions will help you determine not only the kinds of information you must obtain, but also where you should look for that information.

  Identify the additional questions that will assist your readers even though your readers don't know to ask them. The list of these questions is likely to grow during your research as you learn more about your subject.
- **Identify the kinds of information and arguments that will make your communication most persuasive in your readers' eyes.** Given your readers' goals, values, and preferences, what kinds of information and arguments are most likely to influence their attitudes and actions? For example, are they primarily interested in efficiency or profitability, safety or consumer acceptance? Consider also the types of evidence and kinds of sources your readers will find most compelling. For instance, are they more likely to be swayed by quantitative data or by testimonials from leaders in their field?

Although you should define your research objectives at the outset, be prepared to revise them as you proceed. Research is all about learning. One thing you may learn along the way is that you need to investigate something you hadn't originally thought important—or even thought about at all.

Guideline 2 | Identify the criteria by which your readers will judge the quality of your research

The second set of goals for your research concerns the quality of the research itself. Readers are acutely aware that good research by you can provide them with the basis for making good decisions and taking effective action, and that poor research by you can lead them to disaster. They will generally want your research to have the following four qualities.

QUALITIES OF READER-CENTERED RESEARCH RESULTS

- **Complete.** Readers will want you to gather all the information they must have to make a good decision or take productive action.
- **Unbiased.** Readers will want you to gather information from unbiased sources or take any biases into account when interpreting it for them. They will also want you to take an unbiased approach when gathering and interpreting information.
- **Credible.** Readers will want your information to be from sources they consider to be credible. What counts as a credible source varies from one profession to another, so you will need to determine the standards of credibility used by your particular readers.
- **Thoroughly analyzed.** Some kinds of research produce general results that can be analyzed into subgroups. Election polling provides an example. In addition to saying that a certain percentage of eligible voters favor one political candidate over another, pollsters divide their overall data into subgroups so they can tell what percentage of women favor that candidate, what percentage of people in a certain region, and so on. Your readers will often want you to analyze your data into subgroups because the subdivided results enable them to make more precise decisions and take better, targeted actions.

The rest of this chapter and your instructor's discussion of research methods provide specific advice for conducting complete, unbiased, credible, and thoroughly analyzed results that meet your readers' needs.

HOW TO GATHER INFORMATION AND IDEAS YOUR READERS WANT AND NEED

How do you go about gathering information in a way that your readers will consider to be high quality and that also enables you to conduct your search as efficiently as possible? The following guidelines suggest four major strategies.

Guideline 1 | Identify the full range of sources and methods that may provide helpful information

What counts as complete research depends greatly on the topic you are studying. In the lab of a manufacturing company, some research may involve only a single experiment. When the research involves policies on topics that affect people, like air pollution, employment, and health, you may need to use many sources and methods to conduct complete and credible research.

Primary and secondary research

In your career, you may be involved mostly with *primary research*, which is research where you generate the information yourself through such methods as observation, experimentation, and surveys. Almost certainly, though, you will also conduct *secondary research*, which involves reading the results of other people's research, for instance, by reading about it in professional journals or on the Internet.

Generally, begin by consulting secondary sources, especially ones, such as encyclopedias, that provide an overview of your topic. By gaining a general view of your subject, you increase the ease with which you can locate, comprehend, and interpret the more detailed facts you are seeking. Useful general sources include encyclopedias, review articles that summarize research on a particular subject, and articles in popular magazines.

To provide your readers with complete and credible answers to their questions, you must take into account the variety of perspectives that people and organizations have on the topic. A method that is often helpful is to consider gathering information from four types of sources.

Sources that often have helpful information for research affecting people

- Persons affected
- Persons involved
- Other organizations or groups engaged in similar efforts
- Professional publications

Imagine, for instance, that your employer has asked you to investigate ways to make some of its processes "greener"—more environmentally friendly. You could gain ideas from employees who perform the processes, other organizations that have similar environmental goals, and publications or specialists in your field.

Look at each source widely enough to uncover conflicting evidence, disagreements, and controversies, or to feel certain that none exist.

Look at each widely enough to uncover conflicting evidence, disagreements, and controversies, or to feel certain that none exist. Different people and organizations can have very conflicting views on many topics. If you learn the views of only a few, you risk presenting your readers with incomplete information. For example, in research on greener processes that your employer might use, you would probably find contrasting views on some of them. Perhaps a manufacturing process that removes harmful chemicals from solid waste products will discharge warm water into a river, damaging the ecological system for miles downstream. Only by looking broadly can you present your readers with a full answer to the questions they've asked you.


© iStockphoto.com/Andreas Reh


© AStock/Corbis

In *primary* research, you generate the information or data yourself. In *secondary* research, you work with information or data gathered and reported by someone else.

Guideline 2 | Use secondary sources your readers will find credible and unbiased

When using secondary sources, focus on ones that will be most persuasive to your readers. Your readers will depend on you to provide information they can trust as they make decisions and take action. In addition, they will judge the quality of your research based on the quality of the sources you use.

In some cases, the distinction between sources that are acceptable and those that are unacceptable in your readers' eyes will be very clear. Scientists generally trust research published in peer-reviewed journals because these articles have been judged by other scientists in order to be published. Generally, they do not trust research reported in other places, such as websites.

In most other circumstances, you will have a more challenging job distinguishing between sources your readers will find credible and those they won't. The following six questions can help.

QUESTIONS FOR EVALUATING RESEARCH SOURCES

- Is it **relevant** to my readers' needs?
- Will it be **credible** in my readers' eyes?
- Is it **accurate**?
- Is it **complete**?
- Is it **current** and up to date?
- Is it **unbiased**?

LEARN MORE For suggestions about ways to imagine your readers in the act of reading, see Chapter 3, page 61.

To answer the questions about relevance and credibility, refer to the imaginary portrait you created of your readers when defining your communication's objectives. Ask yourself, "Can I imagine my readers using this information as they perform the job my research is supposed to help them perform?" If you can't, the source is irrelevant. Your portrait of your readers will also help you learn whether the source will be credible to them. As you learned in Chapter 5, what people in one profession consider credible may lack credibility in another.

The questions about accuracy, completeness, and currency can be difficult to answer when you are researching a subject that is new to you. Follow Guideline 1's advice: Gather information from lots of sources and compare them with one another. Contradictions and inconsistencies may indicate that you should conduct additional research to learn which source to trust. Although information from old publications or other sources can still be up to date, it's always good to check some recent ones as well.

When your sources disagree, ask whether the person who wrote the information, or that person's employer, may benefit if people believe the information provided. The source's information may still be valid, but may need careful scrutiny. Review the reasonableness of its interpretations of evidence. Be alert to strong positive or negative language, which may indicate that the source is relying on emotions rather than facts. Chapter 7 provides additional advice for evaluating information you find on the Internet.

Note, however, that bias does not necessarily mean that a source should be dismissed. Sometimes your readers will want to know conflicting views.

When evaluating sources, be as cautious about your own biases. Don't dismiss a source simply because it contradicts your views or presents data that fail to support your conclusions. Your readers depend on your thoroughness and integrity.

Guideline 3 | Use primary research methods in a credible and unbiased way

To assure that your primary research is credible and unbiased, study the research methods you are going to use. For many kinds of research methods there are procedures and techniques that workplace readers consider to be essential to good studies. Chapter 7 provides detailed advice for skillfully conducting two widely used primary research methods—interviews and surveys. Similarly, when conducting any other kind of primary research in your technical writing course or other classes, learn the procedural details that are crucial to workplace readers.

Guideline 4 | Gather information that can be analyzed in subgroups

As explained earlier in this chapter, workplace readers want research that looks for possible differences among different groups of information or data. From a study of the tensile strength of a new alloy it has developed, a manufacturing company will want to test its strength at various temperatures so they can know what applications it might be used for. From research on the appeal of a new cellphone they have developed, an electronics company would want to know about the phone's appeal to specific consumer groups—by age group, economic status, gender, and so on—so they can plan an effective marketing campaign. To be able to provide your reader with this sort of information, you need to gather information that can be analyzed in this way, for instance by testing the alloy at different temperatures and conducting a marketing analysis that includes these various subgroups.

To identify the subgroups of information that are important to your readers, consider the nature of the decision they are making or the action they are thinking about taking. What would they ask you in an effort to gain a more fine-grained understanding of your results?

Guideline 5 | Take careful notes

A simple but critical technique for conducting productive, efficient research is to take careful notes every step of the way. When recording the facts and opinions you discover, be sure to distinguish quotations from paraphrases so you can properly identify quoted statements in your communication. Also, clearly differentiate between ideas you obtain from your sources and your own ideas in response to what you find there.

In addition, make careful bibliographic notes about your sources. Include all the details you will need when documenting your sources (see page 150). For books and articles, record the following details.

INFORMATION TO RECORD ABOUT YOUR SOURCES

BOOKS	ARTICLES
Author's or editor's full name	Author's or editor's full name
Exact title	Exact title
City of publication	Journal title
Year of publication	Volume (and issue unless pages are numbered consecutively throughout the volume)
Edition	Year of publication
Page numbers	Page numbers

For interviews, record the person's full name (verify the spelling!), title, and employer, if different from your own. Special considerations apply when your sources are on the Internet; they are described in Appendix A.

It is equally important for you to record the information you will need if you later find that you need to consult this source again. For instance, when you are working in a library, jot down the call number of each book; when interviewing someone, get the person's phone number or e-mail address; and when using a site on the World Wide Web, copy the universal resource locator (URL).

As you proceed, be sure to keep a list of sources that you checked, but found useless. Otherwise, you may find a later reference to the same sources, but be unable to remember that you have already examined them.

INTERMISSION

In many projects, all of the research activities are intermingled. Even as you are interpreting some research results, you are gathering others. Even as you are beginning to formulate some recommendations, you discover new information that requires you to revise one of your conclusions. Still, as types of mental work, the activities discussed so far in the chapter, which focus on gathering information, are quite distinct from those described later, which concern analyzing and processing the information you have gathered. Consequently, there is value in pausing here for two reasons.

The first is to provide you with the Writer's Guide for Gathering Information, shown in Figure 6.2. The other is to give you a chance to think about what the first two activities of the reader-centered research process look like in action, using as an example the kind of client project many students (perhaps you) are asked to perform in their technical writing or other courses.

Two engineering students, Anna and Terry, agreed to help their dean find out how effectively engineering majors were being advised about their classes and careers by the faculty in their departments. Having heard both praise and grumbling about the advising, the dean wanted to know what, if anything, needed to be done.

Anna and Terry began their research by defining their project-specific goals (pages 134–135): They listed the major questions they knew the dean would want them to answer: How good is the advising students are receiving? Are they receiving enough advising? How could the advising system be improved? Would some other way of providing advising to engineering students be more effective?

FIGURE 6.2

Writer's Guide for Conducting Reader-Centered Research

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
CONDUCTING READER-CENTERED RESEARCH

Defining your research's goals

1. Identify the information your readers want, need, and will fine persuasive.
2. Identify the criteria by which your readers will judge the quality of your research.

Gathering information

1. Use the full range of sources and research methods that might be helpful.
2. Identify secondary sources your readers will find credible and unbiased.
3. Identify appropriate primary research methods and learn to use them in a way your readers will find credible and unbiased.
4. Look at each source widely enough to uncover conflicting evidence, disagreements, and controversies or to feel certain none exist.
5. Evaluate each source for its relevance to your readers' needs, credibility, accuracy, completeness, currency, and freedom from bias.
6. Gather information that can be analyzed in subgroups.
7. Consult secondary and general sources first.

Taking notes

1. Record facts and ideas your readers will find useful or persuasive (not everything the source contains).
2. Record details about your sources that will enable you to document them in the communication in which you present your research results.

Anna and Terry planned and carried out their information gathering in ways that assured their research had each of the four characteristics workplace readers usually want in research (page 136). To assure that their study was **complete**, they gathered information from four sources to learn the views of two groups, engineering students (persons affected) and faculty (persons involved). To find out whether there might be more effective systems for advising students, they contacted two sources the dean would consider to be **credible**: similar engineering programs (other organizations) and journals on engineering education (professional publications).

So that they could **analyze their results for various subgroups** they predicted the dean would ask about, Anna and Terry decided to distribute their survey to students in all of the engineering departments (not just their own) and to students in each of the four years of the program (first-year, sophomore, and so on). So that they could determine which groups each respondent belonged to, they included questions that asked respondents to indicate their department and year in school. Thinking that men and women might feel differently about the advising, they also asked respondents to indicate their sex. To assure that their survey would produce **unbiased** results, Anna and Terry followed carefully the advice given in the next chapter (pages 173–177) about survey design.

In the rest of this chapter, you will see how Anna and Terry performed the other four activities of research in order to provide the dean with complete, unbiased, credible, and thoroughly analyzed answers to his questions about student advising.

HOW TO ANALYZE YOUR RESULTS FOR RELATIONSHIPS AND PATTERNS YOUR READERS WILL FIND USEFUL

To your readers, the information you gather is of little or no value if you don't also make it useful to them. The first step in doing so is to analyze it—to look carefully for the specific items, relationships, and patterns that will be most helpful to your readers as they make their decisions or take their actions. Usually, your hunt for these patterns will be the most creative part of your research, calling on your ability to play with lots of information and data in various ways, seeking spot correspondences whose importance to your readers you can see.

Guideline 1 | Review your research objectives

Begin by reviewing your research objectives. While gathering information, we can become enthralled by information that fascinates us, but is irrelevant to our readers. We all may be tempted to tell our readers about the findings we worked hardest to obtain, even if these results aren't of any use to our readers. By reviewing your research objectives, you remind yourself of the purpose of your analysis.

Guideline 2 | Arrange your information in an analyzable form

To analyze research information, you study it, looking for patterns, connections, and contrasts that can help your readers make decisions or take actions that will help them achieve their goals.

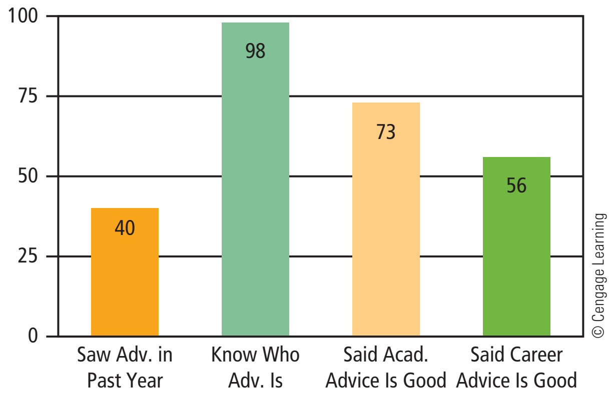
Perhaps it is surprising that the most effective way to look for these patterns doesn't start with mental action, but a physical one: Arrange your data in a table, chart, graph, or other visual display that helps you "see" the relationships. For engineers and scientists in many fields, this is standard practice. To analyze their data, they make a "picture" of them that they can then study. Tables, bar charts, idea trees, and flowcharts can all be helpful in various situations. Some of these displays will yield insights. Others won't. So, make these visual displays quickly, without the refinements you would use if you were preparing the final draft of your report. The key point is that it's often helpful to look, literally, at your information.

LEARN MORE For advice on using charts, graphs, idea trees, and similar aids to research, see Chapter 7, pages 157–159.

Following this guideline, Anna and Terry made many "exploratory" charts of their survey results. Chart A (in the margin) shows one of those they found to be very useful. The discussion of the next guideline explains.

CHART A

Student Survey Responses



Guideline 3 | Look for meaningful relationships in your results

The reason for arranging research information in visual displays is to help you discover meaningful relationships, ones that can guide the decisions and actions of your readers. Looking at the two right-hand bars in Chart A, Anna and Terry saw a substantial difference between the percentage of students who said they received "good" academic advice from their faculty advisers (73 percent) and those who said they received "good" career advice (56 percent). This gap was surely an important one to report to the dean because it could support a decision to focus specifically on building professors' skills at providing career advice.

Strategies for Finding Meaningful Relationships

Not every chart or other visual display will disclose a meaningful relationship. The activity of analyzing information often involves many cycles of choosing possible relationships to look for, creating a visual display, finding no meaningful relationships, and choosing another possible relationship to investigate. The process inevitably involves some hits and some misses.

However, your knowledge of both your subject matter and your readers can suggest many likely pieces of information to explore. Also, the following strategies are often fruitful.

STRATEGIES FOR FINDING RELATIONSHIPS MEANINGFUL TO YOUR READERS

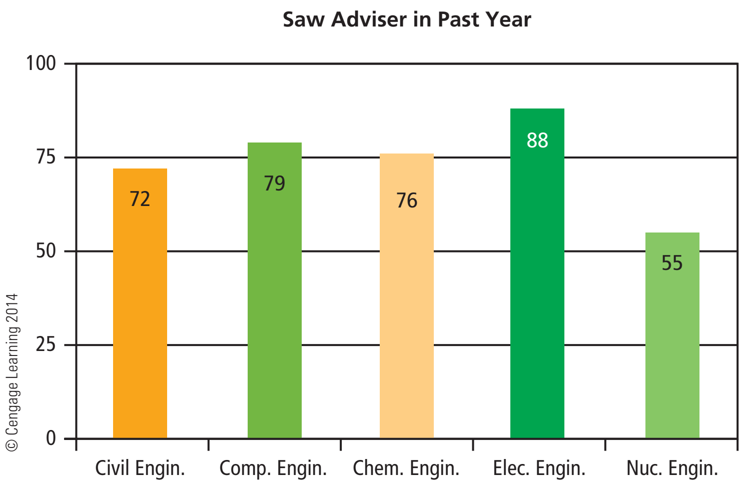
- Compare information on related outcomes (for example, academic advising and career advising).
- Compare information about different steps in a process (for example, getting students to know who their advisers are and getting them to meet with their advisers).
- Compare information on the same topic from different sources (for example, surveys, interviews and books or articles).
- Consider possible cause-and-effect relationships.
- Consider possible correlations.
- Look for relationships where your instinct leads you.

Looking for Meaningful Differences Among Subgroups

As explained on page 142, workplace readers desire analysis of subgroups of research results because this analysis enables them to made refined decisions and take targeted actions. Anna and Terry's research illustrates the value of such fine-grained analysis. They predicted that the dean would want a deeper, more detailed understanding of some results shown in Chart A. It indicated that although almost all students knew who their adviser was, only 40 percent had seen their adviser in the past year. The dean, they thought, would want to know whether there were differences among subgroups of students. If so, the dean could plan targeted actions aimed at increasing the consultation rate for the specific groups that had the lowest rates. Indeed, Anna and Terry found that the percentage of electrical engineering students who saw their advisers in the past year was much higher than that of students in any other department (Chart B). Also, the percentage of nuclear engineering students was much lower than that of any other department. These discoveries formed the basis for one of the actions they recommended to the dean, as described on page 145.

Anna and Terry were able to find these and other important differences among subgroups of students only because they had followed the advice given earlier in this chapter to "Gather information that can be analyzed in subgroups." If they had omitted questions about the students' major, year in school, and sex from their survey questionnaire, they would have missed a great deal of information that was important to their reader, the dean.

CHART B



HOW TO DRAW CONCLUSIONS THAT ARE FOCUSED ON YOUR READERS' NEEDS

After you've found a meaningful pattern, connection, or other relationship, you need to describe it for your readers. Interpretations may take many forms, including generalizations, explanations, and comparisons, along with exceptions and counterevidence. Figuring out how to interpret a relationship accurately, precisely, and helpfully can sometimes require careful thought. Two of the challenges you may face are choosing among alternative interpretations and dealing with uncertainty.

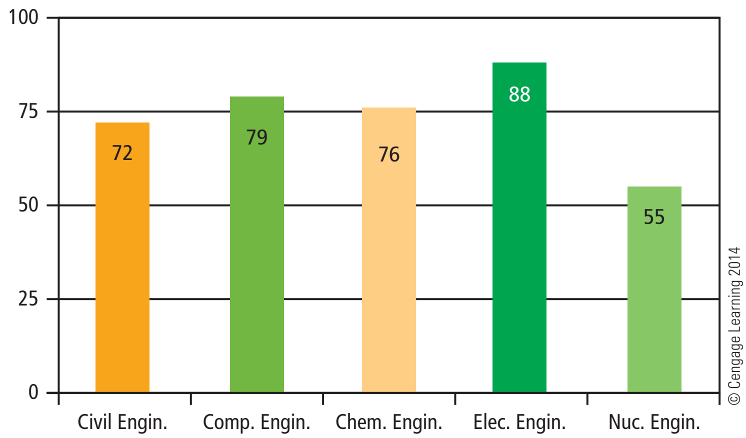
Guideline 1 | Choose conclusions that align with your readers' decisions and actions

There are always alternative ways of understanding a set of data. For example, looking at Chart B, one might say that the students in the nuclear engineering department, who have the worst record of consulting advisers, are less responsible than other engineering majors. They just don't take advantage of the advising that is offered. Alternatively, one might say that the nuclear engineering department is less effective than others at attracting the students to advising. Which interpretation would be most helpful to the dean? Because the dean wants to improve the advising system, it's better to use the second interpretation, which focuses on the department rather than the students. The dean and professors can't control the students' sense of responsibility. They can change the ways they attract students to advising.

Guideline 2 | Acknowledge uncertainty

CHART C

Said Academic Advising "Good"



Sometimes, you may need to take a broad and creative look at your information to find a truly helpful interpretation. Trying to understand why students in some departments visit their advisers more often than students in other departments, Anna and Terry compared the data in Chart B with those in Chart C, which shows the percentage of students who said they received good academic advice from their faculty advisers. The overall patterns are very similar, with nuclear engineering the lowest and electrical engineering the highest in both.

Having found this relationship, Anna and Terry faced a dilemma: How should they interpret it? They could say that the more pleased students are with the academic advice they receive, the more likely they are to consult their advisers. Or they could say that the more often students see their advisers, the more pleased they are with the advice they receive.

Which of these two interpretations is correct? From the data they had, Anna and Terry couldn't tell for sure. Their uncertainty raises an important point about interpretation: When you can't be certain, signal your uncertainty to your readers. One way to do that is simply to tell your readers that alternative interpretations are possible and present them both. Another is to say that your information "suggests" or "appears to indicate" that a relationship exists rather than that the information "demonstrates" or "proves" its existence. In their report to the dean, Anna and Terry wrote: "The data suggest that students are more likely to visit their advisers if they feel they receive good academic advice when they do." Note that their statement discusses how good the students "feel" the advice is. It doesn't state whether the advice is actually good (or bad) in any department. Anna and Terry didn't have evidence about the quality of the advice itself, only of the students' perception of its quality.

HOW TO EXPLAIN THE SIGNIFICANCE OF YOUR CONCLUSIONS TO YOUR READERS

To be sure your readers know what each of your conclusions means to them, you should explain its significance explicitly. In doing this, you move beyond stating the conclusion you draw from your information by describing the decision or action that you believe the conclusion suggests or supports. For instance, as just mentioned, Anna and Terry concluded that "students are more likely to visit their advisers if they feel they receive good academic advice when they do." To state the significance of this conclusion to the dean, they explained the kind of action this conclusion suggested: "These survey results suggest that building professors' skills at career advising would increase student satisfaction with advising and the frequency with which students visit their advisers."

HOW TO RECOMMEND ACTIONS BASED ON YOUR CONCLUSIONS THAT WILL BENEFIT YOUR READERS

In almost all cases, your readers will want you to recommend a decision or action based on your research. The more specific your recommendations, the more helpful they will be.

A weak recommendation that Anna and Terry might have made is that the dean help those professors in the departments with low advising satisfaction become better advisers. It's weak because it merely rephrases one of their conclusions (see page 145). A much more helpful recommendation would be to suggest specific ways in which this assistance might be provided.

The suggestions would be even more helpful if a specific suggestion were also backed by research indicating that the suggested action is likely to achieve its goal. Anna and Terry turned to the information they had gathered from other engineering schools to find specific strategies the dean could use to enhance the advising skills of the professors. They recommended that training sessions be established and that the departments whose students were more satisfied with advising share their strategies with the other departments.

HOW TO THINK CRITICALLY THROUGHOUT YOUR RESEARCH PROCESS

Critical thinking is essential in all aspects of your research, but especially when you are analyzing the information you've gathered. At every step, you need to explore alternatives, evaluate possibilities in light of all the relevant evidence, and identify underlying assumptions—including your own. You need to consider the quality of each piece of information you obtain by considering the perspectives and biases of the sources. Four ways to do that are to 1) let go of your anchor; 2) value counterarguments, counterevidence, and exceptions; 3) avoid unintentional personal or organizational biases; and 4) think critically about your sources.

Guideline 1 | Let go of your anchor

One inhibitor of good analysis is a psychological phenomenon called anchoring (Tversky & Kahneman, 1974). When people have made an initial commitment of any kind, they tend to view future actions from that vantage point. It's what keeps gamblers at the roulette wheel, thinking that they've got to "win back" the money they've already lost. Thinking rationally, they would know that their odds of winning and losing are the same for each new spin, no matter how much they won or lost on previous spins. For people engaged in research, anchoring can mean that they keep finding evidence to confirm their initial intuitions while ignoring other possibilities. Often, these intuitions are formed even as researchers are gathering information—before they begin their analysis. The way to free yourself from anchoring is to consciously and actively look for alternative ways of seeing and understanding your research information.

Guideline 2 | Value counterarguments, counterevidence, and exceptions

In most research, you are likely to find contradictions. Your sources may disagree with one another. A few pieces of information may be inconsistent with everything else you've found. These conflicts can be very valuable. They may signal the need for you to look more deeply for alternative explanations or conclusions—cutting the line to your anchor. They may indicate the need to hedge your conclusions, letting your readers know that there's some uncertainty. They may even be the link to something valuable you can tell your readers. When Anna and Terry discovered that the electrical engineering department received exceptionally high ratings for its academic advising, they saw that this department probably had a lot to teach the others, a point they made to the dean.

Guideline 3 | Avoid personal or organizational biases

Without any malicious or selfish intent, it's easy for all of us to see the merits of interpretations and recommendations that would benefit us, our employer's organization, or our department. To serve your readers well, you need to check whether the natural self-interest we all feel is influencing your analysis. The easiest way to do this is to look at your information from your readers' perspective and those of the other stakeholders in the topic you are studying.

Guideline 4 | Thinking critically about your sources

The advice given so far about thinking critically focuses on your careful examination of your own thoughts. It has focused on you, not your sources, because we all find that the hardest lapses to detect in an analysis are often our own. Of course, you also need to carefully consider the conscious and unconscious biases of the sources from which you have gathered your information. You need to consider the skill with which they have examined their experience and evidence. Most often, you'll find that the biases and lapses you discover mean that you need to adjust for possible distortions and not simply dismiss the source altogether.

HOW TO OBSERVE INTELLECTUAL PROPERTY LAW AND DOCUMENT YOUR SOURCES

As you are preparing the communication in which you report the results of your research, you have two important questions to answer:

- Do I need permission to use this material?
- Do I need to document this source in my communication?

The answers to these questions overlap, but they are not identical. To understand their relationship, you need to consider the laws concerning intellectual property as well as the ethical guidelines for acknowledging sources.

Intellectual Property Law

Broadly speaking, intellectual property law includes the following areas:

Three areas of intellectual property law

- **Patent Law.** Governs such things as inventions and novel manufacturing processes.
- **Trademark law.** Pertains to such things as company and product names (Microsoft, Pentium), slogans ("We bring good things to life"), and symbols (the Nike "swoosh").
- **Copyright law.** Deals with such things as written works, images, performances, and computer software.

When you are writing at work, copyright law will probably be the most important to you. Copyright law was created to encourage creativity while also providing the public with an abundant source of information and ideas. To achieve these goals, copyright law enables the creators of a work to profit from it while also allowing others to use the work in limited ways without cost.

Any communication, such as a report, letter, e-mail, photograph, or diagram, is copyrighted as soon as it is created. If the creator generated the work on his or her own, that individual owns the copyright to it. If the creator made the work while employed by someone else, the copyright probably belongs to the employer. Whether the copyright owner is an individual or an organization, the owner has the legal right to prohibit others from copying the work, distributing it, displaying it in a public forum, or creating a derivative work based on it. When copyright owners grant others permission to do any of these things, they may charge a fee or make other contractual demands. The copyright owner has these rights even if the work does not include the copyright notation or the copyright symbol: ©.

The copyright law does, however, place limits on the copyright owner's rights. First, copyright expires after a certain number of years, which varies depending on the date of publication. Second, the law provides that other people, including you, may legally quote or reproduce parts of someone else's work without their permission if your use is consistent with the legal doctrine of *fair use.* Whether your use is "fair" depends primarily on the following four factors (Stanford University, 2005):

WEB For more information about fair use, go to your English CourseMate at *www.cengagebrain.com*.

- **Proportion of the work used.** Your quotation of a few hundred words from a long book is likely to be considered fair use, but quotation of the same number of words from a short pamphlet may not.
- **Publication status.** The law gives greater protection to works that a copyright owner has not published or distributed than to ones the owner has.
- **Economic Impact.** If your use will diminish the creator's profits, it is unlikely the law will consider it to be fair use.

WEB To learn more about the public domain, go to your English CourseMate at *www.cengagebrain.com.*

It is also legal for you to use other people's work without their permission if the work is in the *public domain.* Such works include those created by or for the U.S. government and similar entities and works whose copyright has expired. Also, private individuals and organizations sometimes put their work in the public domain. The owners of websites that offer free use of clipart are an example.

Finally, you can generally use work that other people working for your employer created as part of their job responsibilities. In fact, in the workplace it is very common for employees to use substantial parts of communications created by other employees. For instance, when you are creating the final report on a project, you may incorporate portions of the proposal written to obtain the original authorization for the project as well as parts of progress reports written during the project.

Copyright law permits people and organizations to share their work by relinquishing some of their rights without giving up ownership, an increasingly popular practice. For example, many professional journals allow faculty and students to print copies of their articles as long as this is done for educational, not commercial, purposes. A nonprofit organization called Creative Commons supports these efforts in many ways.

WEB To learn more about ways copyright owners can share their work, go to your English CourseMate at *www.cengagebrain.com*.

The following guidelines on copyright coverage will help you observe intellectual property law. Note that the principles for text and graphics differ.

OBSERVING COPYRIGHT

TEXT

Ask for permission except in the following circumstances:

- You created the source yourself.
- Someone else at your employer's created it.
- The source is in the public domain.
- The copyright owner explicitly includes a statement with the source that it may be used without permission.
- You are using the text for a course project that will not be published on paper or on the web.

Honor fair use restrictions. Don't use larger amounts of someone else's work than fair use allows.

When in doubt, ask someone. Intellectual property laws are complicated. If you are uncertain about what to do, consult your instructor, your employer's legal department, or the resources available at the website for this book, available at your English CourseMate at www.cengagebrain.com.

GRAPHICS

Note: Each graphic is separately copyrighted. Consequently, the principle of "fair use" does not apply. You always need permission to use a graphic, even if it is only a small part of a larger work.

Copyright law is different for graphics than for text.

Obtain permission for all graphics unless:

- You created the graphic.
- Your employer is the copyright holder.
- The graphic is in the public domain.
- You are using the graphic for a course project that will not be published on paper or on the web.

WEBSITES

Note: Many people mistakenly believe that anything on the web is in the public domain. Actually, all web content is copyrighted by its creator.

Get permission to use web material unless:

- The site belongs to your employer.
- The material you are going to use from the site is in the public domain.
- The site declares that its contents are available for free use.
- You are using the material for a course project that will not be published on paper or on the web.

ETHICAL GUIDELINES FOR DOCUMENTING SOURCES

On the job, as in college, you have an ethical obligation to credit the sources of your ideas and information by citing them in a reference list, footnotes, or bibliography. Failure to do so is considered plagiarism. However, standards for deciding exactly which sources need to be listed at work differ considerably from the standards that apply at school. By asking the questions listed below, you can usually determine whether you need to credit sources when writing on the job. Note, however, that ethical standards for citing sources differ from culture to culture. The questions below apply in the United States, Canada, and Europe. If you are working in another part of the world, ask your co-workers to help you understand the standards that apply where you are.

LEARN MORE You will find information about how to document your sources in Appendix A.

DETERMINING WHETHER YOU NEED TO DOCUMENT A SOURCE AT WORK

- **Did you obtain permission from the copyright owner?** If you obtained the copyright owner's permission, you must document the source.
- **Is the information you obtained from this source common knowledge?** Both in college and at work, you must indicate the source of ideas and information that (1) you have derived from someone else, and (2) are not common knowledge.

  However, what's considered common knowledge at work is different from what's considered common knowledge at school. At school, it's knowledge every person possesses without doing any special reading. Thus, you must document any material you find in print.

  In contrast, at work common knowledge is knowledge that is possessed by or readily available to people in your field. Thus, you do not need to acknowledge material you obtained through your college courses, your textbooks, standard reference works in your field, or similar sources.
- **Does my employer own it?** As explained above, employers own the writing done at work by their employees. Consequently, it is usually considered perfectly ethical to incorporate information from one proposal or report into another without acknowledging the source.

- **Am I taking credit for someone else's work?** On the other hand, you must be careful to avoid taking credit for ideas that aren't your own. In one case, an engineer was fired for unethical conduct because he pretended that he had devised a solution to a technical problem when he had actually copied the solution from a published article.
- **Am I writing for a research journal?** In articles to be published in scientific or scholarly journals, ethical standards for documentation are far more stringent than they are for on-the-job reports and proposals. In such articles, thorough documentation is required even for ideas based on a single sentence in another source. Thus, you must document any information you find in print or online. In research labs where employees customarily publish their results in scientific or scholarly journals, even information drawn from internal communications may need to be thoroughly documented.
- **Whom can I ask for advice?** Because expectations about documentation can vary from company to company and from situation to situation, the surest way to identify your ethical obligations is to determine what your readers and employer expect. Consult your boss and co-workers and examine communications similar to the one you are preparing. For clarification about what sources you need to document for your class, ask your instructor.

CONCLUSION

Conducting reader-centered research is a complex process that calls on your intelligence and creativity in many different ways. This chapter used an example involving survey data to illustrate the process. You would follow the same steps for most other types of primary and secondary research: You define your research goals in a reader-centered way, gather information that will be useful to your readers and examine the results, looking for relationships and testing them against exceptions and counterevidence in an effort to interpret your findings in ways that can help your readers. In the end, research is a problem-solving process in which, rather than solving the problem yourself, you provide indispensable assistance to your readers so they can solve it.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Create a research plan for a project you are preparing for your technical communication course.
2. Choose a concept, process, or procedure that is important in your field. Imagine that one of your instructors has asked you to explain it to first-year students in your major. (See Chapter 7 for guidelines for using each of the following research methods.)
   a. Use brainstorming or freewriting to generate a list of things you might say in your talk.
   b. Use a flowchart, matrix, cluster sketch, or table to generate a list of things you might say.
   c. Compare your two lists. What inferences can you draw about the strengths and limitations of each technique?
3. Imagine that a friend wants to purchase some item about which you are knowledgeable (for example, a motorcycle, MP3 player, or sewing machine). The friend has asked your advice about which brand to buy. Design a matrix in which you list two or three brands and also at least

six criteria you recommend that your friend use to compare them. Fill in the matrix as completely as you can. Each box you can't complete indicates an area you must research. Describe the methods you would use to gather the additional information. (See Chapter 7 for advice about using a matrix as a research tool.)

4. Imagine that you have been asked by the chair of your major department to study student satisfaction with its course offerings. Devise a set of six or more closed questions and four open-ended questions you could use in interviews or in a survey. (For information about interview and survey questions, see Chapter 7, pages 172–173 and 173–177.)
5. While analyzing their survey data, Anna and Terry compared responses of men with responses of women to this question: "Have you visited your faculty adviser this year?" They displayed their results in the chart shown in Figure 6.3. Interpret this result in two or more ways. Which of your interpretations would be the most helpful to the dean of the engineering school? Why? Next, write a sentence that explains the significance of your interpretation to the dean. Finally, make a recommendation to the dean based on your interpretation.
6. Work on the "Increasing Organ Donations" Case on page 201.

EXPLORE ONLINE

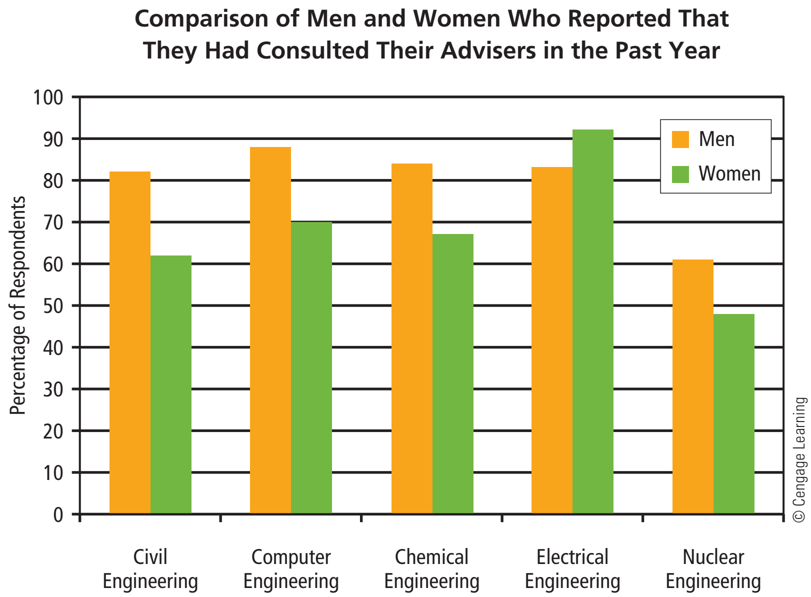
1. Use two search engines and an Internet directory to look for websites on a topic related to your major. How many hits does each produce? Compare the first ten results from each search in terms of the quality of the sites and the amount and kind of information the search engine or Internet directory provides about each one. (For information about using search engines and Internet directories, see pages 160–164 in Chapter 7.)
2. Using a search engine and online library resources, identify three websites, two books, and two articles on a topic related to your field. Which would you find most interesting? Which would be most helpful if you were writing a paper on the topic for a class? Which would be most helpful if you were writing a report on the topic for your employer? (For information about using search engines and online library resources, see pages 160–164 in Chapter 7.)
3. Using the newspapers available online, find a story that includes a graph. In 200 words, describe the topic of the graph, what the story says it shows, and the additional analysis (such as analysis of subgroups of information) that would provide a fuller understanding of the topic.

COLLABORATE WITH YOUR CLASSMATES

1. Working with another student, choose a topic that interests you both. Find five websites that provide substantial information on your topic. Which sites are most appealing to you initially? Following the advice on pages 146–147, evaluate each site, and then compare the results with your initial impression of it.
2. In their survey, Anna and Terry gathered information from the engineering students that let them analyze subgroup data from students according to their major, year in school, and sex. If you were conducting a survey about academic advising at your school, what additional subgroups of students would you want to identify? Why?

FIGURE 6.3

Chart for Expertise Exercise 5



3. Imagine that the chair or head of your department has asked you and one or two of your classmates to conduct a survey of students in your major that is exactly eight questions long. As a group, name the survey topic and the chair's reason for wanting the information you would obtain through the survey. List the questions you would ask. Explain how the data obtained from each question would help the chair achieve his or her goal.

APPLY YOUR ETHICS

1. Create a bibliography of sources concerning an ethical issue related to your major or career. Include four websites, one book, and two journal articles that you believe would help you understand various approaches to this issue.
2. One ethical principle for analysis is to use methods that avoid accidentally reaching incorrect conclusions. Even if they are reached by accident, inaccurate analyses can have serious consequences when they are used to make decisions and take action. By conducting an Internet search, find a case where a person or organization is accused of using "misleading statistics." In 100 words, summarize the topic of the statistics, explain why they are said to be misleading, and identify the harmful consequences that could result or have already resulted from the use of these statistics. Tell whether you think the statistics really were misleading and why. If you believe they were misleading, did the problem arise by accident or intention?

Jaroslav74/Shutterstock.com

7 | Using Five Reader-Centered Research Methods

This chapter explains how to use five primary and secondary research methods effectively and efficiently.

No matter which method you are using, follow Chapter 6's guidelines for conducting reader-centered research, paying special attention to points your instructor emphasizes as well as to any additional points he or she makes. Your instructor's guidance will be targeted at the specific research resources, skills, and techniques that are important in the careers you and your classmates have chosen. Throughout your research, concentrate on developing your ability to do the following:

WEB For additional information related to this chapter, go to your English CourseMate at *www .cengagebrain.com.*

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Efficiently produce the information and ideas your readers want and need.
2. Employ the techniques for each method that are required to establish your readers' confidence in your results and your abilities as a researcher.

HOW TO CONDUCT RESEARCH USING YOUR MEMORY AND CREATIVITY

Although we often think of research as a search outside of ourselves—in books, on the Internet, through an experiment—research actually has a broader goal: assembling the ideas and information that our readers will find useful and persuasive. Achieving this broader goal often requires us to rely also on resources inside ourselves—to use our intelligence to remember relevant facts, draw conclusions from what we already know, and generate answers and solutions on our own.

The following sections describe four techniques for using your memory and creativity that can be especially helpful in workplace research. You may be familiar with some or all of them from other courses. As you read about them here, note how they can be used for research you will conduct in your career.

Brainstorming

Admittedly, the name is a little silly and the technique can be overused, but brainstorming is still a highly productive research method, if employed thoughtfully.

Brainstorming lets your thoughts run free.

When brainstorming, you generate thoughts about your subject as rapidly as you can, through the spontaneous association of ideas, writing down whatever thoughts occur to you.

By freeing you from the confines imposed by outlines or other highly structured ways of organizing your ideas, brainstorming lets you follow your own creative lines of thought. It also works well in team projects: An idea expressed by one team member often sparks ideas for others.

The key to brainstorming is to record ideas quickly without evaluating any of the thoughts that come to mind. If you shift your task from generating ideas to evaluating them, you will disrupt the free flow of associations on which brainstorming thrives.

However, to brainstorm productively, you do need to monitor your thoughts for another reason: to assure that they stick to the problem or question you are trying to address. The free association that gives brainstorming its power can also lead you far astray from what's useful.


© Jim Craigmyle/Corbis

Writing teams at work often brainstorm together to plan their communications.

Example of Workplace Brainstorming

Brainstorming can be especially helpful when you want to find arguments and evidence that will persuade readers to take action. Nicole decided to persuade her company, which makes machines that keep patients alive during organ transplant operations, that it needed better quality-control procedures. She began her research into what she might say by first sitting at her computer. Then, she typed her topic: "Ideas for Quality Control Recommendations."

Some of Nicole's brainstorming

Then she summarized the problem: "Present system is unreliable." And her ideas began to flow: "Everyone is *supposed* to be responsible for quality but no one has specific responsibility for it." Next she wrote her reason for feeling so strongly about quality control: "People's lives are at stake." And she recalled a "near-fatal failure of our equipment last year in Tucson." Her thoughts shifted to improvements that might be made: "Need procedures to test critical components when they arrive from suppliers." And back to causes of the problem: "Workers follow shortcuts, deviating from approved assembly techniques."

Nicole's thoughts continued to flow for ten more minutes. Then she grouped related items under common headings:

In addition to this general outline, Nicole's brainstorming enabled her to identify topics to take up in each of the sections.

- Importance of Quality Control
- Present System
- Strategies for a Better System

For some of these topics, she knew everything she needed to say to her readers. For others, she identified information she would need to obtain through other research methods.

Nicole's use of brainstorming to generate topics and identify additional research tasks illustrates one of the many ways brainstorming can assist you in your workplace research. Here is a procedure you will find helpful.

BRAINSTORMING PROCEDURE

1. Jot down the question or problem your research will help your readers answer or solve.
2. Ask yourself, "What do I know that they would find to be helpful or persuasive?"
3. As ideas come, write them down rapidly. As soon as you record one idea, move on to the next thought that comes to you.
4. Watch out for chains of ideas that lead you away from the core question or problem.
5. When your stream of ideas runs dry, read back through your list to see whether your previous entries suggest new ideas.
6. When you no longer have any new ideas, gather related items in your list into groups to see whether this activity inspires new thoughts.

Freewriting

Freewriting is much like brainstorming. Here, too, you tap your natural creativity, free from the confines of structured thought. You rapidly record your ideas as they pop into your mind. Only this time, you write prose rather than a list.

Freewriting is especially helpful when you are trying to develop your main points, whether in brief communications or in parts of a long communication.

Example of Workplace Freewriting

Miguel, an employee of a company that makes precision instruments, spent two weeks investigating technologies to be placed aboard airplanes for detecting microbursts and wind shear, two sudden and dangerous atmospheric conditions that cause crashes. Stumped about how to write the opening paragraph of his report, Miguel started freewriting. As you can see, he produced a jumble of sentences he drafted, jumping from topic to topic.

Some of Miguel's freewriting

Wind shear and microbursts blamed for several recent airline crashes (find out which ones—Dallas?).
How detect these conditions?
Then pilots can fly around them.
Technology could be used on the ground or in planes.
We need to pick most promising technology and develop it.
Many companies are working on it.
Onboard would be more helpful to pilots.
Would be high demand from airlines for onboard devices.

Although Miguel's freewriting has no structure, it helped him explore the points he felt would be important to include in his opening. It also helped him identify the most important point to his readers:

The main point Miguel found by freewriting

We have a substantial opportunity to develop and successfully market instruments that can be placed aboard airplanes to detect dangerous wind conditions called wind shear and microbursts.

Using that sentence as his opening statement, Miguel then arranged the rest of his thoughts to complete an introductory paragraph that flowed coherently.

These conditions have been blamed for several recent air crashes, including one of a Lockheed L-1011 that killed 133 people in Dallas. Because of the increasing awareness of the danger of these wind conditions, airlines are eager for detection equipment. We could make a large profit by identifying the most promising technology and then developing it rapidly enough to beat out our competitors.

FREEWRITING PROCEDURE

1. Review your knowledge of your readers and your communication situation.
2. Ask yourself, "What do I know about my subject that will be useful or persuasive to my readers?"
3. As ideas come, write them down as sentences. Follow each line of thought until you come to the end of it, then immediately pick up the next line of thought that suggests itself.
4. Write rapidly without making corrections or refining your prose. If you think of a better way to say something, start the sentence anew.
5. Don't stop for gaps in your knowledge. If you discover that you need some information you don't possess, note that fact, then keep on writing.
6. When you finally do run out of ideas, read back through your material to select the ideas worth telling your readers. The rest you throw away.

Draw a Picture of Your Topic

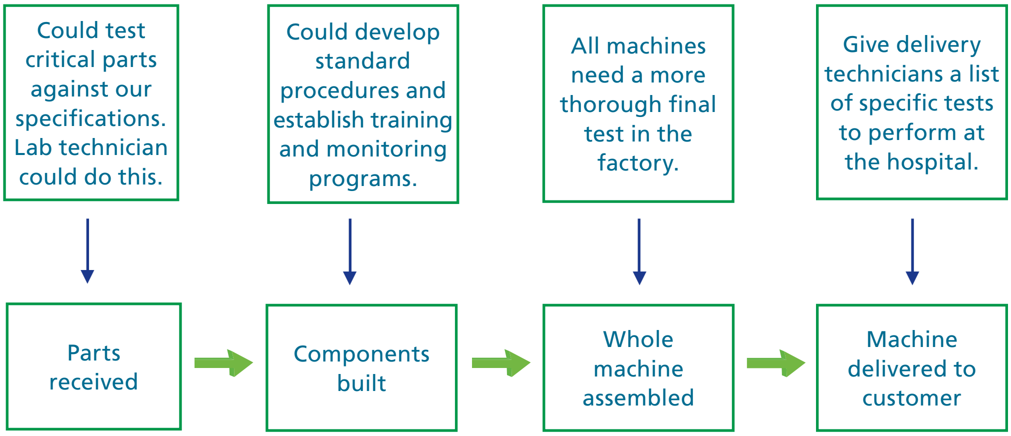
Another effective strategy for exploiting your memory and creativity is to explore your topic visually. Here are four kinds of diagrams that writers at work have found to be useful.

LEARN MORE Visualizing is also an important method for analyzing information you have gathered through your research. See Guideline 2 in Chapter 6 (page 142).

Flowchart

When you are writing about a process or procedure, try drawing a flowchart of it. Leave lots of space around each box in the flowchart so you can write notes next to it. Here is a flowchart that Nicole used to generate ideas for a report recommending improved quality control procedures in the manufacture and delivery of the medical equipment sold by her employer.

Above the flowchart, Nicole wrote the ideas that occurred to her as she studied the chart.



© Cengage Learning

Matrix

A matrix is a table used to generate and organize ideas.

When you are comparing two or more alternatives in terms of a common set of criteria, drawing a matrix can aid you in systematically identifying the key features of each item being compared. Make a table in which you list the alternatives down the left-hand side and write the topics or issues to be covered across the top. Then, fill in each cell in the resulting table by brainstorming. Blank boxes indicate information you need to obtain. Miguel created the matrix shown in Figure 7.1 on his computer, but he could also have made it with pencil and paper.

Cluster Sketch

Creating a cluster sketch is a simple, powerful technique for exploring a topic visually. Write your overall topic in a circle at the center of a piece of paper, then add circles around the perimeter that identify the major issues or subtopics, joining them with lines to the main topic. Continue adding satellite notes, expanding

FIGURE 7.1

Matrix Used by Miguel to Develop Ideas

By filling in the cells of this matrix, Miguel identified some of the key information he needed to include in his report.

	How It Works	Limitations	Potential Competition
Doppler radar	Detects rapidly rotating air masses, like those found in wind shear	Technology still being researched	General Dynamics Hughes
Infrared detector	Detects slight increases in temperature that often accompany wind shear	Temperature doesn't always rise	None—Federal Aviation Administration suspended testing
Laser sensor	Sudden wind shifts affect reflectivity of air that lasers can detect	Provides only 20-second warning for jets traveling at a typical speed	Walton Electronic perhaps Sperry

© Cengage Learning

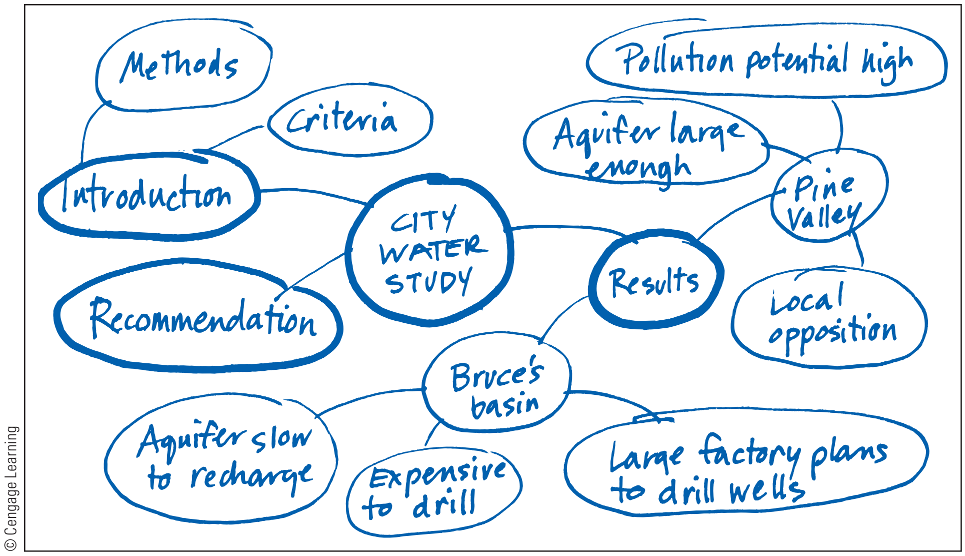


FIGURE 7.2

Cluster Sketch

An engineer created this cluster sketch in order to identify the topics she would need to cover in a report on the possibility of developing new wells for her town's water supply.

outward as far as you find productive. Figure 7.2 shows a cluster sketch created by Carol, an engineer who is leading a team assigned to help a small city locate places where it can drill new wells for its municipal water supply.

A variation of the cluster sketch is the idea tree, shown in Figure 7.3.

TRY THIS Make a cluster sketch or idea tree to generate a list of your abilities that you would like to highlight in an employment interview. Identify general areas of ability and specifics related to each one.

Create and Study a Table or Graph of Your Data

Often at work you will need to write communications about data, such as the results of a test you have run, costs you have calculated, or production figures you have gathered. In such cases, many people find it helpful to begin their writing process by making the tables or graphs that they will include in their communication. Then they can begin to interpret the data arrayed before them, making notes about the data's meaning and significance to their readers.

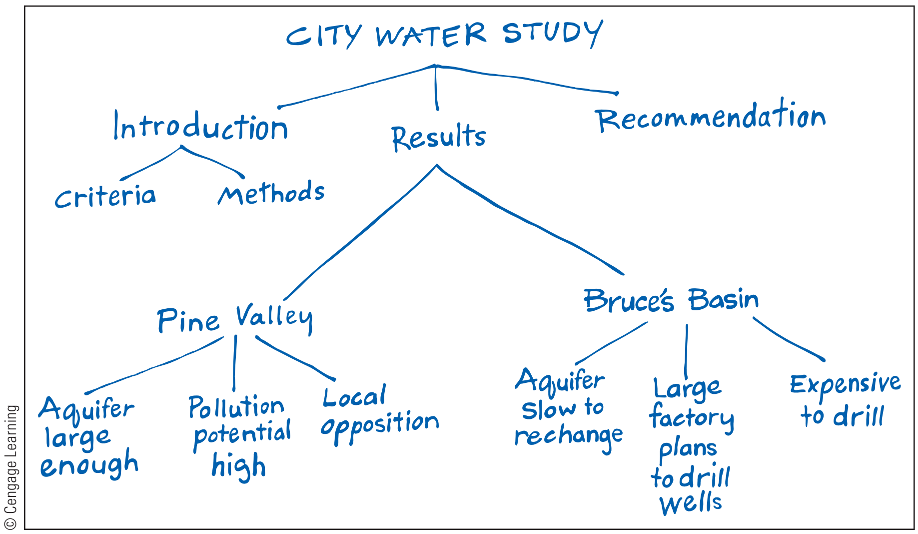


FIGURE 7.3

Idea Tree

To identify topics for her report, the engineer might have used an idea tree like this rather than the cluster sketch shown in Figure 7.2.

HOW TO RESEARCH ON THE INTERNET

The Internet has created a rich and continuously evolving resource for your on-the-job research. Wherever you are, the Internet lets you read technical reports from companies such as IBM, view pictures taken by NASA spacecraft in remote areas of the solar system, or join online discussions on an astonishing array of topics with people around the world. Figure 7.4 lists just a few of the resources the Internet makes available to you.

As a resource for research, the web also presents you with significant challenges. Its sheer size can make it difficult to find the exact information your readers need. Search engines are helpful, but not perfect. In addition, no one monitors the web's content to weed out biased, misleading, or inaccurate information.

Search engines produce a large number of potentially helpful results but don't evaluate them for bias, completeness, or accuracy.

To conduct web research successfully on the job, you must search through its vast contents efficiently so you don't waste time you should devote to other tasks, and you must evaluate carefully what you find so you don't report wrong information to your readers.

Using Search Engines and Internet Directories Effectively

In addition to search engines like Google and Yahoo!, there is another very useful tool for web research: Internet directories. Search engines and Internet directories

FIGURE 7.4

Some Major Internet Resources for Research

INTERNET RESOURCES

Corporate reports and information	IBM posts technical documents, Microsoft offers detailed information on its products, and the World Wildlife Fund reports on its environmental projects. Thousands of other profit and nonprofit organizations do the same. Examples IBM Research Papers on Networking http://www.research.ibm.com Microsoft technical information IT systems engineer http://technet.microsoft.com/ World Wildlife Fund for Nature http://www.panda.org
Technical and scientific journals	Many technical and scientific journals are available online, some for free and some for a fee. Examples Journal of Cell Science http://jcs.biologists.org/ IEEE Transactions on Software Engineering http://www.computer.org/tse
Government agencies	Many government agencies have websites at which they provide reports, regulations, forms, and similar resources. Examples NASA http://www.nasa.gov National Cancer Institute http://www.cancer.gov National Park Service http://www.nps.gov

provide distinctly different kinds of research support, so it is often helpful to use both.

Search engines produce the more comprehensive results. They scour a great deal of the web (though not all of it), looking for resources that include the same words that you enter into the search line. They also determine the order in which they will place their results in the list that appears on your computer screen. For both searching and ranking, they apply a combination of criteria, such as the number of times the words appear on a web page, their location on the page, the number of websites that link to the source, and so on. Because different search engines use different combinations of criteria, they produce different numbers of results with different rankings. On the same day, a Google search for basking shark (the second largest of all sharks) returned 286,000 results. Yahoo! produced almost four times as many (1,250,000) and placed different results at the top of its list.

Internet directories provide a small number of results that people have judged to be valuable resources, but their criteria for selection may or may not match yours.

Internet directories are created by people, not computers, who search the Internet for resources they judge to be particularly valuable. Consequently, they yield much smaller, more sharply focused results organized in a hierarchical framework that enables you to search systematically for the information you need to obtain for your readers. Using Yahoo!'s directory, you would first choose the category "Science," then "Animals, Insects, and Pets," then "Fish," then "Marine and Anadromous Fish," then "Sharks," then "Basking Shark." You would find eight results, not hundreds of thousands.

Which is better, a search engine or an Internet directory? There's no absolute answer. Search engines can provide overwhelming numbers of results, and they don't distinguish between sites created by experts and those created by second graders. Internet directories simplify your search by reducing the number of results, but they miss many useful results, and their selection criteria may not match yours. The Yahoo! directory's eight results for "basking shark" omitted important websites maintained by wildlife and scientific organizations, and they included a site for elementary school children. These and other differences explain why it's often worthwhile to use more than one search engine and more than one directory in the same search.

TRY THIS Open two browser windows. Using a different search engine in each one, search for information on a topic related to your major or personal interests. Which search engine produces the most hits? Which has the most helpful links at the top of the results?

Also, the web's information on many subjects is incomplete even when all its resources are combined. For some topics, you'll need to look elsewhere, for instance in books and reference journals, to obtain a thorough, balanced understanding of the topic you are researching on your readers' behalf.

Using Search Engines Efficiently

A web search is basically a word game. You can significantly increase your skill at it by employing the following strategies.

Ways to increase the efficiency of web searches

- **Use as few words as possible.** With the exception of conjunctions, prepositions, and a few other types of words, each word you enter becomes part of the search. For most searches, fewer words are helpful.
- **Use the words most likely to be used on the site you want.** Instead of "stomach hurts," use "stomachache" because this term is more likely to appear on the sites you want.
- **Use precise words.** Especially when researching technical or scientific topics, use the words specialists would use. While "heart attack" is the common term, medical specialists use "myocardial infarction."

Google, Yahoo, and other search engines use thousands of PCs to store and search information about websites its computers have visited.

- **Try different words.** Keep your vocabulary flexible. If your search isn't producing the results you want, use synonyms. "Gene splicing" will produce different results than "genetic engineering."
- **Reorder words.** Word order influences the number and ranking of search results. A search for "Mars life" produces results focused on space science. One for "life Mars" yields many kinds of results, including those about an old television comedy.
- **Narrow results by adding words.** To sharpen an initial search, add another word you would expect to appear on the websites you are targeting. Adding "science" or "comedy" significantly focuses the results of a search on "life Mars."
- **Narrow results by using quotation marks.** Quotation marks signal most search engines that you want sites where the enclosed words appear exactly as you have written them. Putting quotation marks around "basking sharks" cuts the number of results in half for both Google and Yahoo.
- **Narrow results by using "advanced search" features.** Advanced searches enable you to focus your search in many ways. Among other techniques, you can specify words that should not appear at any site you want and the type of file you want (.doc, .xls, .jpg). Another useful option is to limit the search to certain domains such as only those for educational institutions (.edu) and governments (.gov), but not businesses (.com and .biz).

WEB For links to a variety of search engines and Internet directories, go to your English CourseMate at *www.cengagebrain.com.*

For a brief tutorial on conducting efficient web searches, go to page 164.

Evaluating Your Search Results

As you learned in Chapter 6 (page 138), you should carefully evaluate the information you obtain from any source. However, research on the web requires special scrutiny because people can post anything there, whether it's true or false.

Begin by examining the URL (web address) of each search. The most helpful part of a URL is often the site's domain. Different kinds of organizations are assigned to different domains on the web. For instance, in the following URL, the three-letters "edu" identify the "education" domain, meaning that the site belongs to an educational institution, in this case the University of Florida ("ufl").

Location of a site's domain in its address

http://www.flmnh.ufl.edu/fish/Gallery/Descript/baskingshark/baskingshark.html

Other domains often used by researchers include:

.com	Commercial (sites for businesses)
.gov	Government (sites for local, state, and federal governments)
.org	Not-for-profit organizations

Depending on what you are looking for, sites in any of these domains may be good sources or bad ones. For example, a .com site may provide useful details about the features of its products, but biased information about product quality or lawsuits against the corporation.

Finally, if you decide to visit a site, evaluate its contents critically. In addition to applying the evaluative criteria described in Chapter 6 (page 138), determine whether the site identifies the person or organization that created it, whether you can contact the creator, and when the site was last modified (how up to date it is).

Keeping Records

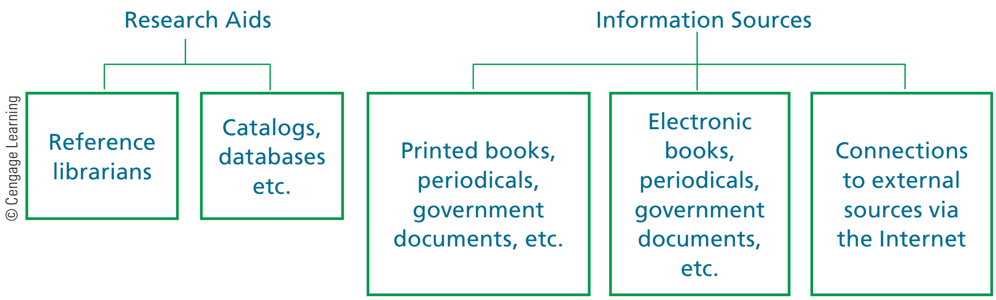
When conducting Internet research, keep careful records of the sites you find valuable. It's easy to lose your way when searching the Internet, which can make it difficult to relocate a site you need to visit again. Most browsers provide a bookmark feature that lets you add any page you are visiting to a personalized menu of sites you can return to with a single click. Even so, it's best to write down the URL of any site whose information you believe you will provide to your readers.

Bookmark valuable sites and write down their URLs.

Be sure to record the date you visit each site. Sites can change and even disappear suddenly, so this date is a crucial part of your bibliographic citation, as Appendix A explains.

HOW TO USE THE LIBRARY EFFECTIVELY

For research projects, the library will be your best source of information and ideas. Library resources fall into two broad categories.



Major library resources

Generally, your excursions in library research will begin with one of the research aids, which can guide you to the most productive information sources. The following sections will help you use the research aids productively and also introduce other sources with which you may not be familiar.

Obtaining Assistance from Reference Librarians

You will rarely find any research aid more helpful than reference librarians. They can tell you about specialized resources that you may not be aware of, and they can explain how to use the time-saving features of these resources.

Reference librarians will be able to give you the best help if you indicate very specifically what you want. In addition to stating your topic, describe what the purpose of your communication is, who your readers are, and how your readers will use your communication.

Tell the reference librarian your communication's objectives.

Using the Library Catalog

The library catalog lists the complete holdings of a library, including books, periodicals, pamphlets, recordings, videotapes, and other materials. In most

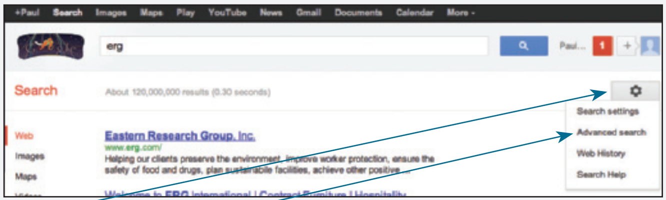
THREE WAYS TO SEARCH EFFICIENTLY ON THE INTERNET

By narrowing your search to specific parts of the Internet, you can increase the efficiency of your research by focusing your energy on websites your readers will find credible. The directions below show how to narrow a search with Google and Yahoo. Other search engines have similar options.

Use an Advanced Search

Use an advanced search to limit the kinds of web pages a search engine looks for.

1. Enter your key words.
2. Click on **Search**.
3. In the window that opens, click on the "Gear."
4. In the dropdown menu, choose **Advanced Search**.
5. Enter the words you want the search engine to look for or to avoid.
6. Scroll to limit the search to web pages that are:
   - Written in a certain language
   - Created in a certain file format (e.g., doc, xls)
   - Updated in the last 3 months, 6 months, etc.
   - Located in a certain domain (e.g., edu, org, com)



© Google, Inc.

© Google, Inc.

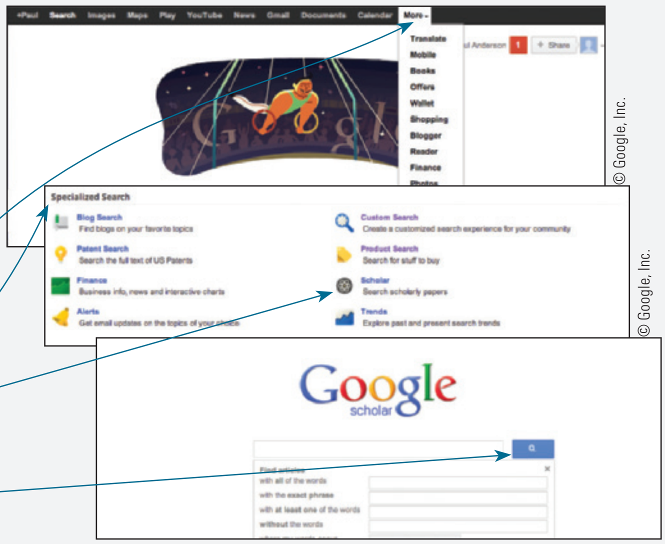
Use a Focused Search

Save time by telling the search engine to look only for a certain type of source.

You can also gain credibility by focusing the search on types of sites your readers respect.

For example, Google's Scholar search looks only at sites refereed by experts in their subjects.

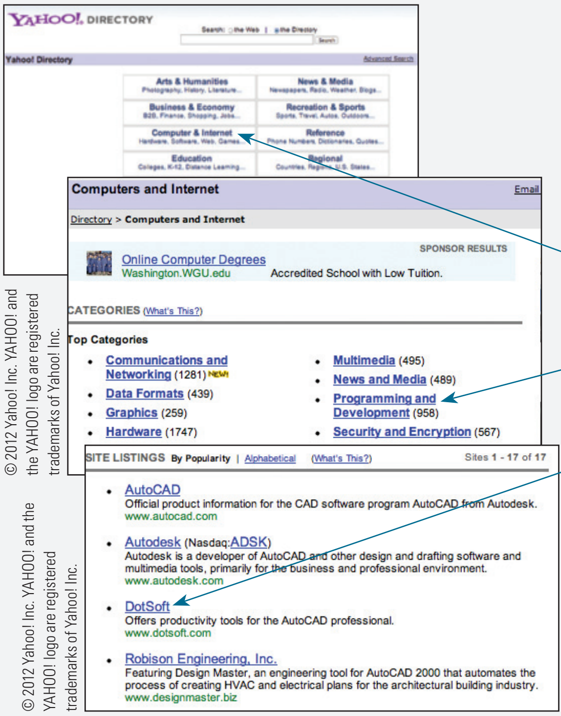
1. At Google's home page, click on **More**.
2. Click on **Even more** (at bottom).
3. In the window that opens, scroll to **Specialized Search**.
4. Click on **Scholar Search**.
5. If you wish, add advanced search options by clicking on the triangle next to the magnifying glass.



© Google, Inc.

© Google, Inc.

© Google, Inc.



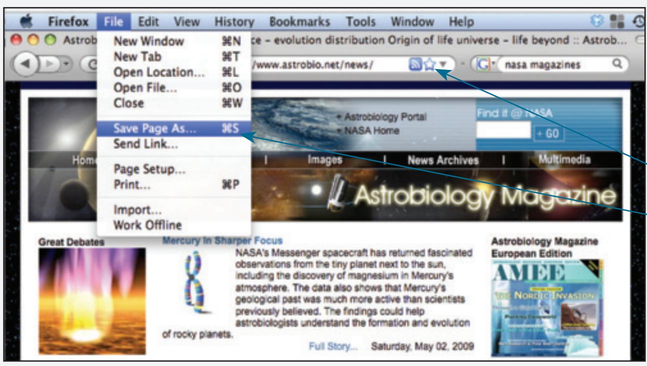
Use a Directory Search

Save time by using an Internet directory to search only through sites that human reviewers have judged to be good sources.

To use Yahoo's directory, do the following:

1. In your browser, go to dir.yahoo.com.
2. Click on the category that includes the kind of information you are searching for.
3. As each new screen appears, choose the most appropriate subcategory until you find the list of sites indexed for your search topic.
4. Click on the sites that appear to have the information most helpful to your readers.

NOTE: You can also access Yahoo's directory from the main Yahoo site (www.Yahoo.com) if you have or wish to set up a Yahoo account.



Save a Page for Future Reference

Save time by saving web pages you may want to visit again later in your research. Here are two ways to save a page.

- Create a bookmark in your browser.
- Use your browser's SAVE option. Record the date to include in your documentation.

Note: Copyright law protects information and images at websites. You must ask permission to reproduce an entire site or any image in it unless the site fits an exception in intellectual property law (page 147).

Learn More at the Website

For more advice about Internet research, go to your English CourseMate at www.cengagebrain.com.


© A. Huber/U. Starke/Corbis

Many employers have their own libraries that include resources directly related to their specialties.

libraries, the catalog is computerized so you can search for items in several ways. If you are looking for a particular book whose title you know or for work written or edited by a person whose name you know, library catalogs are very simple to use. However, when you begin by looking for information about a particular topic, your success may depend on your ingenuity and knowledge of how to use the computerized catalog that most libraries have.

To search for a specific topic, you have two choices:

- Subject search. To aid researchers, librarians include subject headings in the record for each library item. When you indicate that you want to do a subject search, the computer will prompt you to enter the words that identify the subject you are looking for. The computer will search through all items that have been tagged with the exact words you entered.
- Word search. When you indicate that you wish to conduct a word search, you will also be prompted to enter the words that identify your subject. This time, however, the computer will search the entire contents of all its records, including the title, author, and subject lines as well as tables of contents and other information that particular records might have.

Conducting Subject and Word Searches

Subject and word searches in computerized library catalogs are very similar to keyword searches on the Internet. Therefore, all the advice given on pages 161–162 applies. However, there is also one very important difference: When identifying the words used to describe the subject of a book, librarians use a formal and restricted set of terms that are defined in a large volume entitled the *Library of Congress Subject Headings List*. In the discussion about keyword searches on the Internet, you learned that some websites might use the term "gene splicing" and others might use "genetic engineering." In library subject headings, only "genetic engineering" is used. Consequently, while "gene splicing" will produce some results in an Internet search, it won't produce any in a subject search in a library. For help in determining the correct terms for subject searches, you have three resources:

- Many computerized library catalogs will tell you the correct term if you use an incorrect one that it recognizes as a synonym.
- The *Library of Congress Subject Headings List* is available at any library.
- Reference librarians are most willing to assist you.

Many computerized library catalogs will let you choose between abbreviated and extended displays of your search results. Extended displays are usually more helpful because they give you more information to consider as you decide whether to look at the entry for a particular item.

Refining and Extending Your Search

If your initial effort produces too few results, an overwhelming number of them, or an inadequate quality or range of them, there are several ways to refine and extend your search:

- **Look in the catalog entries of books you find for leads to other books.** Catalog entries not only name the subject headings under which a book is cataloged, but they also provide links to lists of other works that also have those subject headings.
- **Narrow your search.** If you receive too many results, you may refine the search in many of the ways described in the discussion of Internet searches (see pages 161–162).
- **Use other resources.** Don't limit yourself only to resources you locate through the library catalog. Your best source of information may be a corporate publication or other item not listed there. A reference librarian can help you identify other aids to use.
- **When you go to the library shelves, browse.** Sometimes books that will assist you are located right next to books you found through the library catalog. Don't miss the opportunity to discover them. Browse the shelves.

Using Databases

Databases are online research aids that catalog, describe, and often, provide access to publications and other resources on particular topics. Your college library's website will include a list of the databases it has available.

Many databases focus on science, technology, engineering, health, and other specialized topics. Most provide citations for relevant information, for instance the title, author, and location of journal articles. Figure 7.5 provides an abstract or summary of each item. By scanning through an abstract, you can usually tell whether reading the entire article would be worthwhile. Some databases go farther by enabling you to download copies of the items you would like to see.

The first step in locating resources through databases is to identify appropriate ones. Each resource has its own topics and selection criteria. Their topics can be very broad or very narrow. Many overlap in their coverage. An important criterion for you to use when choosing the databases to use is the *audience* for the items it indexes. Some databases provide pathways to items for general readers. Others guide users to resources for specialists in a field. You will want to use databases that index items for users like the readers to whom you are writing. A reference librarian can assist you in finding the most promising databases.

To locate items in most databases, you would use a keyword search similar to the one you would use in the library's online catalog. Some databases also support additional, powerful search methods. *SciFinder*, which includes information from more than 10,000 chemistry journals worldwide and has information about 49 million chemical substances, enables users to search for items related to a chemical by entering its formula or structure.

TRY THIS Using the online resources in your college's library, find an article related to your major or a personal interest in a journal you haven't heard of before. Can you find articles in two?

FIGURE 7.5

Abstract from an Abstracting Index

This abstract illustrates the research help you can receive when using online databases and indexes.

Full citation
In addition to using this information to locate this item, you can copy and paste the citation into your notes for possible inclusion in your references.

Links to other works by the author
These links can help you find other publications that may also relate to your research.

Abstract
This summary helps you decide whether it would be worthwhile to read the entire publication article.

Subject codes
This list identifies the keywords used to index this article. You can use it to link to other publications that were coded with these words.

Courtesy of OhioLINK

Reference Works

When you hear the term *reference works,* you probably think immediately (and quite correctly) of encyclopedias, dictionaries, and similar storehouses of knowledge, thousands of pages long. What you may not realize is that many of these resources, such as the *Encyclopedia Americana*, are now available online or on CD-ROM, so that finding information in them can be very quick and easy.

In addition to such familiar reference works as the *Encyclopedia Britannica,* thousands of specialized reference works exist. Some surely relate to your specialty. For example, there are the *Encyclopedia of the Biological Sciences, McGraw-Hill Encyclopedia of Science and Technology* (20 volumes), *Elsevier's Medical Dictionary, Harper's Dictionary of Music,* and the *Petroleum Dictionary.*

Government Documents

Every year, the U.S. Government Printing Office distributes millions of copies of its publications, ranging from pamphlets and brochures to periodicals, reports, and books. Some are addressed to the general public, while others are addressed to specialists in various fields. Sample titles include *Acid Rain, Chinese Herbal Medicine, Poisonous Snakes of the World,* and *A Report on the U.S. Semiconductor Industry.*

Government publications that may be especially useful to you are reports on research projects undertaken by government agencies or supported by government grants and contracts. Annually, the National Technical Information Service acquires more than 150,000 new reports on topics ranging from nuclear physics to the sociology of Peruvian squatter settlements. Chances are great that some relate to your subject.

The following indexes are especially helpful. A reference librarian can help you find many others.

INDEXES TO U.S. GOVERNMENT PUBLICATIONS

- Monthly Catalog of U.S. Government Publications
  Publications handled by the Government Printing Office
  http://catalog.gpo.gov:80/F?RN=94090418
- Lists of Publications by Specific Agencies
  EPA http://www.epa.gov/ncepihom/
  NASA http://www.nasa.gov/news/reports/index.html
  National Institutes of Health http://www.nih.gov

HOW TO CONDUCT EFFECTIVE INTERVIEWS

At work, your best source of information will often be another person. In fact, people will sometimes be your only source of information because you'll be researching situations unique to your organization or its clients and customers. Or you may be asking an expert for information that is not yet available in print or from an online source.

The following advice focuses on face-to-face interviews, but it applies also to telephone interviews, which are quite common in the workplace.

Preparing for an Interview

Preparing for an interview involves three major activities:

Take a reader-centered approach to selecting your interviewee.

- **Choose the right person to interview.** Approach this selection from your readers' perspective. Pick someone you feel confident can answer the questions your readers are likely to ask in a way that your readers will find useful and credible. If you are seeking someone to interview who is outside your own organization, the directories of professional societies may help you identify an appropriate person.
- **Make arrangements.** Contact the person in advance to make an appointment. Let the person know the purpose of the interview. This will enable him or her to start thinking about how to assist you before you arrive. Be sure to say how long you think the interview will take. This will enable your interviewee to carve out time for you. If you would like to record the interview, ask permission in advance.
- **Plan the agenda.** As the interviewer, you will be the person who must identify the topics that need to be discussed. Often, it's best simply to generate a list of topics to inquire about. But if there are specific facts you need to obtain, identify them as well. To protect against forgetting something during the interview, bring a written list of your topics and specific questions. For advice on phrasing questions, see the section on surveys (pages 173–177).

A well-planned interview can be productive and enjoyable for both interviewer and interviewee.

Rob Marmion/Shutterstock.com

CONDUCTING EFFICIENT LIBRARY RESEARCH

By wisely using various features of online library catalogs and indexes, you can increase your research efficiency.

Finding Books

Online library catalogs typically show an opening page that invites you to search by one of four topics: keywords, author, title, and subject.

However, you can often research more efficiently by using an advanced search to sharpen your focus.

1. Limit the search to sources identified by *all* of several keywords.
2. Limit the search to sources that are:
   - Written in a certain language.
   - A certain type of resource (e.g., book, periodical).
   - Published before or after a certain date.
3. Examine the search results to determine which items are worth clicking on for more details.

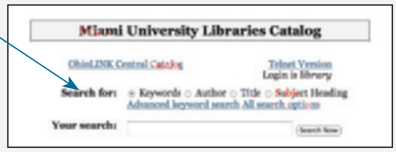


Image provided by Miami University Libraries, Oxford, OH.

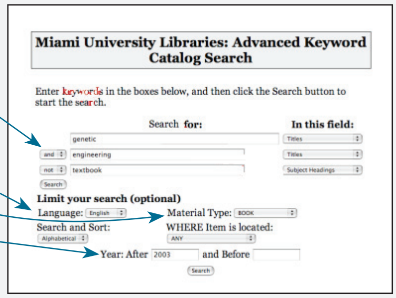


Image provided by Miami University Libraries, Oxford, OH.

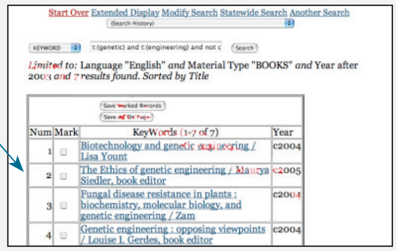


Image provided by Miami University Libraries, Oxford, OH.

Following Leads to Other Sources

Use the detailed description of a source to find other helpful items.

1. Click on the author's name to see other items written by this person.
2. Note whether the item has a bibliography you can review for leads to other sources.
3. Click on the relevant subject headings to see other items tagged the same way (see page 166).

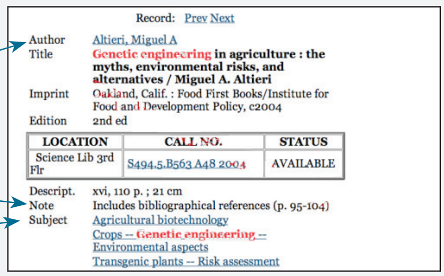


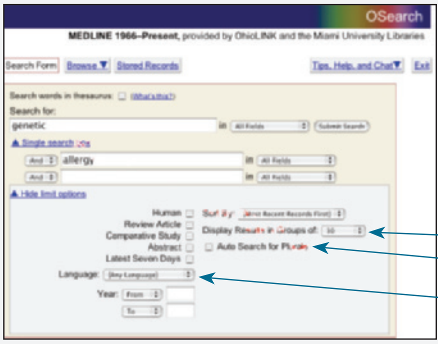
Image provided by Miami University Libraries, Oxford, OH.

Finding Periodical Sources

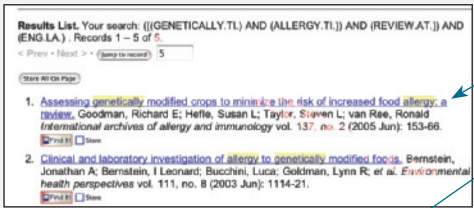
Save time using online indexes.

1. Ask a librarian to help you choose the best index or indexes for your topic.
2. Use the advanced search functions to search for items that are:
   - A certain type (e.g., a review article).
   - Published before or after a certain date.
   - Written in a certain language.
3. Click on items in the search results list that look as though they might be useful.
4. Read the abstract to decide whether it would be worthwhile to get the full item.
5. Click on the subject terms that are relevant to your research in order to view other articles tagged the same way (see page 166).

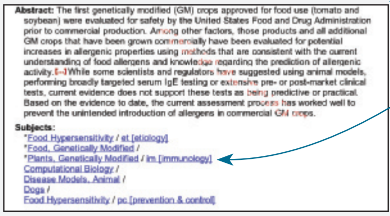
   Some let you read sources instantly on screen.



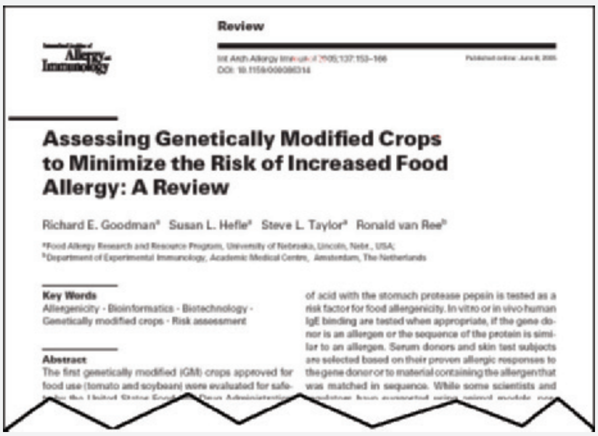
Courtesy of OhioLINK



Courtesy of OhioLINK



Courtesy of OhioLINK



Assessing Genetically Modified Crops to Minimize the Risk of Increased Food Allergy: A Review. International Archives of Allergy and Immunology. Richard E Goodman, Susan L Hefle, Steven L Taylor, Ronald van Ree, Food Allergy Research and Resource Program, University of Nebraska

Learn More at the Website

For more advice about library research, go to your English CourseMate at www.cengagebrain.com.

Conducting the Interview

Do only 10 to 20 percent of the talking.

Unless you are seeking a simple list of facts, your goal in an interview should be to engage the other person in a conversation, not a question-and-answer session. In this conversation, your goal should be to have the other person do 80 to 90 percent of the talking—and to have him or her focus on the information you need. To achieve these goals, you will need to ask your questions well and maintain a productive interpersonal relationship with your interviewee. Here are practical steps that you can take.

LEARN MORE For advice about succeeding in employment interviews, go to your English CourseMate at *www.cengagebrain.com.*

CONDUCTING A PRODUCTIVE INTERVIEW

Establish rapport.

- Arrive on time.
- Thank the person for agreeing to meet with you.

Explain your goal.

- Tell what you are writing and who your readers will be.
- Explain the use your readers will make of your communication.
- Describe the outcome you desire.

Ask questions that encourage discussion.

- Use questions that ask the interviewee to explain, describe, and discuss. They can elicit valuable information that you might not have thought to ask for. Avoid closed questions that request a yes/no or either/or response.

  Closed question: Does the present policy create any problems?

  Open question: What are your views of the present policy?
- Use neutral, unbiased questions.

  Biased question: Don't you think we could improve operations by making this change?

  Neutral question: If we made this change, what effect would it have on operations?
- Begin with general questions, supplemented by more specific follow-up questions that seek additional details important to you.

  General question: Please tell me the history of this policy.

  Follow-up question: What role did the labor union play in formulating the policy?

TRY THIS Write two biased questions intended to get students to give a favorable evaluation of a cafeteria, bookstore, or other facility at your school. Next, write two parallel questions designed to elicit unfavorable evaluations. Finally, write versions of the same questions that are not biased.

Show that you are attentive and appreciative.

- Maintain eye contact and lean forward.
- Respond with an occasional "uh-huh" or "I see."
- Comment favorably on the interviewee's statements.

  Examples: "That's helpful." "I hadn't thought of that." "This will be useful to my readers."

Give your interviewee room to help you.

- If the interviewee pauses, be patient. Don't jump in with another question. Assume that he or she is thinking of some additional point. Look at him or her in order to convey that you are waiting to hear whatever he or she will add.
- If the interviewee begins to offer information out of the order you anticipated, adjust your expectations.

Keep the conversation on track.

- If the interviewee strays seriously from the topic, find a moment to interrupt politely in order to ask another question. You might preface the question by saying something like this: "My readers will be very interested to know . . ."

Be sure you understand and remember.

- If anything is unclear, ask for further explanation.
- On complicated points, paraphrase what your interviewee has said and then ask, "Have I understood correctly?"
- Take notes. Jot down key points. Don't try to write down everything because that would be distracting and would slow down the conversation.
- Double-check the spelling of names, people's titles, and specific figures.

It's especially important that you assume leadership for guiding the interview. You are the person who knows what information you need to obtain on your readers' behalf. Consequently, you may need to courteously redirect the conversation to your topics.

Concluding the Interview

During the interview, keep your eye on the clock so that you don't take more of your interviewee's time than you requested. As the time limit approaches, do the following:

- **Check your list.** Make sure that all your key questions have been answered.
- **Invite a final thought.** One of the most productive questions that you can ask near the end of an interview is, "Can you think of anything else I should know?"
- **Open the door for follow-up.** Ask something like this: "If I find that I need to know a little more about something we've discussed, would it be okay if I called you?"
- **Thank your interviewee.** If appropriate, send a brief thank-you note by letter, memo, or e-mail.

HOW TO CONDUCT A SURVEY

While an interview enables you to gather information from one person, a survey enables you to gather information from *groups* of people.

At work, surveys are used as the basis for practical decision-making. Manufacturers survey consumers when deciding how to market a new product,

At work, surveys support practical decision making.

WEB For information about creating online surveys for free using services such as Survey Monkey, go to your English CourseMate at *www.cengagebrain.com*.

and employers survey their employees when deciding how to modify personnel policies or benefit packages. While some surveys require the use of specialized statistical techniques that are beyond the scope of this book, you will usually be able to construct surveys that provide a solid basis for on-the-job decision making simply by following the advice provided in the following sections. This advice is equally valid for paper and online surveys.

Deciding What to Ask About

The first step in writing survey questions is to decide exactly what you want to learn.

- **Review your research objectives by focusing on the decisions your readers must make.** Roger worked for a small restaurant chain that asked him to study the feasibility of opening a premium pastry and coffee shop next to a college campus. His readers' question, Roger knew, would relate primarily to whether there would be enough business to make the shop profitable.
- **Identify the full range of information your readers will find helpful.** Thinking about the information his readers would want, Roger realized that his survey should ask about the full range of variables that could influence the shop's profitability, such as location, hours of operation, products offered, and pricing.
- **Gather the information needed for analyzing information from subgroups.** Because different groups answer survey questions differently, Roger asked about the respondents' sex, age, income, relationship to the college (student, employee, or not affiliated), and other characteristics. By analyzing responses from various demographic groups, Roger could help his readers understand more precisely the potential market for the shop.

Writing the Questions

More than anything else, the success of your survey depends on the skill with which you write your questions. The following suggestions will help you create an effective questionnaire that provides useful information and elicits the cooperation of the people you ask to fill it out.

Ambiguity is the greatest threat to a survey's value.

- **Avoid ambiguity.** The greatest threat to a survey's value is ambiguity in the questions. If different people interpret a question differently, they will, in fact, be answering different questions, making your data worthless. If they all interpret your question differently than you do, then your interpretation of the results will be erroneous. Take the reader-centered approach of asking yourself how the people responding to the survey might misunderstand each question. Pilot test your questions by asking a few people to tell you what they think each is asking. In survey questionnaires, as in all communications, what matters isn't what you mean but what your readers think you mean.
- **Mix closed and open questions.** *Closed questions* allow only a limited number of possible responses. They provide answers that are easy to tabulate. *Open questions* allow the respondent freedom in devising the answer. They provide respondents an opportunity to react to your subject matter in their own terms. See Figure 7.6.

TRY THIS If one of your professors asked you to help him or her improve a course by writing a survey for students to take, what three closed questions and what three open-ended questions would you include in it. Why?

FIGURE 7.6

Closed and Open Questions

CLOSED QUESTIONS

Forced Choice

- Respondents must select one of two choices (yes/no, either/or).

Example
Would you buy pastries at a shop near campus, yes or no?

Multiple Choice

- Respondents select from several predefined alternatives.

How many times a month would you visit the shop?

_____ 1 to 2 _____ 3 to 4 _____ 5 or more

Ranking

- Respondents indicate an order of preference.

Example
Please rank the following types of pastry, using a 1 for your favorite, and so on.

Rating

- Respondents pick a number on a scale.

Example
Please circle the number on the following scale that best describes the importance of the following features of a pastry shop:

Music	Unimportant	1	2	3	4	5	Important
Tables	Unimportant	1	2	3	4	5	Important

OPEN QUESTIONS

Fill in the Blank

- Respondents complete a statement.

Example
When deciding where to eat a late-night snack, I usually base my choice on __________.

Written Response

- Respondents can frame responses in any way they choose.

Example
Please suggest ways we could make a pastry shop that would be appealing to you.

You may want to follow each of your closed questions with an open one that simply asks respondents to comment. A good way to conclude a survey is to invite additional comments.

- **Ask reliable questions.** A *reliable* question is one that every respondent will understand and interpret in the same way. For instance, if Roger asked, “Do you like high-quality pastries?” different readers might interpret the term “high-quality” in different ways. Roger might instead ask how much the respondents would be willing to pay for pastries or what kinds of snacks they like to eat with their coffee.
- **Ask valid questions.** A *valid* question is one that produces the information you are seeking. For example, to determine how much business the pastry shop might attract, Roger could ask either of these two questions:
  - How much do you like pastries? — Invalid
  - How many times a month would you visit a pastry shop located within three blocks of campus? — Valid

The first question is invalid because the fact that students like pastries does not necessarily mean that they would patronize a pastry shop. The second question is valid because it can help Roger estimate how many customers the shop would have.

- **Avoid biased questions.** Don't phrase your questions in ways that seem to guide your respondents to give a particular response.

Biased

- Wouldn't it be good to have a coffee shop near campus?

Unbiased

- How would you feel about having a coffee shop near campus?

- **Place your most interesting questions first.** Save questions about the respondent's age or similar characteristics until the end.
- **Limit the number of questions.** If your questionnaire is lengthy, people may not complete it. Decide what you really need to know and ask only about that.
- **Test your questionnaire.** Even small changes in wording may have a substantial effect on the way people respond. Questions that seem perfectly clear to you may appear puzzling or ambiguous to others. Before completing your survey, try out your questions with a few people from your target group.

Selecting Your Respondents

At work, writers sometimes present their survey questions to every person who belongs to the group whose attitudes or practices they want to learn about. For example, an employee assigned to learn what others in her company feel about a proposed change in health care benefits or a switch to flextime scheduling might send a survey questionnaire to every employee.

Your sample should reflect the composition of the overall group.

However, surveys are often designed to permit the writers to generalize about a large group of people (called a *population*) by surveying only a small portion of individuals in the group (called a *sample*). To ensure that the sample is truly representative of the population, you must select the sample carefully. Here are four types of samples you can use:

- **Simple random sample.** Here, every member of the population has an equal chance of being chosen for the sample. If the population is small, you could put the name of every person into a hat, then draw out the names to be included in your sample. If the population is large—all the students at a major university, for example—the creation of a simple random sample can be difficult.
- **Systematic random sample.** To create a systematic random sample, you start with a list that includes every person in the population—perhaps by using a phone book or student directory. Then you devise some pattern or rule for choosing the people who will make up your sample. For instance, you might choose the fourteenth name on each page of the list.

Convenience samples can give unreliable results.

- **Convenience sample.** To set up a convenience sample, you select people who are handy and who resemble in some way the population you want to survey. For example, if your population is the student body, you might knock on every fifth door in your dormitory, or stop every fifth student who walks into the library. The weakness of such samples is obvious: From the point of view of the attitudes or behaviors you want to learn about, the students who live with their parents or in apartments may be significantly different from those who live in dorms, just as those who don't go to the library may differ in substantial ways from those who do.

- **Stratified sample.** Creating a stratified sample is one way to partially overcome the shortcomings of a convenience sample. For instance, if you know that 15 percent of the students in your population live at home, 25 percent live in apartments, and 60 percent live in dormitories, you would find enough representatives of each group so that they constituted 15 percent, 25 percent, and 60 percent of your sample. Even if you can't choose the people in each group randomly, you would have made some progress toward creating a sample that accurately represents your population.

When creating your sample, you must determine how many people to include. On one hand, you want a manageable number; on the other hand, however, you also want enough people to form the basis for valid generalizations. Statisticians use formulas to decide on the appropriate sample size, but in many on-the-job situations, writers rely on their common sense. One good way to decide is to ask what number of people your readers would consider to be sufficient.

Use enough respondents to persuade your readers.

Contacting Respondents

There are three methods for presenting your survey to your respondents:

Adam Gregor/Shutterstock.com

In face-to-face interviews, the interviewer carefully avoids facial expressions, comments, or other indications that he or she wants a particular response to a question.

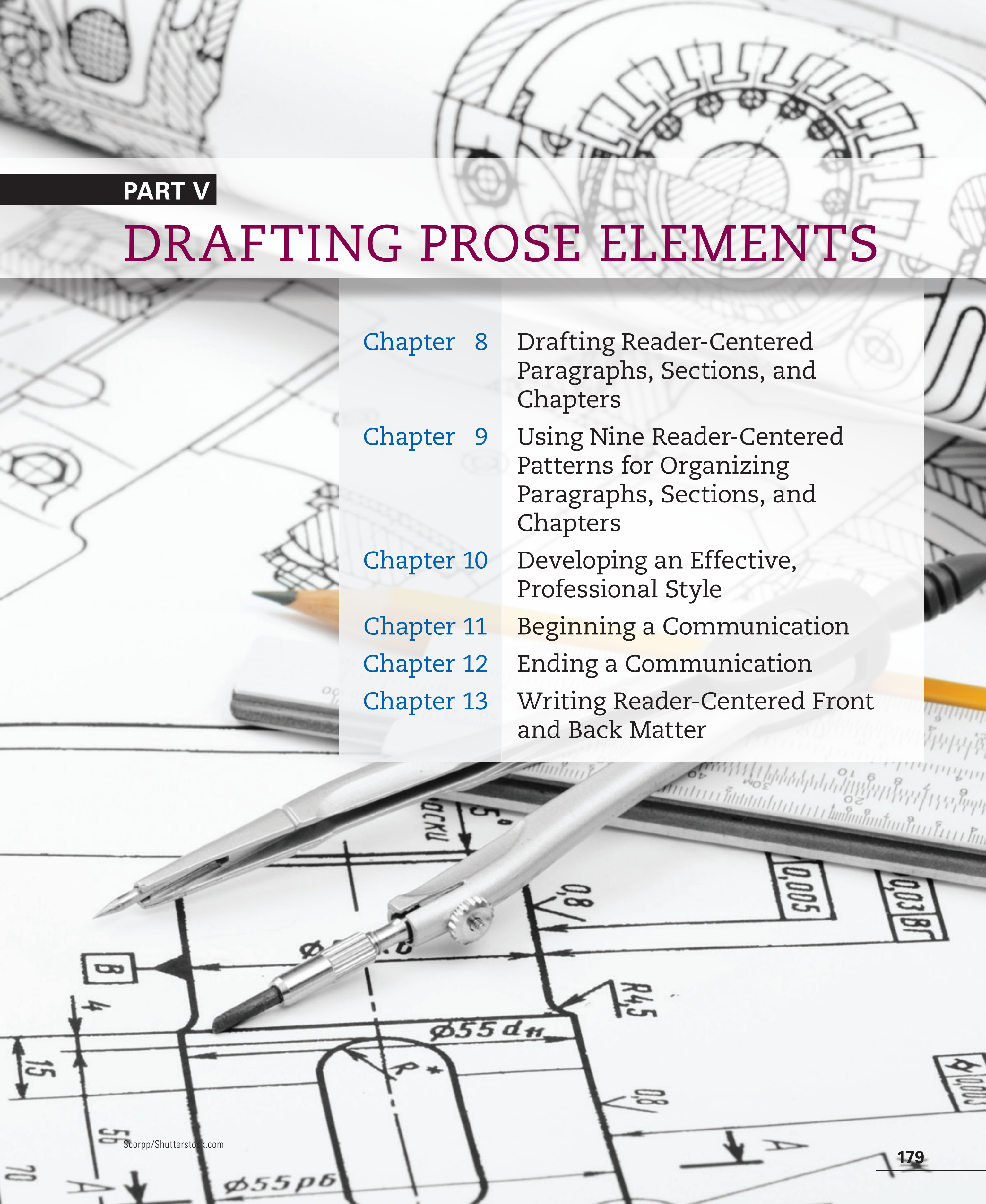
- **Face-to-face.** In this method, you read your questions aloud to each respondent and record his or her answers on a form. It's an effective method of contacting respondents because people are more willing to cooperate when someone asks for their help in person than they are when asked to fill out a printed questionnaire. The only risk is that your intonation, facial expressions, or body language may signal that you are hoping for a certain answer. Research shows that respondents tend to give answers that will please the questioner.
- **Telephone.** Telephone surveys are convenient for the writer. However, it can sometimes be difficult to use a phone book to identify people who represent the group of people being studied.
- **Mail or handout.** Mailing or handing your survey forms to people you hope will respond is less time-consuming than conducting a survey face to face or by telephone. Generally, however, only a small portion of the people who receive survey forms in these ways actually fill them out and return them. Even

LEARN MORE See Chapter 6 for detailed suggestions for interpreting survey results.

professional survey specialists typically receive responses from only about 20 percent of the people they contact.

Interpreting Your Results

Of course, survey results don't speak for themselves. You need to analyze and interpret them in order to make the results meaningful and useful to your readers. Chapter 6 guides you through this process using an extended example that involves the analysis, interpretation, and presentation of survey data.



PART V

DRAFTING PROSE ELEMENTS

Scorpp/Shutterstock.com

Scorpp/Shutterstock.com

8 | Drafting Reader-Centered Paragraphs, Sections, and Chapters

This chapter marks a major transition in your study of on-the-job writing. Its focus differs significantly from that of Chapters 3 through 7. They provide advice about the important writing activities you perform before you put fingers to keyboard or pen to paper. Here, and in the next six chapters, you will learn effective, reader-centered strategies for converting your goals (Chapter 3), plans (Chapters 4 and 5), and research results (Chapters 6 and 7) into actual communications.

This chapter starts the seven-chapter sequence at the moment when you have, on the one hand, a good idea of what you want to achieve plus a plan for achieving it, and, on the other hand, the ideas and information you generated and gathered through your reader research. The next step is figuring out how to arrange your research results into the paragraphs, sections, and chapters that fit coherently, helpfully, and persuasively in the overall plan or outline you have created.

WEB For more information, examples, and links related to this chapter, go to your English CourseMate at *www.cengagebrain.com.*

THE SIMILARITIES AMONG PARAGRAPHS, SECTIONS, AND CHAPTERS

This chapter's strategies apply to writing all parts of a communication that are longer than a few sentences, including paragraphs, groups of paragraphs that make up the sections and chapters of longer communications, and even whole communications. For convenience's sake, this chapter uses the word *segments* to designate these variously sized prose units.

Can the same strategies really apply with equal validity to segments that range in size from a few sentences to an entire communication that may be tens or hundreds of pages long? In fact, it is very possible—for two reasons, one related to usefulness and the other to persuasiveness.

- **Usefulness.** You may have heard a paragraph described as a group of sentences on the same subject. With slight variation, that definition applies to larger segments. A section is a group of paragraphs, a chapter is a group of sections, and an entire communication is a group of sections.
- **Persuasiveness.** Regardless of a segment's size, readers mentally process its persuasive claims and evidence in the same way. For example, as Chapter 5 explains, they look for benefits to their organizations and themselves, and they spontaneously raise counterarguments. Because readers read all segments in the same way, the same strategies can increase the persuasiveness of all segments.

Because segments of all sizes share these two characteristics, they present the same challenges to readers. As they read any segment, small or large, readers must figure out what its parts have in common—what they are about—and how they fit together. Because segments of all sizes present the same challenges to readers, you can use the same strategies to help your readers see what the sentences have in common (what the topic is) and how each one fits in with the others.

WHAT TO FOCUS ON WHEN READING THIS CHAPTER

This chapter's advice focuses on three issues: how to start segments, how to arrange their other parts, and how to help your readers see the organization you've given them. An additional section addresses a related ethical question. As you read this chapter, discuss it in class, and apply its advice to your writing projects, your instructor will help you emphasize the strategies that will be most beneficial to you, considering your major and your professional goals. Overall, though, concentrate on developing your skills at doing the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Start each paragraph, section, and chapter in a way your readers will find clear, coherent, and persuasive.
2. Arrange all the other parts to create clarity, coherence, and persuasiveness.
3. Help your readers see the organization you have created for each paragraph, section, and chapter.
4. Weigh the human consequences of what you write.

HOW TO START A SEGMENT

Some ways of beginning a segment are more effective than others. Guidelines 1 and 2 describe highly effective ways to begin most segments. For some, however, different strategies are superior. The discussion of Guideline 2 explains when and how to use them.

Guideline 1 | Begin by announcing your topic

By far, the most valuable advice for starting segments is something you may have first heard long ago: Begin with a topic sentence. Although we often think of topic sentences as associated with paragraphs, they usually increase the clarity and coherence of segments of any size because they answer the first question readers ask, "What is this communication, section, or paragraph about?"

Topic statements are more helpful to readers when placed at the beginning of a segment.

While you could answer that question anywhere in a segment, research has shown that placing your topic statement at the beginning helps readers understand more rapidly and remember more. In a classic experiment, Bransford and Johnson (1972) asked people to listen to the following passage being read aloud.

Passage used in an experiment that demonstrated the value of placing topics statements at the beginning of a segment

> The procedure is actually quite simple. First you arrange things into different groups. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities, that is the next step; otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run this may not seem important, but complications can easily arise. A mistake can be expensive as well. At first the whole procedure will seem complicated. Soon, however, it will become just another facet of life. . . . After the procedure is completed, one arranges the materials into different groups again. Then they can be put into their appropriate places. Eventually they will be used once more and the whole cycle will then have to be repeated. However, that is part of life.

The researchers told one group the topic of this passage in advance; they told the other group afterward. Then they asked both groups to write down everything they remembered from what they had heard. People who had been told the topic (washing clothes) before hearing the passage remembered many more details than those who were told afterward. One goal of your writing at work will always be to provide information your readers will remember.

Here are three of the most common and effective ways to provide topic statements at the beginning of your segments.

INDICATING THE TOPIC OF A SEGMENT

- **Use a sentence.** An example is the sentence that introduced this list of strategies ("Here are three of the most common and effective ways to provide topic statements at the beginning of your segments").
- **Use a single word.** When a paragraph or other segment begins with "First," you know that you are starting a discussion with two or more parts. "Second" tells you that you are moving to the next part. Words such as "However," "Finally," and "Therefore" tell how what comes next relates to what they just read.
- **Use a question.** A paragraph earlier in this chapter begins, "Can the same strategies really apply with equal validity to segments that range in size from a few sentences to an entire communication?" The question suggests that the answer is "Yes" and that the paragraph will explain how.

You can provide your readers with even more assistance in understanding your communications by creating an interlocking set of easy-to-spot topic statements that reveal the organizational hierarchy of your communication. Chandra, a large-animal-veterinarian, did so in a report she wrote about the financial situation of the small zoo that employed her. Here is the outline for one part of the report.

LEARN MORE For advice on organizing your communications hierarchically, see Chapter 4, page 92.

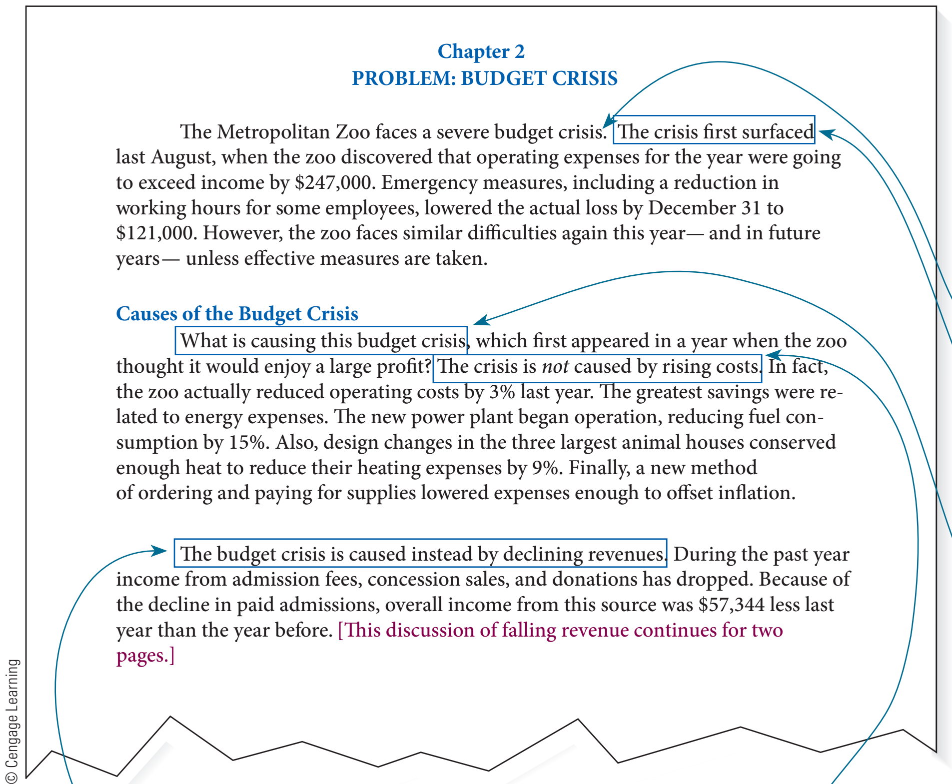
I. Budget Crisis
  A. The crisis first surfaced last August.
  B. What is causing the crisis?
    1. The crisis is not caused by rising costs.
    2. The crisis is caused by declining revenues.

Outline corresponding to the page shown in Figure 8.1

In Figure 8.1, you can see how Chandra incorporated the outline into topic sentences that increase the coherence and flow of her report.

Guideline 2 | Present your generalizations before your details

In many of the segments you write at work, you will present detailed facts about your topic in order to explain or support a general point. You can usually increase



Chapter 2
PROBLEM: BUDGET CRISIS

The Metropolitan Zoo faces a severe budget crisis. The crisis first surfaced last August, when the zoo discovered that operating expenses for the year were going to exceed income by $247,000. Emergency measures, including a reduction in working hours for some employees, lowered the actual loss by December 31 to $121,000. However, the zoo faces similar difficulties again this year— and in future years— unless effective measures are taken.

Causes of the Budget Crisis

What is causing this budget crisis, which first appeared in a year when the zoo thought it would enjoy a large profit? The crisis is *not* caused by rising costs. In fact, the zoo actually reduced operating costs by 3% last year. The greatest savings were related to energy expenses. The new power plant began operation, reducing fuel consumption by 15%. Also, design changes in the three largest animal houses conserved enough heat to reduce their heating expenses by 9%. Finally, a new method of ordering and paying for supplies lowered expenses enough to offset inflation.

The budget crisis is caused instead by declining revenues. During the past year income from admission fees, concession sales, and donations has dropped. Because of the decline in paid admissions, overall income from this source was $57,344 less last year than the year before. [This discussion of falling revenue continues for two pages.]

FIGURE 8.1

Interlocking Topic Statements (see above for the outline of this passage)

The writer has created an interlocking set of topic statements that correspond to the outline shown above.

She announces the topic for the entire chapter in its first sentence (budget crisis).

In the second sentence, she provides the topic statement for the first section for the chapter (history of the crisis). Note that a topic statement does not need to be the first sentence of a paragraph.

The writer provides the topic statement for the second section of the chapter (cause of the budget crisis). Here, she places the topic statement in the first sentence of the entire section.

She provides the topic statement for the second subtopic (falling revenue is the cause).

She provides the topic statement for the first subtopic (rising costs are not the cause).

the usefulness and persuasiveness of these segments by not only stating the *topic,* but also stating the *main point* you want to make at the beginning.

How Initial Generalizations Make Writing Easier to Understand and Use

When you present your generalizations first, you save your readers the work of trying to figure out what your general point is. Imagine, for instance, that you are a manager who finds the following sentences in a report:

Details without an initial generalization

> In a chamber set at 25°C, we passed a gas sample containing 500 micrograms of vinyl chloride monomer through a sampling tube with 5 grams of charcoal. We then divided the tube into half. The front half, which contained 2.3 grams of charcoal, had the entire 500 micrograms. The back half, which contained the majority of the charcoal, had none.

As you read these details, you probably find yourself asking, "What does the writer want me to get from this?" You would have been saved that labor if the writer had begun the segment with the following statement:

> We have conducted a test that demonstrates the ability of our sampling tube to absorb the necessary amount of VCM under the conditions specified.

By placing the generalization at the head of the paragraph, the writer would also help you use the segment more efficiently as you performed the managerial task of determining whether the writer's conclusion is valid. Because you would already know the writer's generalization, you could immediately assess whether each detail does, indeed, provide adequate support for the conclusion that the sample tube absorbs the necessary amount of VCM. In contrast, if the writer waited to reveal his or her conclusion after presenting the details, you would have to recall each detail from memory—or even reread the passage—in order to assess the strength of its support for the writer's conclusion.

How Initial Generalizations Make Writing More Persuasive

Left to themselves, readers are capable of deriving all sorts of generalizations from a passage. Consider the following sentences:

> Richard moved the gas chromatograph to the adjacent lab.

> He also moved the electronic balance.

> And he moved the experimental laser.

One reader might note that everything Richard moved is a piece of laboratory equipment and consequently might generalize that "Richard moved some laboratory equipment from one place to another." Another reader might observe that everything Richard moved was heavy and therefore might generalize that "Richard is strong." A member of a labor union in Richard's organization might generalize that "Richard was doing work that should have been done by a union member, not by a manager" and might file a grievance. Different generalizations lead to different outcomes.

Present your generalization before your readers begin to formulate contradictory ones.

A key point is that readers naturally formulate generalizations even if none are provided. Of course, when you are writing persuasively, you want your readers to draw one particular conclusion—and not other possible ones. You increase your chances of succeeding by stating your desired generalization explicitly and by placing that generalization ahead of your supporting details so that your readers encounter it before forming a different generalization on their own.

Sometimes You Shouldn't Present Your Generalizations First

Although you usually strengthen your segments by stating your generalizations before your details, you will encounter situations where delaying the generalizations will be more effective. As explained in Chapter 5, if you begin a segment with a generalization that is likely to provoke a negative reaction from your readers, you may decrease your communication's persuasiveness. In such cases, you usually increase your communication's persuasiveness by postponing your general points until *after* you've laid the relevant groundwork with your details by using the indirect organizational pattern (described in Chapter 5).

How Guideline 2 Relates to Guideline 1

Taken together, Guidelines 1 and 2 suggest that in most cases you announce your topic and state your main point about it at the beginning of each segment. You can devote a separate sentence to each purpose. In the following example from the beginning of a two-page test report, the first sentence announces the topic and the second states the engineer's main conclusion.

> We conducted tests to determine whether the plastic resins can be used to replace metal in the manufacture of the CV-200 housing. The tests showed that there are three shortcomings in plastic resins that make them unsuitable as a replacement for the metal.

Separate sentences state the topic and the writer's generalization.

Often, however, you can make your writing more concise and forceful by stating both your topic and your main point in a single sentence.

> Our tests showed three shortcomings in plastic resins that make them unsuitable as a replacement for metal in the manufacture of the CV-200 housing.

Topic and generalization are combined in one sentence.

HOW TO ARRANGE THE PARTS OF YOUR COMMUNICATION TO CREATE CLARITY, COHERENCE, AND PERSUASIVNESS

The guidelines in the preceding section discussed strategies for beginning your segments. The next three guidelines focus on ways to organize the material that follows your opening sentence or sentences.

Guideline 1 | Move from most important to least important

In some segments, you will present parallel pieces of information, such as a list of five recommendations or an explanation of three causes of a problem. Whether you devote a single sentence or several paragraphs to each item, you can usually increase your segment's usefulness by presenting the most important item first and proceeding in descending order of importance. This organization helps readers who scan to locate your key points. It also increases your communication's persuasiveness by presenting the strongest support for your arguments in the most prominent spot.

To identify the most important information, consider your communication from your readers' viewpoint. What information will they be most interested in or find most persuasive? For example, in the segment on the three shortcomings of plastic resins, readers will certainly be more interested in the major shortcoming than the minor ones. Similarly, if the readers must be persuaded that plastic resins are not a good substitute for metal, they are sure to find the major shortcoming more compelling than minor ones.

Occasionally, you may encounter situations where you must ignore this guideline in order to present your overall message clearly and economically. For instance, to explain clearly the multiple causes of a flooding along a river, you may need to describe events chronologically even though the event that occurred first was not the one with the greatest impact. In general, though, presenting the most important information first will be most helpful and persuasive to your readers.

Guideline 2 | Consult conventional strategies when having difficulties organizing

Every writer occasionally gets stumped when trying to organize a particular paragraph, section, or chapter. Often the problem is one that many others have faced, such as how to describe a certain process or how to explain the causes of a particular event. For many commonly encountered organizational problems, there are conventional strategies for arranging material in ways that will be understandable and useful to readers. By consulting these strategies, you will often find a quick and effective solution to your own problem.

Chapter 9 suggests ways to use seven of these strategies that are especially useful on the job. As you study the strategies, remember to use them only as guides. To make them work in your particular context, you will need to adapt them to your purpose and the needs of your readers.

Guideline 3 | Global Guideline: Consider your readers' cultural background when organizing

The advice you have read so far in this chapter is based on the customs of readers in the United States and other Western countries where readers expect and value what might be called a *linear* organization. In this organizational pattern, writers express their main ideas explicitly and develop each one separately, carefully leading readers from one to another. As international communication experts Myron W. Lustig and Jolene Koester explain, this pattern can be visualized as "a series of steps or progressions that move in a straight line toward a particular goal or idea" (1993, p. 218).

In other cultures, writers and readers are accustomed to different patterns. For example, the Japanese use a nonlinear pattern that many researchers call a *gyre* (Connor, 1996). The writer approaches a topic by indirection and implication because in Japanese culture it's rude and inappropriate to tell the reader the specific point being conveyed. Communication specialist Kazuo Nishiyama (1983) gives an example: When a Japanese manager says, "I'd like you to reflect on your proposal for a while," the manager can mean, "You are dead wrong, and you'd better come up with a better idea very soon. But I don't say this to you directly because you should be able to understand what I'm saying without my being so rude." Similarly, in

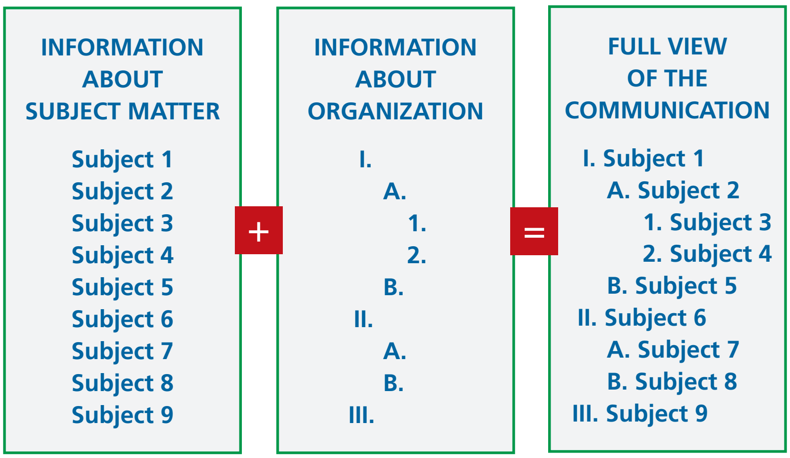
Hindi (one of the major languages of India), paragraphs do not stick to one unified idea or thought, as they do in the United States and many other Western nations. Linguist Jamuna Kachru (1988) explains that in the preferred Hindi style, the writer may digress and introduce material related to many different ideas.

Because of these cultural differences, serious misunderstandings can arise when your readers are employed by other companies in another country, work for your own company in another country, or even work in your own building but were raised observing the customs of another culture. Such misunderstandings cannot be avoided simply by translating the words of your communication: The whole message must be structured to suit the customs of your readers' culture.

HOW TO HELP YOUR READERS SEE THE ORGANIZATION OF YOUR COMMUNICATION

By following the advice given so far in this chapter and the advice from Chapters 4 and 5, you can organize your communications in reader-centered ways that are highly useful and highly persuasive. However, in even the most skillfully organized communications, the relationships among the parts may not be evident to readers.

How can that be? As the following diagram indicates, information about an organization can be quite distinct from information about subject matter.



© Cengage Learning

Because you wrote the communication, you have the full view indicated in the right-hand column. You know how every part fits in with the rest. But your readers don't begin with that overview. They read one sentence, then the next, one paragraph, then the next, and so on. To understand and use your communication, they must determine how each sentence or paragraph they are reading fits in with the one they just read, and they must figure out where both belong in the communication's overall hierarchy.

The next two guidelines describe ways to provide your readers with this important information. The first focuses on the relationship among larger units—paragraphs, sections, and chapters. The second concerns the equally significant goal of smoothing the flow of thought from sentence to sentence.

Guideline 1 | Provide signposts that create a map of your communication

The following sections describe four kinds of signposts you can use to map your communication's organization.

- Forecasting statements
- Transitions
- Headings
- Visual arrangement of your text on the page

Use Forecasting Statements

Forecasting statements tell the reader the organization of what lies ahead. Often, they appear along with a topic sentence, which they supplement. For instance, here are the first two sentences from a section of a brochure published by a large chain of garden nurseries:

Topic statement followed by a forecasting statement

> Our first topic is the trees found in the American Southwest. Some of the trees are native, some imported.

Forecasting and topic statements are often combined in one sentence:

Topic statement combined with a forecasting statement

> Our first topic is the trees—both native and imported—found in the American Southwest.

Forecasting statements may vary greatly in the amount of detail they provide. The sample sentences above provide both the number and the names of the categories to be discussed. A more general preview is given in the next example, which tells its readers to expect a list of actions but not what these actions are or how many will be discussed:

Forecasting statement

> To solve this problem, the department must take the following actions.

When you are deciding how much detail to include in a forecasting statement, there are three main points to consider.

WRITING FORECASTING STATEMENTS

- **Say something about the segment's arrangement that readers will find helpful.** Usually, the more complex the relationship among the parts, the greater the amount of detail that is needed.
- **Say only as much as readers can easily remember.** A forecasting statement should help readers, not test their memories. When forecasting a segment that will discuss a three-step process, you could name all the steps. If the process has eight steps, state the number without naming them.
- **Forecast only one level at a time.** Don't list all the contents of a communication at its outset. That will only confuse your readers. Tick off only the major divisions of a particular section. If those divisions are themselves divided, provide each of them with its own forecasting statement.

Use Transitions

When you organize a communication, you understand the connections between adjacent parts—how one topic leads to the second and the second follows from the first. If your readers miss a connection along the way, they will miss part of your meaning.

Transitions include three elements: a reference to the preceding topic, the topic (or topic statement) that is beginning, and the link between the two.

> This large increase in contributions will enable us to expand our free health care program in several ways.

Transition based on cause and effect

This sentence begins with the preceding topic (the increase in contributions) and ends with the next topic (the ways the free health care program might be expanded). The link between the two is that the contributions have created the opportunity for the expansion. Here's another example.

> Having finally reached Dingham Point, the expedition spent the next three days building rafts to cross the river.

Transition based on sequence of events

In this case, the link between the last topic (about the journey to Dingham Point) and the next one (building the rafts) is that one followed the other.

Sometimes you can signal transitions without using any words at all. For example, in a report that presents three brief recommendations, you might arrange the recommendations in a numbered list. The numbers themselves would provide the transition from one recommendation to the next. Similarly, in a memo covering several separate topics, the transition from one to the next might be provided by giving each topic a heading (see the discussion of headings that follows).

Use Headings

Headings are a third kind of signpost for mapping your communication's organization. At work, writers use headings not only in long documents, such as reports and manuals, but also in short ones, such as letters and memos. To see how effectively headings can signal organization, look at Figure 8.2, which highlights the use of headings on a website. Figure 8.3 shows versions of the same memo, one without and one with headings.

Headings help readers wherever there is a major shift in topic. In much on-the-job writing, such shifts occur every few paragraphs. Avoid giving every paragraph its own heading, which would give your prose a disjointed appearance rather than helping readers see how things fit together. An exception occurs in communications designed to provide readers quick access to specific pieces of information, as in a warranty, troubleshooting guide, reference manual, or fact sheet. In these documents, headings may even label sentence fragments or brief bits of data, turning the communication into something very much like a table of facts.

To be helpful, each heading must unambiguously indicate the kind of information that is included in the passage it labels.

CREATING TEXT FOR HEADINGS

- **Ask the question that the segment will answer for your readers.** Headings that ask questions such as "What happens if I miss a payment on my loan?" or "Can I pay off my loan early?" are especially useful in communications designed to help readers decide what to do.

- **State the main idea of the segment.** This strategy is often used in documents that offer advice or guidance. A brochure on bicycling safety uses headings such as "Ride with the Traffic," "Use Hand Signals," and "Ride Single File."
- **Use a keyword or phrase.** This type of heading is especially effective when a full question or statement would be unnecessarily wordy. For instance, in a request for a high-end multimedia production system, the section that discusses prices might have a heading that reads "How Much Will the System Cost?" However, the single word "Cost" would serve the same purpose.

Often, parallel headings make a communication's content easier to access and understand. For instance, when you are describing a series of steps in a process, parallel phrasing cues readers that the segments are logically parallel: "Opening the Computer Program," "Entering Data," and so on. However, in some situations, a mix of heading types will tell readers more directly what each section is about. Figure 8.4 shows the table of contents from a booklet titled *Getting the Bugs Out* that uses all three types of headings. Notice where they are parallel—and where they are not.

FIGURE 8.2

Headings Used to Indicate Organization of a Website

Headings are as helpful to readers on web pages as they are in printed communications.

Headings in the navigation bar organize the groups of links.

The page's title gets the largest type.

The title at the top of this column is bold and large.

The headings for these sections, which are also bold, are smaller than the column heading but larger than the text.

Courtesy of The Nature Conservancy

FIGURE 8.3

The Same Memo without and with Headings

Garibaldi Corporation
INTEROFFICE MEMORANDUM

MEMO

June 14, 2013

TO Vice Presidents and Department Managers
FROM Davis M. Pritchard, President
RE PURCHASES

Three months ago, I appo
the purchase of compute
I am establishing the foll

The task force was to bala
each department purchas
(2) to ensure compatibilit
create an efficient electro

I am designating one "pre
vendors.

The preferred vendor, YY
unless there is a compelli
purchases from the prefe
purchase price so that in

Two other vendors, AAA
Garibaldi; both compute
network. Therefore, the s
price of these machines.

We will select one prefer
The task force will choose
when the choice is made

David Pritchard's first version lacked visual cues to the memo's organization.

By adding headings, he helped readers see how his memo is organized. The bold headings tell readers that these are the main parts of the memo.

By indenting, he indicated that these are the two parts of the computer policy.

Garibaldi Corporation
INTEROFFICE MEMORANDUM

June 14, 2013

TO Vice Presidents and Department Managers
FROM Davis M. Pritchard, President
RE PURCHASES OF TABLET COMPUTERS AND SMARTPHONES

Three months ago, I appointed a task force to develop corporate-wide policies for the purchase of tablet computers and smartphones. We face substantial risks to the security of our data and communications through vulnerabilities of the various operating systems to hacking. Based on the advice of the task force, I am establishing the following policies.

Objectives of Policies
The task force was to balance two possibly conflicting objectives: (1) to ensure that each department purchases the equipment that best serves its special needs and (2) to ensure compatibility among the equipment purchased so the company can create an efficient and, above all, secure network for our communications and data.

Computer Tablet Purchases
I am designating one "preferred" vendor of tablets and two "secondary" vendors.

> Preferred Vendor: The preferred vendor, YYY, is the vendor from which all purchases should be made unless there is a compelling reason for selecting other equipment. To encourage purchases from the preferred vendor, a special corporate fund will cover 30% of the purchase price so that individual departments need fund only 70%.

> Secondary Vendor: Two other vendors, AAA and MMM, provide tablets very rapidly in some South American countries and may be used when the need is urgent. However, no subsidy will be provided from the corporate fund.

Smartphone Purchases
We will select one preferred vendor and no secondary vendor for smartphones. The task force will choose between two candidates: FFF and TTT. I will notify you when the choice is made early next month.

© Cengage Learning

The visual appearance of headings is important to readers. To be useful, headings must stand out visually.

DESIGNING HEADINGS VISUALLY

1. **Make headings stand out from the text, perhaps using these strategies.**
   - Use bold.
   - Use a different color than is used for the text.
   - Place headings at the left-hand margin or center them.
2. **Make major headings more prominent than minor ones. Here are some strategies to consider.**
   - Make major headings larger.
   - Center the major headings and position the others against the left-hand margin.

FIGURE 8.4

Table of Contents from a Booklet That Uses Three Kinds of Chapter and Section Headings

This table of contents shows all the headings used in this short booklet. The writers used several kinds of headings described in this chapter.

The writers used a **question** for this heading to grab the readers' interest. A less interesting title would have been "Definition of a Pest."

The writers used **keywords** and phrases for these two topics.

By using **full sentences** as the headings for these sections, the writers ensured that their readers would know the main points of these sections. Because the headings suggest new ways for people to think about their homes and gardens, the writers also raise people's curiosity and thereby increase their interest in reading the sections.

CONTENTS

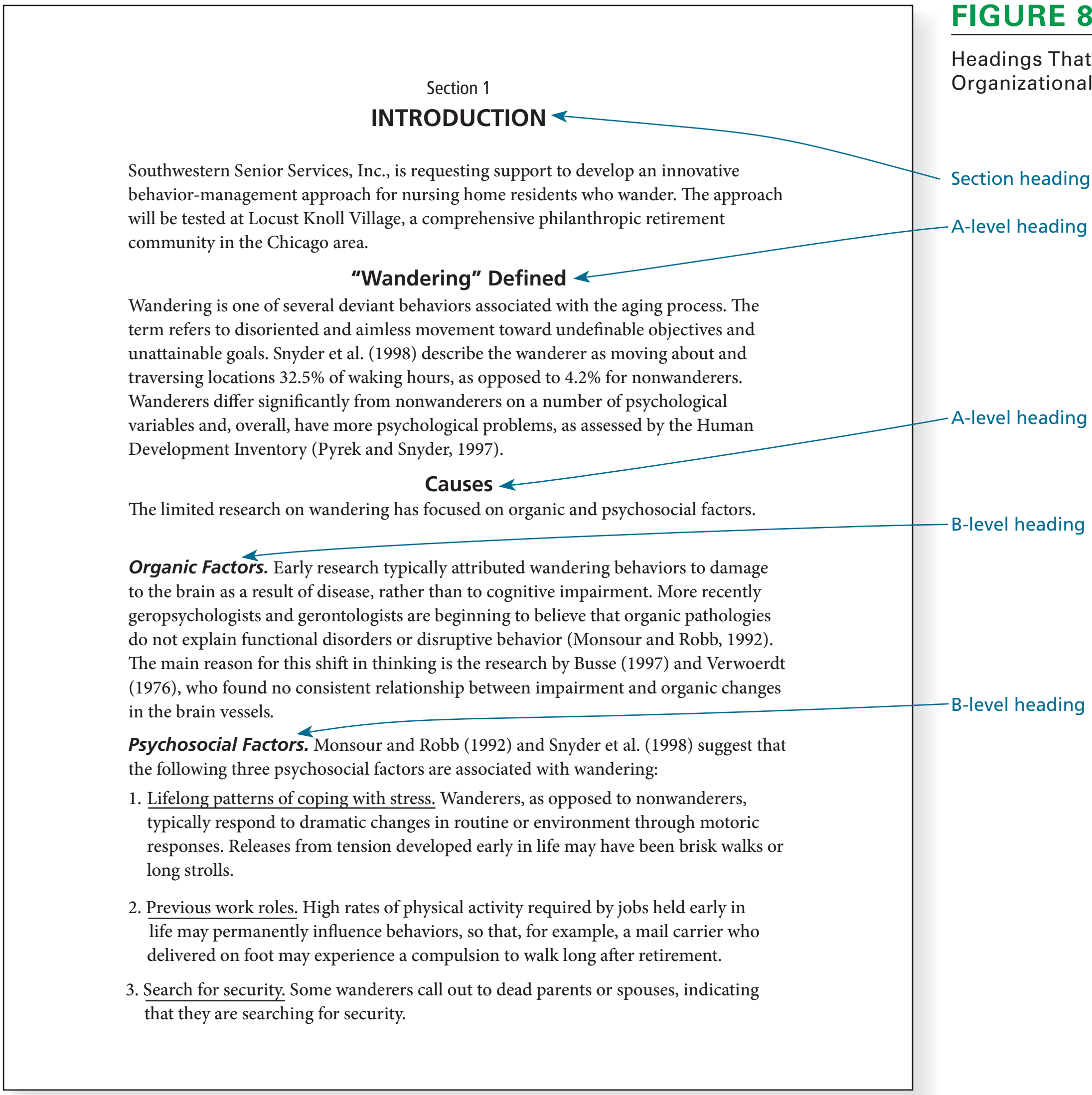
- Use all capital letters for the major headings and initial capital letters for the others.
- Give the major headings a line of their own and put the others on the same line as the text that follows them.

3. **Give the same visual treatment to headings at the same level in the hierarchy.**

Usually, you can use two or more of these techniques together so they reinforce one another. By doing so, you can readily create two or three easily distinguishable levels of headings that instantly convey the organizational hierarchy of your communication. Section or chapter titles may also function as a type of heading, as in Figure 8.5.

Sometimes, headings include the numbers and letters that are used in an outline. In most circumstances, however, the numbers and letters of an outline diminish the effectiveness of headings by distracting the readers' eyes from the headings' keywords.

By convention, headings and the topic statements that follow them reinforce each other, with the topic statement repeating one or more keywords from the



Section 1

INTRODUCTION

Southwestern Senior Services, Inc., is requesting support to develop an innovative behavior-management approach for nursing home residents who wander. The approach will be tested at Locust Knoll Village, a comprehensive philanthropic retirement community in the Chicago area.

"Wandering" Defined

Wandering is one of several deviant behaviors associated with the aging process. The term refers to disoriented and aimless movement toward undefinable objectives and unattainable goals. Snyder et al. (1998) describe the wanderer as moving about and traversing locations 32.5% of waking hours, as opposed to 4.2% for nonwanderers. Wanderers differ significantly from nonwanderers on a number of psychological variables and, overall, have more psychological problems, as assessed by the Human Development Inventory (Pyrek and Snyder, 1997).

Causes

The limited research on wandering has focused on organic and psychosocial factors.

Organic Factors. Early research typically attributed wandering behaviors to damage to the brain as a result of disease, rather than to cognitive impairment. More recently geropsychologists and gerontologists are beginning to believe that organic pathologies do not explain functional disorders or disruptive behavior (Monsour and Robb, 1992). The main reason for this shift in thinking is the research by Busse (1997) and Verwoerdt (1976), who found no consistent relationship between impairment and organic changes in the brain vessels.

Psychosocial Factors. Monsour and Robb (1992) and Snyder et al. (1998) suggest that the following three psychosocial factors are associated with wandering:

1. Lifelong patterns of coping with stress. Wanderers, as opposed to nonwanderers, typically respond to dramatic changes in routine or environment through motoric responses. Releases from tension developed early in life may have been brisk walks or long strolls.
2. Previous work roles. High rates of physical activity required by jobs held early in life may permanently influence behaviors, so that, for example, a mail carrier who delivered on foot may experience a compulsion to walk long after retirement.
3. Search for security. Some wanderers call out to dead parents or spouses, indicating that they are searching for security.

FIGURE 8.5

Headings That Indicate Organizational Hierarchy heading. Topic statements do not contain pronouns that refer to the headings. For example, the heading "Research Method" would not be followed by a sentence that says, "Designing this was a great challenge." Instead, the sentence would read, "Designing the research method was a great challenge."

Use the Visual Arrangement of Your Text

TRY THIS From the web, download a document written in a language you don't know that uses visual cues to indicate the organization of its contents. Describe in detail the techniques used. Could you improve on them? If you can't download a document, find a website in a language you don't know.

You can also signal your communication's organization through the visual arrangement of your text on the page.

ARRANGING TEXT VISUALLY TO SIGNAL ORGANIZATION

- **Adjust the location of your blocks of type.** Here are three adjustments you can make:
  - Indent paragraphs lower in the organizational hierarchy. (See Figure 8.6.)
  - Leave extra space between the end of one major section and the beginning of the next.
  - In long communications, begin each new chapter or major section on its own page, regardless of where the preceding chapter or section ended.
- **Use lists.** By placing items in a list, you signal readers that items hold a parallel place in your organizational hierarchy. Usually, numbers are used for sequential steps. Bullets are often used where a specific order isn't required.

Number List	**Bullet List**
The three steps we should take are:	Three features of the product are:
1. ___________	• ___________
2. ___________	• ___________
3. ___________	• ___________

TRY THIS Why not evaluate this book? Identify places where it provides signposts that indicate a chapter's organization effectively. Where could it do a better job? What do you recommend?

When you are constructing a list, give the entries a parallel grammatical construction: All the items should be nouns, all should be full sentences, or all should be questions, and so on. Mixing grammatical constructions distracts readers and sometimes indicates a shift in point of view that breaks the tight relationship that should exist among the items.

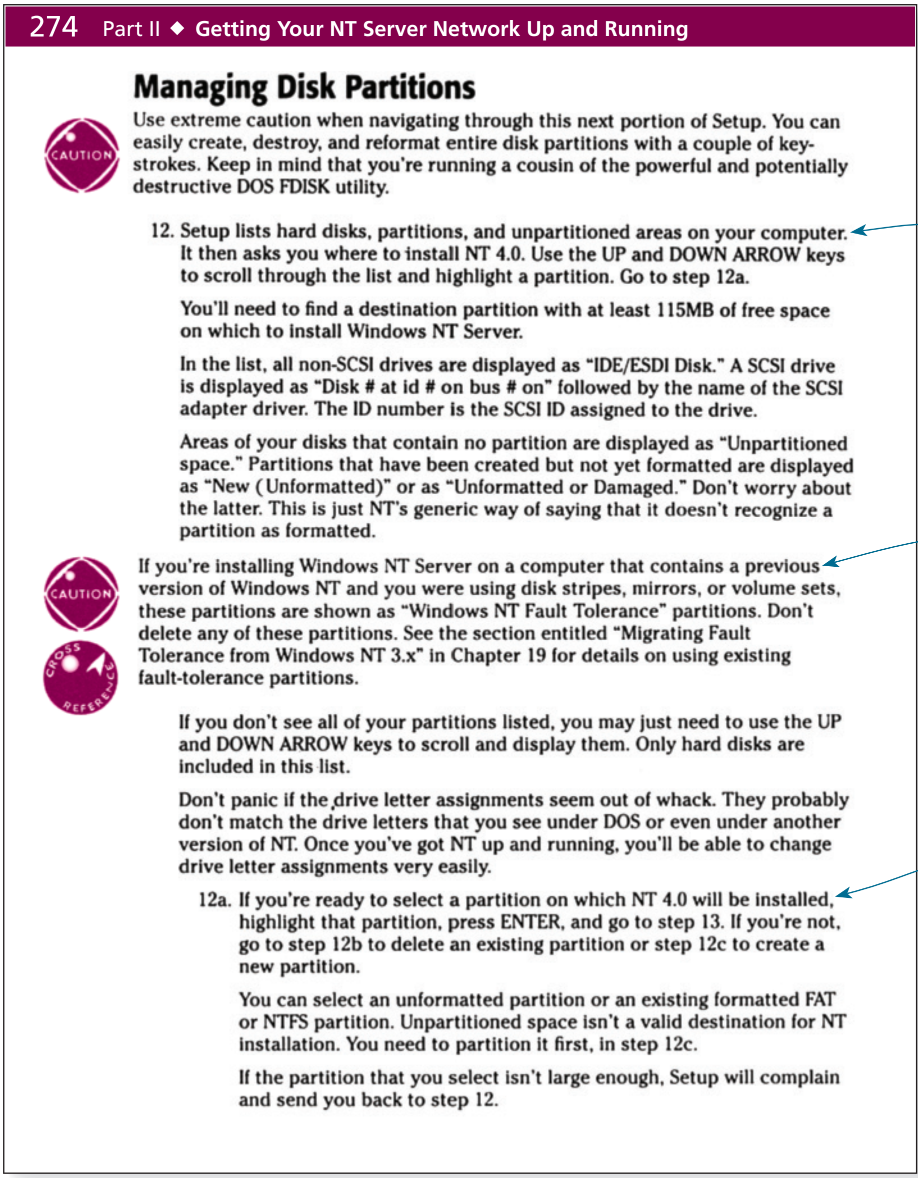
WITHOUT PARALLELISM	**WITH PARALLELISM**
Benefits	Benefits
• Increased sales	• Increased sales
• Decreased production costs	• Decreased production costs
• Morale that is higher	• Higher morale
Recommendations	Recommendations
1. Sell our Tallahassee plant.	1. Sell our Tallahassee plant.
2. Place the two Baton Rouge plants under a single manager.	2. Place the two Baton Rouge plants under a single manager.
3. We should also seek a better location for our Columbia warehouse.	3. Seek a better location for our Columbia warehouse.

Parallel

Not parallel

Parallel

Not parallel



274 Part II ◆ Getting Your NT Server Network Up and Running

Managing Disk Partitions

CAUTION

Use extreme caution when navigating through this next portion of Setup. You can easily create, destroy, and reformat entire disk partitions with a couple of keystrokes. Keep in mind that you're running a cousin of the powerful and potentially destructive DOS FDISK utility.

12. Setup lists hard disks, partitions, and unpartitioned areas on your computer. It then asks you where to install NT 4.0. Use the UP and DOWN ARROW keys to scroll through the list and highlight a partition. Go to step 12a.

You'll need to find a destination partition with at least 115MB of free space on which to install Windows NT Server.

In the list, all non-SCSI drives are displayed as "IDE/ESDI Disk." A SCSI drive is displayed as "Disk # at id # on bus # on" followed by the name of the SCSI adapter driver. The ID number is the SCSI ID assigned to the drive.

Areas of your disks that contain no partition are displayed as "Unpartitioned space." Partitions that have been created but not yet formatted are displayed as "New (Unformatted)" or as "Unformatted or Damaged." Don't worry about the latter. This is just NT's generic way of saying that it doesn't recognize a partition as formatted.

CAUTION

CROSS REFERENCE

If you're installing Windows NT Server on a computer that contains a previous version of Windows NT and you were using disk stripes, mirrors, or volume sets, these partitions are shown as "Windows NT Fault Tolerance" partitions. Don't delete any of these partitions. See the section entitled "Migrating Fault Tolerance from Windows NT 3.x" in Chapter 19 for details on using existing fault-tolerance partitions.

If you don't see all of your partitions listed, you may just need to use the UP and DOWN ARROW keys to scroll and display them. Only hard disks are included in this list.

Don't panic if the drive letter assignments seem out of whack. They probably don't match the drive letters that you see under DOS or even under another version of NT. Once you've got NT up and running, you'll be able to change drive letter assignments very easily.

12a. If you're ready to select a partition on which NT 4.0 will be installed, highlight that partition, press ENTER, and go to step 13. If you're not, go to step 12b to delete an existing partition or step 12c to create a new partition.

You can select an unformatted partition or an existing formatted FAT or NTFS partition. Unpartitioned space isn't a valid destination for NT installation. You need to partition it first, in step 12c.

If the partition that you select isn't large enough, Setup will complain and send you back to step 12.

Adapted from Managing Disk Partitions from Robert Cowart and Kenneth Gregg, *Windows NT Server 4.0 Administrator's Bible* (Foster City, CA: IDG Books, 1996), p. 274.

FIGURE 8.6

Indentation of Text Used to Indicate Organizational Hierarchy

Subordinate material is indented.

To emphasize this caution, the writer uses an icon and moves the text margin farther left.

A second level of indentation signals a second level of subordination.

Guideline 2 | Smooth the flow of thought from sentence to sentence

As people read, they are continuously determining how the sentence they are now reading relates to the sentence they just completed. This connection-making process occurs so rapidly that readers aren't even aware of it until they hit a sentence that doesn't seem to fit. Then, they either stop to figure out the relationship or they push ahead, missing some of the writer's meaning. To avoid these undesirable results, smooth the flow of thought from sentence to sentence, using the following strategies.

- Use transitional words and phrases
- Use echo words
- Keep a steady focus from sentence to sentence

Use Transitional Words and Phrases

Transitional words and phrases can serve as links that tie one sentence to the next. Here are some of the most commonly used transitional words:

Transitional words and phrases

Links in time	after, before, during, until, while
Links in space	above, below, inside
Links of cause and effect	as a result, because, since
Links of similarity	as, furthermore, likewise, similarly
Links of contrast	although, however, nevertheless, on the other hand

These and many more are undoubtedly familiar to you. The important point is to remember to use them when they will help your readers follow the flow of thought through your communication. When using them, put them where they will help your readers most: at the beginning of sentences. In that position, they immediately signal the relationship between that sentence and the preceding one.

Use Echo Words

Another way to guide your readers from one sentence to the next is to use *echo words*. An echo word is a word or phrase that recalls to the readers' minds some information they've already encountered. For example:

The word echoed is *developed*. The echo word is *development*.

A flu vaccine can be developed. Development will take several weeks, however.

In this example, the noun *development* at the beginning of the second sentence echoes the verb in the first.

There are many other kinds of echo words.

- **Pronouns**

In the second sentence, *It* echoes *copier* in the first sentence.

We had to return the copier. Its frequent breakdowns were disrupting work.

- **Another word from the same "word family" as the word being echoed**

In the second sentence, *oscilloscope* echoes *lab equipment* in the first sentence.

I went to my locker to get my lab equipment. My oscilloscope was missing.

- **A word or phrase that recalls some idea or theme expressed but is not explicitly stated in the preceding sentence**

In the second sentence, the words *these transactions* echo the purchase and retiring of shares described in the first sentence.

The company also purchased and retired 17,399 shares of its $2.90 convertible, preferred stock at $5.70 a share. These transactions reduce the number of outstanding convertible shares to 635,200.

Like transitional words and phrases, echo words help readers most when they appear at the beginning of a sentence.

Note that if you use *this* or *that* as an echo word at the beginning of a sentence, you should follow it with a noun. If used alone at the beginning of a sentence, you can leave your readers uncertain about what *this* is.

Original

Our client rejected the R37 compound because it softened at temperatures about 500°C. This is what our engineers feared.

In this example, the reader would be unsure whether *This* refers to the client's dissatisfaction or the softening of the R37. The addition of a noun after *This* clears up the ambiguity.

> Our client rejected the R37 compound because it softened at temperatures about 500°C. This softening is what our engineers feared.

Revised

Keep a Steady Focus from Sentence to Sentence

The preceding strategies for guiding readers from sentence to sentence involve situations where the two sentences have different topics. In some cases, the topic can remain the same. In these situations, keep a steady focus on that topic by keeping the topic in the subject position of both sentences. You can repeat the same word, use a synonym, or use an echo word (see the discussion of echo words on the previous page).

> The links of the drive chain must fit together firmly. They are too loose if you can easily wiggle two links from side to side more than ten degrees.

These sentences have the same focus because they both have the same subject.

Because "They" in the second sentence is an echo word for "The links" in the first sentence, both sentences have the same subject.

Maintaining a steady focus requires that you consider alternative ways of writing a sentence. For example, you could fashion a sentence in either of the following ways.

> The system has saved thousands of dollars this month alone.

Version A

> Thousands of dollars have been saved by the system this month alone.

Version B

Both versions contain the same information. To decide between them, you could look at the preceding sentence to see which will keep a steady focus. If the preceding sentence had said, "Our company's new inventory system reduces our costs considerably," then Version A would maintain the steady focus because it has the same subject (the system) as the preceding sentence.

> Our company's new inventory system reduces costs considerably. The system saved thousands of dollars this month alone.

Both sentences have the same subject.

In order to keep a steady focus, you may sometimes need to use a sentence that has the passive voice. As Chapter 10 explains, it is usually desirable to use the active voice, not the passive. However, the chapter also explains that sometimes the passive is more appropriate, even preferable, to the active. One such time occurs when the passive voice enables you to avoid a needless shift in the topic of two adjacent sentences. Consider the following paragraph from an accident report.

LEARN MORE For more on the active and passive voice, see Chapter 10, page 239.

> After lunch on Tuesday, Tom took a shortcut back to his workstation. Fifteen yards above the factory floor, a can of paint slipped off a scaffold and hit him on the left foot. Consequently, he missed seventeen days of work.

The focus shifts from the first sentence to the second.

The subject of the first and third sentences is the same: *Tom* and *he*. However, the second sentence shifts the topic from Tom to the can of paint. Furthermore, because the second sentence shifts, the third does also in bringing the focus back to Tom. The writer could avoid these two shifts by rewriting the second sentence in the passive voice, making Tom its subject, not the can of paint.

> He was hit on the left foot by a can of paint that slipped off a scaffold fifteen yards above the factory floor.

Better second sentence

ETHICS GUIDELINE: EXAMINE THE HUMAN CONSEQUENCES OF WHAT YOU'RE DRAFTING

When drafting their communications, employees sometimes become so engrossed in the technical aspects of their subject that they forget the human consequences of what they're writing. When this happens, they write communications in which their stakeholders are overlooked. Depending on the situation, the consequences can be quite harmful or relatively mild—but they can always lead to the unethical treatment of other people.

Mining Accidents

An example is provided by Beverly A. Sauer (2003), who has studied the reports written by the federal employees who investigate mining accidents in which miners are killed. In their reports, Sauer points out, the investigators typically focus on technical information about the accidents without paying sufficient attention to the human tragedies caused by the accidents. In one report, for example, the investigators describe the path of an underground explosion as it traveled through an intricate web of mineshafts and flamed out of various mine entrances. At one entrance, investigators write, "Debris blown by the explosion's forces damaged a jeep automobile parked near the drift openings." The investigators don't mention in this passage that in addition to damaging the jeep, the explosion killed sixteen miners who were in the mineshafts.

In addition to overlooking the victims of the disasters, the investigators' reports often fail to identify the human beings who created the conditions that caused the accidents. One report says, "The accident and resultant fatality occurred when the victim proceeded into an area of known loose roof before the roof was supported or taken down." This suggests that the miner was crushed to death by a falling mine roof because he was careless. Sauer's research showed, however, that in the same mines ten fatalities had occurred in five years—and seven resulted from falling roofs. Managers of the mines were not following safety regulations, and mine safety inspectors were not enforcing the law.

Miners in the United States would be safer if the persons who prepare mining accident reports paid more attention to the human consequences of their writing, Dr. Beverly Sauer argues.

Writing with Awareness of Human Consequences

Of course, there's nothing the inspectors' reports can do on behalf of the deceased miners or their families. However, the stakeholders in the inspectors' reports include other miners who continue to work in what is the most dangerous profession in the United States. As Sauer points out, the investigators' readers include the federal officials responsible for overseeing the nation's mining industry. If the inspectors wrote in ways that made these readers more aware of the human consequences of mining accidents—and of the human failings that often bring them about—the federal officials might be more willing to pass stricter laws and insist that existing regulations be strictly enforced.

In Europe, where government regulation of mining is much stronger, the death and injury of miners are much rarer events than in the United States. The high accident rate that makes mining so dangerous in the United States, she argues, results in part from the way mining investigators write their reports.

Of course, most people aren't in professions where lives are at stake. In any profession, however, it's possible to become so focused on your technical subject matter that you forget the human consequences of your writing.

To avoid accidentally treating others unethically, you can take the following steps.

AVOIDING ACCIDENTALLY TREATING OTHERS UNETHICALLY

- **When beginning work on a communication, identify its stakeholders** (pages 78–79). Certainly, the stakeholders of the mining disaster reports include miners whose lives are endangered if government officials don't enact and enforce life-saving safety measures.
- **Determine how the stakeholders will be affected by your communication** (pages 101–102).
- **Draft your communication in a way that reflects proper care for these individuals.** Be sure that all your decisions about what to say, what *not* to say, and how to present your message are consistent with your personal beliefs about how you should treat other people.

CONCLUSION

This chapter has suggested that you can increase the usefulness and persuasiveness of your communications if you begin your segments with topic statements; present generalizations before details; organize from most important to least important; provide readers with a map of your communication's organization with headings, forecasting statements, and similar devices; and consider your readers' cultural background.

Remember that the guidelines in this chapter are suggestions, not rules. The only "rule" for writing segments is to be sure your readers know what you are talking about and how your various points relate to one another. Sometimes you will be able to do this without thinking consciously about your techniques. At other times, you will be able to increase the clarity and persuasiveness of your segments by drawing on this chapter's advice.

To assure that you are always drafting ethically, the following statement is something you *should* treat as a rule: Consider the human consequences of what you are writing.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Circle the various parts and subparts of the passage in Figure 8.7 to show how the smaller segments are contained within larger ones.
2. Identify the topic statements in Figure 8.7 by putting an asterisk before the first word of each sentence that indicates the topic of a segment.
3. Circle all the forecasting statements in Figure 8.5 (page 193). For those segments that lack explicit forecasting statements, explain how readers might figure out the way in which they are organized.

NOTE: Additional exercises are provided at the end of Chapter 9. See page 228.

EXPLORE ONLINE

Examine the ways that this chapter's guidelines are applied by a website that explains technical or scientific topics. For example, study the explanation of a medical topic at the

FIGURE 8.7

Passage Containing Several Levels of Segments

Importing Insects

By importing insects from other parts of the world, nations can sometimes increase the productivity of their agricultural sector, but they also risk hurting themselves. By importing insects, Australia controlled the infestation of its continent by the prickly pear, a cactus native to North and South America. The problem began when this plant, which has an edible fruit, was brought to Australia by early explorers. Because the explorers did not also bring its natural enemies, the prickly pear grew uncontrolled, eventually rendering large areas useless as grazing land, thereby harming the nation's farm economy. The problem was solved when scientists in Argentina found a small moth, *Cactoblastis cactorum*, whose larvae feed upon the prickly pear. The moth was imported to Australia, where its larvae, by eating the cactus, reopened thousands of acres of land.

In contrast, the importation of another insect, the Africanized bee, could threaten the well-being of the United States. It once appeared that the importation of this insect might bring tremendous benefits to North and South America. The Africanized bee produces about twice as much honey as do the bees native to the Americas.

However, the U.S. Department of Agriculture now speculates that the introduction of the Africanized honey bee into the U.S. would create serious problems arising from the peculiar way the Africanized honey bee swarms. When the honey bees native to the United States swarm, about half the bees leave the hive with the queen, moving a small distance. The rest remain, choosing a new queen. In contrast, when the Africanized honey bee swarms, the entire colony moves, sometimes up to fifty miles. If Africanized bees intermix with the domestic bee population, they might introduce these swarming traits. Beekeepers could be abandoned by their bees, and large areas of cropland could be left without the services of this pollinating insect. Unfortunately, the Africanized honey bee is moving slowly northward to the United States from Sao Paulo, Brazil, where several years ago a researcher accidentally released 27 swarms of the bee from an experiment.

Thus, while the importation of insects can sometimes benefit a nation, imported insects can also alter the nation's ecological system, thereby harming its agricultural business.

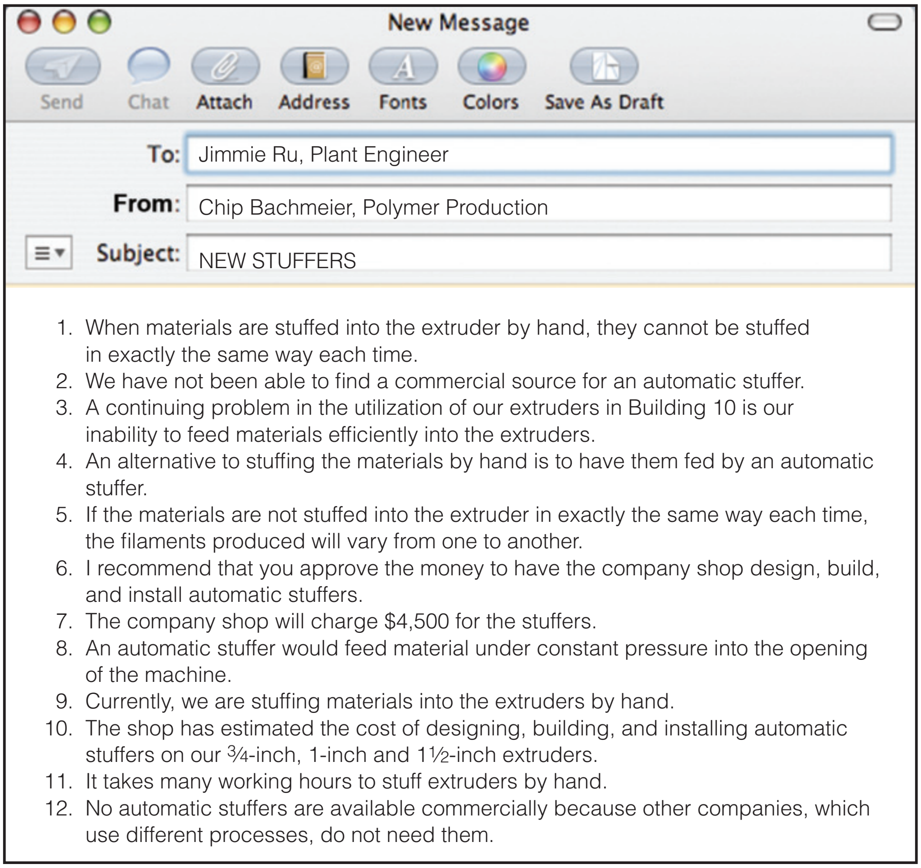
National Cancer Institute (www.nci.nih.gov), the National Institute on Drug Abuse (www.nida.nih.gov), or WebMD (www.WebMD.com). Present your analysis in the way your instructor requests.

COLLABORATE WITH YOUR CLASSMATES

1. Figure 8.8 shows an e-mail whose contents have been scrambled. Each statement has been assigned a number. Working with one or two other students, do the following:
   a. Write the numbers of the statements in the order in which the statements would appear if the e-mail were written in accordance with the guidelines in this chapter. Place an asterisk before each statement that would begin a segment. (When you order the statements, ignore their particular phrasing. Order them according to the information they provide the reader.)
   b. Using the list you just made, rewrite the e-mail by rephrasing the sentences so that the finished message conforms with all the guidelines in this chapter.

APPLY YOUR ETHICS

Using the Internet or a library, find the ethics codes for three corporations. Examine the ways this chapter's guidelines would help these corporations write codes that clearly convey their ethical commitments.


New Message

Send Chat Attach Address Fonts Colors Save As Draft

To: Jimmie Ru, Plant Engineer

From: Chip Bachmeier, Polymer Production

Subject: NEW STUFFERS

1. When materials are stuffed into the extruder by hand, they cannot be stuffed in exactly the same way each time.
2. We have not been able to find a commercial source for an automatic stuffer.
3. A continuing problem in the utilization of our extruders in Building 10 is our inability to feed materials efficiently into the extruders.
4. An alternative to stuffing the materials by hand is to have them fed by an automatic stuffer.
5. If the materials are not stuffed into the extruder in exactly the same way each time, the filaments produced will vary from one to another.
6. I recommend that you approve the money to have the company shop design, build, and install automatic stuffers.
7. The company shop will charge $4,500 for the stuffers.
8. An automatic stuffer would feed material under constant pressure into the opening of the machine.
9. Currently, we are stuffing materials into the extruders by hand.
10. The shop has estimated the cost of designing, building, and installing automatic stuffers on our ¾-inch, 1-inch and 1½-inch extruders.
11. It takes many working hours to stuff extruders by hand.
12. No automatic stuffers are available commercially because other companies, which use different processes, do not need them.

Text, © Cengage Learning, image © Apple Inc.

FIGURE 8.8

Memo for Collaboration Exercise

CASE Increasing Organ Donations

For additional cases, go to your English CourseMate at www.cengagebrain.com. Instructors: The book's website includes suggestions for teaching cases.

Case created by Gail S. Bartlett

You've been working for the past six months at Organ Replacement Gives a New Start (ORGANS), a regional clearinghouse for information about organ donation. At any given moment, 30,000 people in the United States are on a waiting list for organ transplants. Seven of them will die today, and every 20 minutes another will join the waiting list. It is believed that from 12,000 to 15,000 potential organ donors die each year in the United States, but only 4,500 of them actually donate. One donor may provide as many as six organs for transplant.

To discover ways of increasing the number of potential organ donors in the area, Eleanor Gaworski, executive director of ORGANS, asked staff member Aaron Nicholson to study and report on a recent Gallup survey of attitudes toward organ donation. However, Aaron suddenly left ORGANS to take another job. Eleanor has asked you to prepare the report using the information he has collected. The information includes the following tables and notes.

YOUR ASSIGNMENT

According to your instructor's directions, do one of the following:

A. For one of the tables, or for a group of the tables identified by your instructor, state the important conclusion or conclusions that you draw, explain the evidence that supports your conclusion, and make a recommendation.

B. Using all the tables or a group identified by your instructor, write a full report to Eleanor. Include an introduction; a brief explanation of the survey method used; the key conclusions you draw, together with the specific results that support them; and your recommendation.

(*continued*)

Notes Aaron Left

Largest survey ever conducted on attitudes about organ donation
National survey—6,127 people interviewed
Procedures used make results representative of the U.S. adult population
Telephone survey
In tables, not all percentages total 100 percent because of rounding.
Organs taken only from people who are brain-dead
Brain-dead means there is no hope of recovery.
Younger people have more organs to donate; as people get older, fewer of their organs are suitable for donation.
People do not need to sign an organ donor card or indicate on their driver's license their desire to donate organs.
Next of kin's permission is always needed even if a person has indicated a desire to donate organs.

1. Do you support or oppose the donation of organs for transplants?

Total Age	Support	Oppose	Don't Know
	85%	6%	9%
18–24	81%	10%	9%
25–34	85	7	8
35– 44	91	4	5
45–54	86	4	9
55+	81	7	11

2. How likely are you to want to have your organs donated after your death?

Total Age	Very Likely	Some-what Likely	Not Very/ Not at All Likely	Don't Know
	37%	32%	25%	6%
18–24	33%	41%	22%	5%
25–34	38	40	17	5
35–44	50	28	17	5
45–54	41	36	18	5
55+	27	26	38	9

3. Is there a particular reason you are not likely to want to have your organs donated upon your death? What might that reason be? (Asked of persons who reported they are not likely to want to have their organs donated)

Response Mentioned	% of Times
Medical reasons	13%
Believe I'm too old	10
Don't want body cut up/Want to be buried as a whole person	9
Don't feel right about it	6
Against religion	5
Other	10
No reason/Don't know/ Haven't given much thought	47

4. Have you made a personal decision about whether or not you would want your or your family members' organs donated in the event of your or their deaths?

Percent Who Have Made Decisions about:

Total Age	Own Organs	Family Members' Organs
	42%	25%
18–24	40%	23%
25–34	43	26
35–44	49	32
45–54	46	33
55+	36	17
Attitude Toward Organ Donation		
Support	45%	27%
Oppose	39	25

5. Have you told some member of your family about your wish to donate your organs after your death? (Asked of respondents who reported themselves likely to wish to become organ donors)

Total Age	Yes
	52%
18–24	39%
25–34	52
35–44	58
45–54	51
55+	52

6. How willing are you to discuss your wishes about organ donation with your family? Would you say very willing, somewhat willing, not very willing, or not at all willing? (Asked of those who have not discussed wishes with family)

Response	Likely to Donate	Not Likely to Donate
Very willing	36%	23%
Somewhat willing	53	35
Not very willing	7	13
Not at all willing	3	23
Don't know	2	4

7. If you had *not discussed* organ donation with a family member, how likely would you be to donate his or her organs upon death?

Total Age	Very/ Somewhat Likely	Not Very/ Not at All Likely	Don't Know
	47%	45%	7%
18–24	44%	52%	4%
25–34	51	44	5
35–44	54	42	4
45–54	51	43	6
55+	38	49	13

Attitude Toward Organ Donation

	Very/ Somewhat Likely	Not Very/ Not at All Likely	Don't Know
Support	52%	41%	7%
Oppose	11	84	5

8. If a family member *had requested* that his or her organs be donated upon death, how likely would you be to donate the organs upon death?

Total Age	Very/ Somewhat Likely	Not Very/ Not at All Likely	Don't Know
	93%	5%	2%
18–24	94%	5%	1%
25–34	94	5	2
35–44	97	2	1
45–54	96	3	1
55+	87	8	3
Attitude Toward Organ Donation			
Support	95%	3%	1%
Oppose	69	24	6

9. Most of the people who need an organ transplant receive a transplant.

Total Age	Strongly Agree/Agree	Disagree/ Strongly Disagree	Don't Know
	20%	68%	12%
18–24	32%	54%	14%
25–34	19	72	9
35–44	14	74	12
45–54	12	75	13
55+	24	63	13
Attitude Toward Organ Donation			
Support	19%	70%	11%
Oppose	32	55	14

10. It is possible for a brain-dead person to recover from his or her injuries.

Total Age	Strongly Agree/Agree	Disagree/ Strongly Disagree	Don't Know
	21%	63%	16%
18–24	28%	52%	19%
25–34	25	60	15
35–44	20	65	15
45–54	16	71	13
55+	18	64	17
Attitude Toward Organ Donation			
Support	20%	65%	15%
Oppose	33	51	15

11. I am going to read you a couple of statements. For each one, please tell me if that statement must be true or not true before an individual can donate his or her organs.

Statement	True	False	Don't Know
The person must carry a signed donor card giving permission.	79%	15%	5%
The person's next of kin must give his or her permission.	58%	34%	8%

12. In the past year, have you read, seen, or heard any information about organ donation?

Total Age	Yes
	58%
18–24	36%
25–34	47
35–44	61
45–54	65
55+	68
Attitude Toward Organ Donation	
Support	61%
Oppose	38

Survey results are from the Gallup Organization, Inc., *The American Public's Attitudes toward Organ Donation and Transplantation,* conducted for The Partnership for Organ Donations, Boston, MA, February 1993. Used with permission.

9 | Using Nine Reader-Centered Patterns for Organizing Paragraphs, Sections, and Chapters

You can often increase the clarity, coherence, and persuasiveness of your paragraphs, sections and chapters by using established organizational patterns that are familiar to your readers. This chapter provides detailed, reader-centered advice for using nine patterns—each with its own purpose—that are often used in the workplace. In some brief communications, you may employ only one of these patterns, but in most cases, you will weave two or more together, as described on page 227.

Because each pattern is distinct from the others, this is not a chapter to read straight through. Your instructor will let you know which patterns are most useful as you work on the writing projects in your class. The others are here for your reference during your current course or later in your other classes or on the job.

When reading about each pattern, discussing it in class, or using it in a writing project, concentrate on developing the following abilities.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Describing the situations in which a pattern is most useful.
2. Describing and applying the principles and strategies for using a pattern effectively.

As you will see as you read this chapter, these patterns also provide highly effective ways to design clear, informative tables, charts, and other graphics.

HOW TO GROUP ITEMS FORMALLY (FORMAL CLASSIFICATION)

On the job, you will often need to organize a set of facts, ideas, or other items that could be arranged in many different ways. To create a clear, coherent structure your readers will find useful and persuasive, you can use a strategy called *classification*. There are two kinds of classification, formal (described here) and informal (described on page 208).

In both forms of classification, you arrange your material into groups of related items that satisfy the following criteria.

- **Every item has a place.** In one group or another, every item fits.
- **Every item has only one place.** If there are two logical places for an item, you might describe it in both locations, thereby creating redundancy. Or you might describe it in only one location, thereby requiring your readers to guess where to find the information. Neither alternative is desirable from your readers' perspective.
- **The groupings are useful to your readers.** Items that readers will use together should be grouped together.

Even when using formal classification, group items in a way that will be helpful to your readers.

How Formal Classification Works

In formal classification, you group items according to a principle of classification—that is, according to some observable characteristic that every item possesses. Usually, you will have several to choose from. While writing a marketing brochure about sixty adhesives manufactured by her employer, a chemical company, Esther could use any characteristic possessed by all the adhesives, such as price, color, and application (that is, whether it is used to bond wood, metal, or ceramic). To choose among these potential principles of classification, she thought about the way consumers would use her brochure. Realizing that they would look for the adhesive best suited to the particular job they were doing, Esther organized around the type of material each adhesive was designed to bond.

Esther organized according to the kinds of material the adhesives will bond because she thought her readers would want to find the adhesives that would work with the materials they had.

In classification, large groups can be organized into subgroups. Within her sections on adhesives for wood, metal, and ceramic, Esther subdivided the adhesives according to the strength of the bond created by each one.

LEARN MORE The formal classification pattern is often combined with other patterns. See page 227.

GUIDELINES FOR FORMAL CLASSIFICATION

1. **Choose a principle of classification that is suited to your readers and your purpose.** Consider the way your readers will use the information you provide.
2. **Use only one principle of classification.** To create a hierarchical organization that has only one place for each item, you must use only one principle of classification at a time. For example, you might classify the cars owned by a large corporation as follows:

Valid classification →

Cars built in the United States
Cars built in other countries

This grouping uses only one principle of classification—the country in which the car was manufactured. Because each car was built in only one country, each would fit into only one group. Suppose you classified the cars this way:

Faulty classification →

Cars built in the United States
Cars built in other countries
Cars that are expensive

This classification is faulty because two principles are being used simultaneously—country of manufacture and cost. An expensive car built in the United States would fit into two categories. You can use different principles at different levels in a hierarchy, as the following classification shows.

Corrected classification →

Cars built in the United States
    Expensive ones
    Inexpensive ones
Cars built in other countries
    Expensive ones
    Inexpensive ones

In this case, an expensive car built in the United States would have only one place at each level of the hierarchy.

TRY THIS Try classifying the students in your class in two different ways. Include one level of subcategories for each classification. Try to identify someone who could make practical use of information about the students that is organized in each of these ways.

WEB To see other communications that use formal classification, go to your English CourseMate at *www.cengagebrain.com.*

Examples of Formal Classification

To see how you could use formal classification to organize the section of a report, look at Figure 9.1, which describes various methods for detecting coronary heart disease. For his principle of classification, Sonja uses the extent to which each method requires physicians to introduce something into the patient's body. Sonja selected this principle of classification because he wants to focus on a new method for which nothing needs to be placed in the patient's body.

Formal classification can also help you create tables and graphs your readers will find clear and easy to use. Figure 9.2 shows a graph about worldwide

FIGURE 9.1

Beginning of a Chapter Organized by Formal Classification

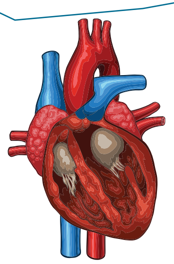
Detecting Coronary Artery Disease

Coronary artery disease (CAD) is the leading cause of death in industrialized countries. In fact, one-third of all deaths in the U.S. are attributable to it. For this reason, the early detection of CAD has long been regarded as among the most vital areas of medical research, and several moderately invasive diagnostic methods have been developed.

Non-invasive methods gather diagnostic information without introducing anything into a patient's body. These methods include traditional physical examinations and history taking, electrocardiography, and echocardiography (ultrasonic imaging).

In contrast, invasive methods involve introducing a substance or object into the person's body. A moderately invasive method is the thallium test, in which a compound of radioactive thallium-201 is injected into the patient and then distributes itself throughout the myocardium (heart muscle) in proportion to the myocardial blood flow. The low-flow regions are detectable as cold spots on the image obtained from a radioisotope camera set over the chest. Although quite sensitive and accurate, the thallium test is also costly and time-comsuming.

As far as invasive techniques are concerned, the most reliable way to diagnose CAD is by means of cardiac catheterization, in which a catheter is inserted into a large artery (usually in the upper arm or thigh) and advanced to the heart. Once the catheter is positioned in the heart, a radio opaque dye is released through it, making it possible to observe the condition of the coronary arteries with X-rays. Although it produces excellent images and definitive diagnoses, cardiac catheterization is expensive, painful, and time-consuming—and it carries an element of risk. For these reasons, an equally accurate, non-invasive method for early detection of coronary artery disease is greatly to be preferred.



© Oguz Aral/Shutterstock.com

[The chapter continues with a description of a new technology that may provide a highly accurate, non-invasive early detection method.]

The principle of classification is the extent to which the methods involve placing something in the person's body ("invading" it).

The first group of methods involves no invasiveness.

Several examples are listed.

The second group of methods does involve invasiveness.

Two invasive methods are each described in a separate paragraph: the thallium test and cardiac catheterization.

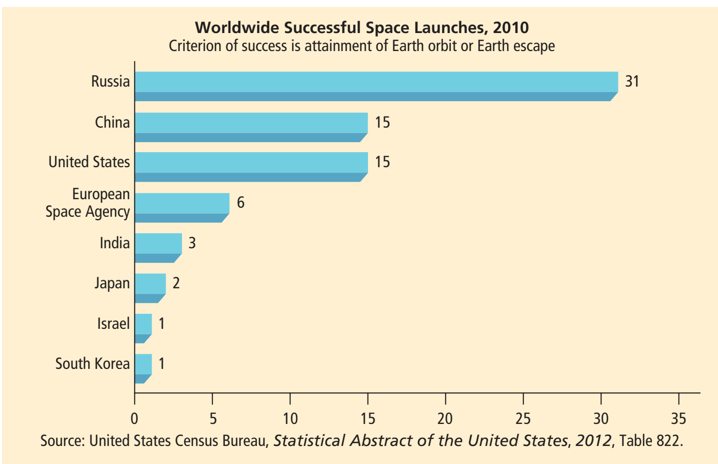


FIGURE 9.2

Graph Organized by Formal Classification

LEARN MORE For advice about constructing graphics, go to Chapter 14 (page 292) and Chapter 15 (page 315).

spacecraft launches. Note that in graphs, as in text, you should match your principle of classification to your readers' need. For their principle of classification, the writers who created Figure 9.2 chose *the country that owned* a successfully launched spacecraft, even if it paid another country to lift it into space. Their purpose was to help readers evaluate the relative size of each country's presence in space. If, instead, the writers' purpose had been to help readers determine the relative capability of each country to launch satellites, they would have chosen *the country that launched* the spacecraft (regardless of who owned it) as their principle.

LEARN MORE Exercises for organizing with formal classification are at the book's website and on page 228.

HOW TO GROUP ITEMS INFORMALLY (INFORMAL CLASSIFICATION)

Sometimes you will need to organize information about a large number of items but will find it impossible or undesirable to classify them according to the kind of objective characteristic that is necessary for formal classification. Perhaps the items don't share an objective characteristic. Or, grouping according to the objective characteristics that do exist won't serve the readers' needs. Still, to create a clear, coherent paragraph, section, or chapter, you need to arrange the items in a way that achieves the same results as formal classification.

- Every item has a place.
- Every item has only one place.
- The groupings are useful to your readers.

Take a reader-centered approach when using informal classification just as you do when using formal classification.

The solution is to use informal classification, which replaces the objective principle of classification with a subjective one. For example, Calvin, a mechanical engineer, was asked by his manager to analyze advertisements in three trade journals for the heavy equipment industry. Objective characteristics do exist, such as the size and number of words in each ad. However, these characteristics would not help his employer create effective ads for the new earthmover that Calvin helped design. Instead, Calvin classified the ads according to the type of appeal they made. Obviously, "type of advertising appeal" is not an objective characteristic. Defining an ad's appeal requires subjective interpretation and judgment. Calvin used this informal classification because it best matched his reader's goal: identifying advertising strategies that would appeal to the company's target market.

GUIDELINES FOR INFORMAL CLASSIFICATION

1. **Group your items in a way that is suited to your readers and your purpose.** Calvin organized his analysis around "type of advertising appeal" because he knew his employer was looking for advice about the design of ads.
2. **Create logically parallel groups.** For instance, if you were classifying advertisements, you wouldn't organize into groups like this:

   Focus on price
   Focus on established reputation

LEARN MORE The informal classification pattern is often combined with other patterns. See page 227 .

Focus on advantages over a competitor's product
Focus on one of the product's key features
Focus on several of the product's key features

Faulty classification

The last two categories are at a lower hierarchical level than the other three. To make the categories parallel, you could combine them in the following way:

Focus on price
Focus on established reputation
Focus on advantages over a competitor's product
Focus on the product's key features
    Focus on one key feature
    Focus on several key features

Corrected classification

3. **Avoid overlap among groups.** Even when you cannot use strict logic in classifying items, strive to provide one and only one place for each item. To do this, you must avoid overlap among categories. For example, in the following list the last item overlaps the others because photographs can be used in any of the other types of advertisements listed.

Focus on price
Focus on established reputation
Focus on advantages over a competitor's product
Focus on the product's key features
Use of photographs

Faulty classification

Examples of Informal Classification

Figure 9.3 shows how three writers used informal classification to organize their report on the ways to identify water plants that might be cultivated, harvested, and dried to serve as fuel for power generators. They organized each section around topics that would be most important to the specialists who would read that section.

Figure 9.4 (page 211) shows how a writer used informal classification to organize advice about preventing identity theft.

LEARN MORE Exercises for organizing with informal classification are at the book's website and on page 228.

COMPARISON

At work, you will often write comparisons, usually for one of the following reasons:

- **To help your readers make a decision.** The workplace is a world of choices. People are constantly choosing among courses of action, competing products, alternative strategies. To help them choose, you will compare the options in writing.
- **To help your readers understand research findings.** Much workplace research focuses on differences and similarities between two or more items or groups—of people, animals, climates, chemicals, and so on. To explain the findings of this kind of research, you will organize the results as comparisons.

FIGURE 9.3

Outline of a Report Organized by Informal Classification

WEB To see other communications that use informal classification, go to your English CourseMate at *www.cengagebrain.com*.

IDENTIFYING EMERGENT AQUATIC PLANTS THAT MIGHT BE USED AS FUEL FOR BIOMASS ENERGY SYSTEM

Introduction

Botanical Considerations
- Growth Habitat
- Morphology
- Genetics

Physiological Considerations
- Carbon Utilization
- Water Utilization
- Nutrient Absorption
- Environmental Factors Influencing Growth

Chemical Considerations
- Carbohydrate Composition
- Crude Protein Content
- Crude Lipid Content
- Inorganic Content

Agronomic Considerations
- Current Emergent Aquatic Systems
  - *Eleocharis dulcis*
  - *Ipomoea aquatica*
  - *Zizania palustris*
  - *Oryza sativa*
- Mechanized Harvesting, Collection, Densification, and Transportation of Biomass
- Crop Improvement
- Propagule Availability

Ecological Considerations
- Water Quality
- Habitat Disruption and Development
- Coastal Wetlands

Economic Considerations
- Prior Research Efforts
  - *Phragmites communis*
  - *Arundo donax*
- Production Costs for Candidate Species
  - Planting and Crop Management
  - Harvesting
  - Drying and Densification
  - Total Costs

Selection of Candidate Species

© Cengage Learning

The writers used informal classification to organize the report outlined here. In each section, they included information relevant to one specialty area: botanists, physiologists, chemists, and so on. The writers also used informal classification to organize the subsections.

Two Patterns for Organizing Comparisons

In some ways, comparison is like classification (page 205). You begin with a large set of facts about the things you are comparing, and you group the facts around points of comparison that enable your readers to see how the things are like and unlike one another. In comparisons written to support decision making, points of comparison are called criteria.

LEARN MORE A point of comparison is very much like a principle of classification. See the section on formal classification, page 205.

When writing a comparison, you can choose either of two organizational patterns: the divided pattern or the alternating pattern. Lorraine's project illustrates the difference between the two. Her employer wants to replace the aging machines it uses to stamp out metal parts for the bodies of large trucks. Lorraine has been assigned to investigate the two machines the company is considering. She can organize the hundreds of facts she has gathered according to the divided pattern or the alternating pattern.

DIVIDED PATTERN	**ALTERNATING PATTERN**
Machine A	**Cost**
Cost	Machine A
Efficiency	Machine B
Construction Time	**Efficiency**
Air Pollution	Machine A
Et cetera	Machine B
Machine B	**Construction Time**
Cost	Machine A
Efficiency	Machine B
Construction Time	**Air Pollution**
Air Pollution	Machine A
Et cetera	Machine B
	Et Cetera
	Machine A
	Machine B

When to Use Each Pattern

To make a reader-centered choice between the divided and alternating patterns, consider the way your readers will use your information. Because the alternating

PROTECT YOURSELF FROM IDENTITY THEFT

Type of Theft	What Thieves Do	Protection
Social Security Number	❏ Open credit card accounts in your name ❏ Obtain loans in your name	❏ Give your number only to businesses you know and trust ❏ Ask to give an alternative identifier when your SS number is requested
Credit Cards	❏ Steal your wallet or purse ❏ Intercept information when you are buying online ❏ Create fraudulent online businesses ❏ Steal preapproved credit card offers mailed to you	❏ Check companies with the Better Business Bureau before buying online ❏ Use a secure web browser to buy online
Checks	❏ Steal your checks or checking account number from your home or office	❏ Notify your bank immediately if your checks are stolen
Cellular Telephone Service	❏ Open telephone service in your name ❏ Use your calling card and PIN to make calls	❏ If this occurs, immediately ask your service provider to close your account, and establish another one with a new PIN.
Internet Account Updates	❏ Send a phony e-mail requesting your credit card information to update or verify a company's records	❏ Check with your Internet Service Provider before responding to such a request
Phony Identity Theft Protections Services	❏ Request personal information in order to "protect" you	❏ Check out the company with the Better Business Bureau before giving personal information

Based on Chicago Better Business Bureau, http://chicago.bbb.org/identitytheft/

FIGURE 9.4

Table Organized by Informal Classification

The types of identity theft described in this table are organized using informal classification.

- There is not a consistent principle of classification. Most of the categories describe what is stolen (e.g., your Social Security number). The last two describe the means used to steal.
- There is overlap among some of the categories. For example, a thief can use a stolen Social Security number to open a credit card account in your name.

Remember that informal classification is not a flaw. Communications organized by informal classification can be very useful.

pattern is organized around the criteria, it is ideal when readers want to make point-by-point comparisons among alternatives. Lorraine should select this pattern so her readers can find the information about the costs, capabilities, and other characteristics of both stamping machines in one place. The divided pattern would separate the information about each machine into different sections, requiring her readers to flip back and forth to compare the machines in detail.

The divided pattern is well suited to situations where readers want to read all the information about each alternative in one place. Typically, this occurs when both the general nature and the details of each alternative can be described in a short space—say, one page or so. An acoustical engineer used the divided pattern to provide a restaurant manager with information about three sound systems for her business. He described each system in a single page.

Whether you use the alternating or divided pattern, you can usually assist your readers by incorporating two kinds of preliminary information:

TRY THIS Try creating a list of criteria you would recommend that a friend use when comparing smart phones, MP3 players, videogames, or some other product he or she might be ready to purchase.

- **Description of the criteria.** This information lets your readers know from the start what the relevant points of comparison are.
- **Overview of the alternatives.** This information provides your readers with a general sense of what each alternative entails before they focus on the details you provide.

In both patterns, the statement of criteria would precede the presentation of details. Taking these additional elements into account, the general structure of the two patterns is as follows:

DIVIDED PATTERN	ALTERNATING PATTERN
Statement of Criteria	Statement of Criteria
Overview of Alternatives	Overview of Alternatives
Evaluation of Alternatives	Evaluation of Alternatives
Alternative A	Criterion 1
Criterion 1	Alternative A
Criterion 2	Alternative B
Alternative B	Criterion 2
Criterion 1	Alternative A
Criterion 2	Alternative B
Conclusion	Conclusion

GUIDELINES FOR USING COMPARISONS

1. **Choose points of comparison suited to your readers and purpose.** When helping readers understand something, focus on major points, not minor ones. When helping readers make a decision, choose criteria that truly make a difference.
2. **Discuss each alternative in terms of all your criteria or points of comparison.** If no information is available concerning some aspect of one alternative, tell your readers. Otherwise, they may assume that you didn't try to obtain it.
3. **Arrange the parts in an order your readers will find helpful.** Often, you can help most by discussing the most significant differences first. Sometimes, it's best to briefly mention criteria on which the alternatives

LEARN MORE The comparison pattern is often combined with other patterns. See page 227.

are very similar so that readers can then focus on the criteria that make a difference. In comparisons designed to aid understanding, it's usually best to begin with what's familiar to your readers and then lead them to the less familiar.

4. **Include graphics if they will help your readers understand and use your communication.** Tables, graphs, diagrams, and drawings can be especially helpful.

LEARN MORE For advice about constructing tables and other graphics, go to Chapter 14 (page 292) and Chapter 15 (page 315).

Examples of Comparisons

Figure 9.5 shows a memo in which the writer uses the alternating pattern of comparison to help a decision maker choose among three alternatives.

FIGURE 9.5

Memo Organized to Help Readers Compare Alternatives

WEB To see other communications that explain about comparison relationships, go to your English CourseMate at *www.cengagebrain.com.*

AdvanceTech
Memorandum

To Mehash Mehta
From Kenneth Abney
Date September 10, 2013

Subject **Recommendations for Smartphone Purchase**

Last week, Marisol de Silva asked me to provide you with a comparison of the top "smartphones" (cell phones that also serve as handheld computers). He explained that AdvancedTech might purchase smartphones for all 27 sales representatives and all 140 installation and service technicians.

I have studied product capabilities and published reviews for the three smartphones that received the highest ratings by *PCWorld* magazine: Blackberry Pearl 8120, Motozine ZN5, and Omnia.

Kenneth explains his research method, including the method by which he chose the smartphones to compare.

All three provide high-quality phone service and comparable computing capabilities. The key criteria for selection are ease of use and the ability to meet potential needs created by possible future expansion of our business. Here are my recommendations:

Kenneth begins his comparison by explaining what all three alternatives have in common.

- If we continue to do business in North America only, the Omnia is our best choice. Offering both a touchscreen and stylus, along with a large display, it has the longest standby battery life and is the only phone that runs Windows Mobile.
- If we will soon open offices outside North America, the BlackBerry 7230 would be preferable. It supports the Global System for Mobile Communication (GSM) used elsewhere in the world.

Kenneth makes two recommendations, one for each of two possible situations.

The following table compares the phones in detail. If you want more information, please let me know.

	Standby Battery Life	Input	Resolution	Operating System	GSM	Price
BlackBerry Pearl 8120	15 Days	Keyboard Thumb Wheel	240 x 260	Proprietary	Yes	$200
Motozine ZN5	7.8 Days	Keyboard	240 x 320	Proprietary	No	$200
Omnia	20 Days	Touchscreen Stylus	400 x 240	Windows Mobile	No	$200

He provides his reader with additional detail in an easy-to-read table.

LEARN MORE Exercises for writing comparisons are at the book's website and on page 228.

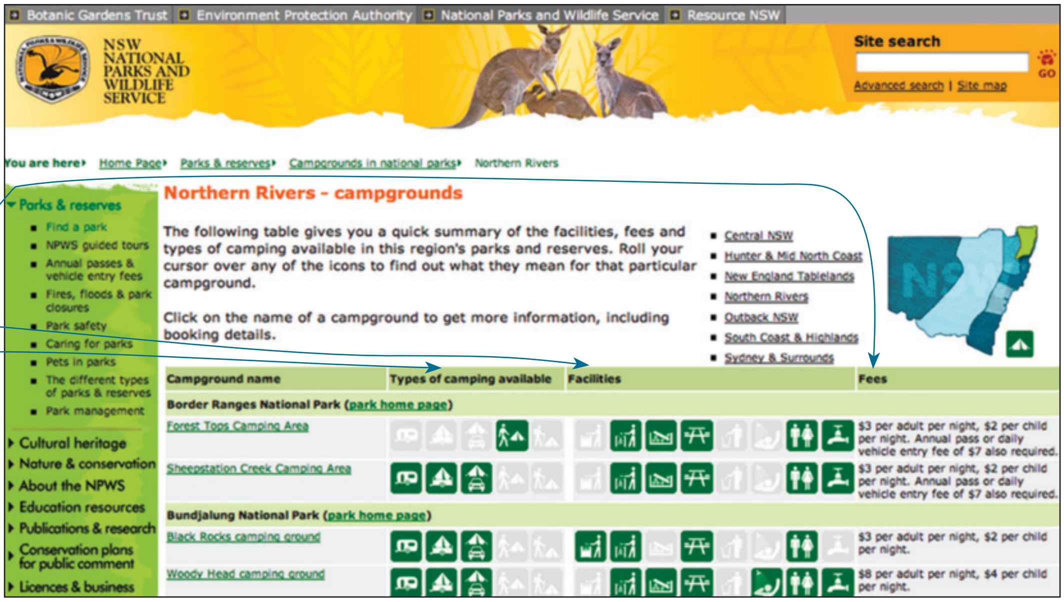
FIGURE 9.6

Website Designed to Help Users Make Comparisons

In this table, the points of comparison are

- Fees
- Facilities
- Types of camping available

By using icons rather than words, the writers help their readers read this table quickly.



Courtesy of The Department of Environment and Conservation (NSW)

In addition to prose, you can use tables and graphs to help readers compare alternatives and make decisions. Figure 9.6 shows a website that helps vacationers pick a campground in New South Wales, Australia.

HOW TO DESCRIBE AN OBJECT (PARTITIONING)

In your career, you will have many occasions to describe a physical object for your readers. If you write about an experiment, you may need to describe your equipment. If you write instructions, you may need to describe the machines your readers will be using. If you propose a new purchase, you may need to describe the object you want to buy.

To organize descriptions, use a strategy called partitioning. Partitioning uses the same basic procedure as does classifying (page 205). Think of the object as a collection of parts. Then identify a principle of classification for organizing the parts into groups of related parts. At work, the principle most useful to your readers will usually be location or function.

LEARN MORE For more on principles of classification, see the section on formal classification, page 205.

Example: Partitioning a Car

Consider, for instance, how you could use location and function to organize a discussion of the parts of a car.

To organize by location, you might talk about the car's interior (passenger compartment, trunk), exterior (front, back, sides, and top), engine compartment, and underside (wheels, transmission, and muffler).

To organize by function, you might focus on parts that provide power and ones that guide the car. The power-producing parts are in several locations: The gas pedal is in the passenger compartment, the engine is under the hood, and the transmission and axle are on the underside. Nevertheless, you would discuss them together because they are related by function.

Of course, other principles of classification are possible.

GUIDELINES FOR DESCRIBING AN OBJECT

1. **Choose a principle of classification suited to your readers and purpose.** For instance, when describing a car for new owners who want to learn about the vehicle they've purchased, you might organize according to location. Your readers would learn about the conveniences in the passenger compartment, trunk, and so on. In contrast, when describing the car for auto repair specialists, you could organize according to function or the kinds of problems they might encounter.
2. **Use only one basis for partitioning at a time.** To assure that you have one place and only one place for each part you describe, use only one basis for partitioning at a time, just as you use only one principle of classification at a time (see page 205.).
3. **Arrange the parts of your description in a way your readers will find useful.** When partitioning by location, you might move systematically from left to right, front to back, or outside to inside. When partitioning by function, you might trace the order in which the parts interact during a process that interests your readers.
4. **When describing each part, provide details that your readers will find useful.** For instance, when describing a car tire to a consumer, you might describe the air pressure the tires should have. When describing the same tire to an engineer, you might provide a technical description of the steel belts in the tire's core.
5. **Include graphics if they will help your readers understand and use your information about the object.** Graphics that are especially helpful to readers of an object's description include drawings, diagrams, and photographs.

LEARN MORE The partitioning pattern is often combined with other patterns. See page 227.

LEARN MORE For advice about constructing graphics, go to Chapter 14 (page 292) and Chapter 15 (page 315).

Description Organized by Partitioning

Figure 9.7 shows a description of the human eye and its ailments, organized by partitioning.

LEARN MORE Exercises for organizing with partitioning are at the book's website and on page 228.

HOW TO DESCRIBE A PROCESS (SEGMENTING)

At work, you will usually have one of the following reasons for describing a process.

- **To enable your readers to perform the process.** For example, you may be writing instructions that will enable your readers to analyze the chemicals present in a sample of liver tissue, make a photovoltaic cell, apply for a loan, or run a computer program.
- **To enable your readers to understand the process.** For example, you might want your readers to understand the following:
  - **How something is done.** For instance, how coal is transformed into synthetic diamonds.

FIGURE 9.7

Passage with Text and Figure That Describe an Object by Partitioning

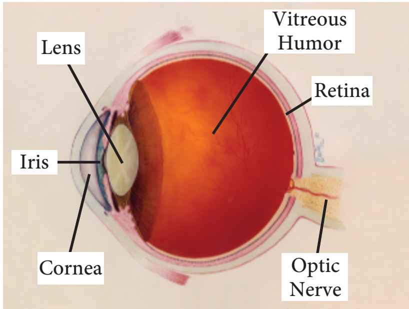
WEB To see other communications that use partitioning, go to your English CourseMate at *www.cengagebrain.com*.

This description is partitioned according to the steps in the process by which light passes through the eye and is transformed into vision. The organization also corresponds to the location of the parts of the eye.

- Light enters the eye through the cornea.
- The amount of light proceeding farther into the eye is controlled by the iris.
- The light is then focused by the lens.
- Next, the light passes through the vitreous humor to the retina.
- The retina transforms the light energy into electrical impulses.

THE HUMAN EYE AND ITS AILMENTS

Several parts of the eye contribute to creation of sharp, clear vision. Disease or damage to any part can distort the light that passes through it or block the light altogether.



- **Cornea** The cornea protects the inner eye. Disease, infection, or injury can create scars that block or distort light.
- **Iris** The iris is the colored part of the external eye. It expands and contracts to regulate the amount of light entering the eye through the pupil. Skin cancer can attack the iris, limiting its ability to function properly.
- **Lens** A set of muscles attached to the lens control its shape, thereby focusing the light that passes through it. The lens can develop cloudy areas called cataracts.
- **Vitreous Humor** The vitreous humor is the gel that fills the eyeball. Particles called floaters sometimes drift through it, looking like dust particles or sand in the field of vision.
- **Retina** Nerve cells in the retina transform light energy into electrical impulses that travel to the brain through the optic nerve. The retina can tear or detach from the lining of the eye, causing flawed vision or blindness.

- **How something works.** For instance, how the lungs provide oxygen to the bloodstream.
- **How something happened.** For instance, how the United States developed the space programs that eventually landed astronauts on the moon.

In either case, you need to help your readers understand the overall structure of the process. To do this, you segment the process. Imagine the entire process as a long line or string of steps. Divide the process (or cut the string) into segments at points where one major group of related steps ends and another begins. If some or all of the major groups are large, you may divide them into subgroups, thereby creating an organizational hierarchy. The outline on the right shows how you might segment the steps in the process for building a cabinet.

Making a Cabinet
Obtaining Materials
Preparing the Pieces
    Cutting the wood
    Routing the wood
Assembling the Cabinet
    Building the base
    Mounting the doors
Finishing the Cabinet
    Sanding
    Applying the stain
    Applying the sealant

Principles of Classification for Segmenting

To determine where to segment the process, you need a principle of classification. Commonly used principles include the time when the steps are performed (first day, second day; spring, summer, fall), the purpose of the steps (to prepare the equipment, to examine the results), and the tools used to perform the steps (for example, table saw, drill press, and so on).

Processes can be segmented by a variety of classification principles. Pick the principle that best supports your readers' goals. For instance, if you were writing a history of the process by which the United States placed a person on the moon, you would segment the process according to the passage of various laws and appropriation bills if your readers were members of the U.S. Congress. If your readers are scientists and engineers, however, you might focus on efforts to overcome various technical problems.

LEARN MORE For more on principles of classification, see the section on formal classification, page 205.

GUIDELINES FOR SEGMENTING

1. **Choose a principle for segmenting suited to your readers and your purpose.** If you are writing instructions, group the steps in ways that support an efficient or comfortable rhythm of work. If you want to help your readers understand a process, organize around concerns that are of interest or use to them.
2. **Make your smallest groupings manageable.** If your smallest groupings include too many steps or too few, your readers will not see the process as a structured hierarchy of activities or events but rather as a long, unstructured list of steps—first one, then the next, and so on.
3. **Describe clearly the relationships among the steps and groups of steps**. To understand and remember the process, readers need to understand how the parts fit together. Where the relationships among the groups of steps will be obvious to your readers, simply provide informative headings. At other times, you will need to explain the relationships in introductory statements, transitions between groups of steps, and, perhaps, in a summary at the end.
4. **Provide enough detail about each step to meet your readers' needs**. Use your understanding of your readers and the ways they will use your communication to determine the appropriate level of detail.
5. **Include graphics if they will help your readers understand and use your information about the process.** Graphics that are especially helpful to readers of a description of a process are diagrams, drawings, photographs, and flowcharts.

LEARN MORE The segmenting pattern is often combined with other patterns. See page 227.

TRY THIS Try segmenting a process you perform regularly, such as going to your first class of the day or doing homework for a course in your major.

LEARN MORE For advice about constructing graphics, go to Chapter 14 (page 292) and Chapter 15 (page 315).

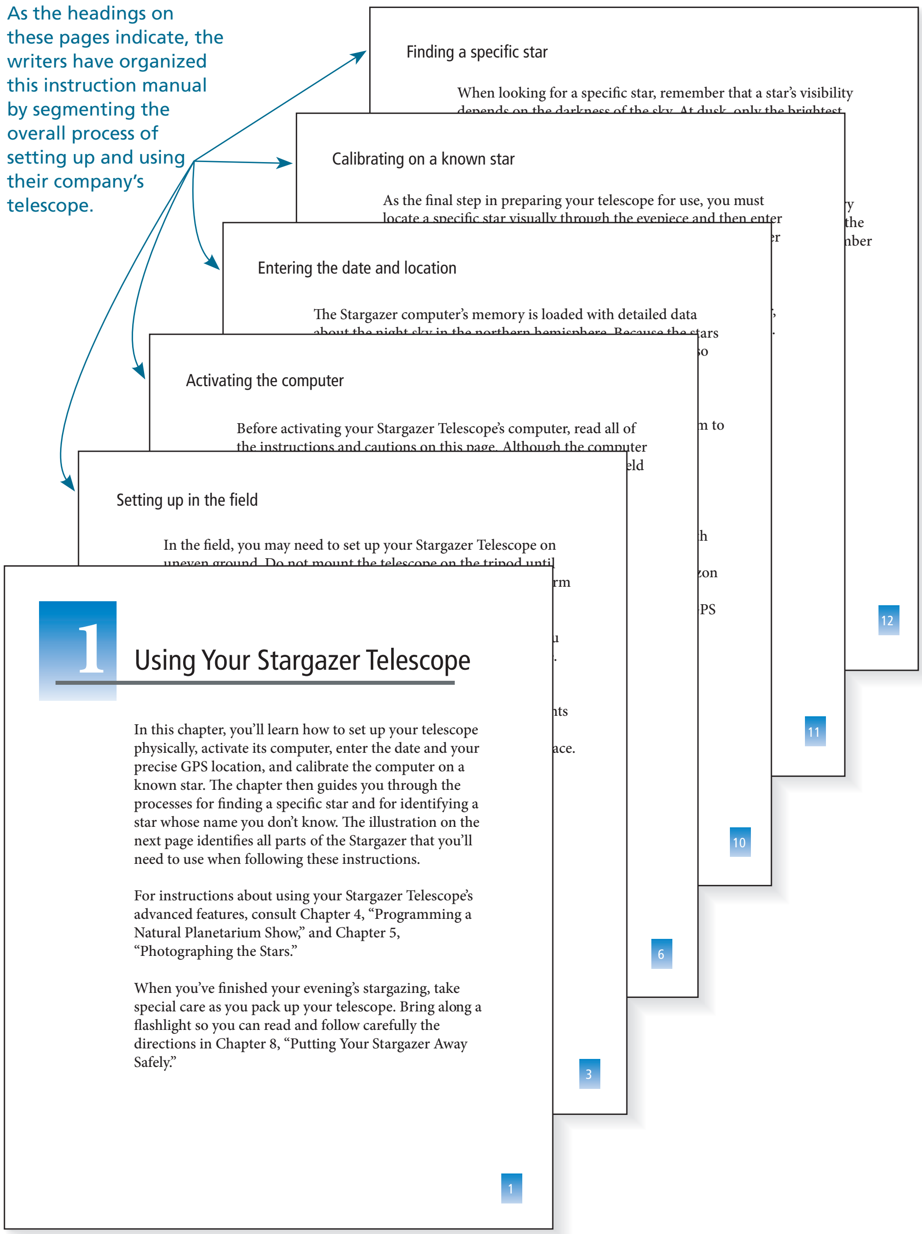
Examples of Describing a Process by Segmenting

Figure 9.8 shows pages from instructions for using a computerized telescope that automatically points to a star or constellation specified by the operator. They are segmented according to the major groups of steps in the process: setting it up,

FIGURE 9.8

Instruction Manual Organized by Segmenting a Process

As the headings on these pages indicate, the writers have organized this instruction manual by segmenting the overall process of setting up and using their company's telescope.



Courtesy of Star Gazer Telescopes

WEB To see other communications that use segmenting, go to your English CourseMate at ***www.cengagebrain.com.***

activating the computer, entering the date and location, and so on. See more examples of instructions organized by segmenting on pages 218 and 219.

Figure 9.9 shows a passage in which the writer uses segmentation to describe one theory about the way planets are formed. Notice how the writer uses headings to signal the major phases of the process.

In the flowchart shown in Figure 9.10, writers at Lawrence Livermore National Laboratory explained the five-step process by which lasers are used to create nuclear fission.

LEARN MORE Exercises for writing about segmenting are at the book's website and on page 228.

How Planets Are Formed

Theoretical astrophysicists have developed an elaborate model describing the formation of stars like our Sun. In this theory, planet formation is a natural and almost necessary result of the process of star formation.

A Proto-Star Is Born

These astrophysicists believe that the process of star formation begins when a dense region of gas and dust in an interstellar cloud becomes gravitationally unstable. The cloud begins a slow, quasistatic contraction as both its internal turbulent and magnetic support are gradually lost through cooling and the outward diffusion of the magnetic field. The core of this cloud condenses to form a proto-star.

If there is sufficient angular momentum, the collapsing cloud may fragment into two or more smaller pieces, thus leading to the formation of a binary or multiple star.

A Rotating Disc Forms

The remaining gas and dust from the cloud continue to fall inwards. Because this material must conserve the initial angular momentum of the cloud, it forms into a rotating disc around the proto-star in accordance with Kepler's laws, with the inner portion of the disc rotating more rapidly than the outer region.

Planets Are Created

The process of planet formation occurs within this rotating disc. Dust grains collide and stick together, forming larger particles. This collisional growth continues over millions of years and eventually results in the creation of rocky bodies a few kilometers in diameter, known as "planetesimals." At this point the gravitational attraction of the planetesimals begins to dominate their random velocities, increasing their growth rate to the point where planetary cores about a thousand kilometers across can form rapidly.

As the proto-planetary disc continues to evolve, the planetary cores in the inner portion of the disc collide, merge and grow to become terrestrial planets such as Earth and Mars. In the outer disc, the cores grow to larger masses. Once the planetary core reaches about 10 Earth masses, its gravity is sufficient to capture gaseous hydrogen and helium from the disc, forming a gas-giant planet such as Jupiter or Saturn. This rapid-growth phase removes most of the material near the orbit of the growing planet, forming a gap in the disc and effectively shutting off the growth process.

Thus, scientists think that planets are built from their cores outward by accretion processes in the disc of gas and dust that surrounds a star during its creation.

How Planets are Formed. (Explanation Organized by Segmenting a Process. From Cochran, William (1997, July), "Extrasolar Planets," Physics World, July, 1997, by the Institute of Physics Publishing, Bristol, England.

FIGURE 9.9

Passage Explaining a Process That Is Organized by Segmenting

The topic is introduced.

First stage is described.

Alternative outcomes are identified.

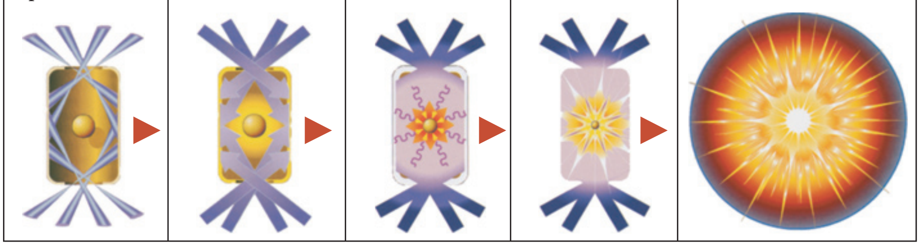
Second stage is described.

Headings help to distinguish the stages.

Third stage is described in two parts, with separate paragraphs devoted to planetesimals and to planets.

A concluding sentence summarizes the overall process.

Three hundred million watts of laser energy are projected into a small container that holds a spherical fusion-fuel capsule.	Reflecting from the container's specially coated walls, the laser beams are converted to x-rays that create a 3-million-degree oven.	The heat energy implodes the fusion-fuel cell to 20 times the density of lead.	The fuel core ignites at 100 million kelvins.	A thermonuclear burn spreads through the fuel, creating gain equivalent to the power of miniature star lasting less than a billionth of a second.



Science & Technology, June 2005. © Lawrence Livermore National Laboratory, Operated by the University of California for the U.S. Department of Energy. https://www.llnl.gov/str/June05/Aufderheide.html

FIGURE 9.10

Flowchart with Text and Figures That Describe a Process by Segmenting

The text explains the steps in the process.

The drawings illustrate each step.

HOW TO DESCRIBE A CAUSE-AND-EFFECT RELATIONSHIP

Questions about cause and effect are very common in the workplace. Profits slumped or skyrocketed. What caused the change? The number of children diagnosed with autism is increasing. How come? If we clear underbrush from forest floors, how will our action affect animal habitats and the severity of forest fires?

At work, you are likely to write about cause and effect for one of two distinct purposes.

- To help your readers understand a cause-and-effect relationship.
- To persuade your readers that a certain cause-and-effect relationship exists.

This section describes strategies for describing cause and effect. The next explains ways to persuade that a certain effect has a particular cause.

Helping Readers Understand a Cause-and-Effect Relationship

Some cause-and-effect relationships are accepted by people knowledgeable about the topic but need to be explained to those who are not.

For instance, geologists agree about what causes the Old Faithful geyser in the United States' Yellowstone National Park to erupt so regularly. However, many park visitors do not know. Consequently, the park publishes brochures that explain the cause.

Depending on your profession, you may need to explain cause-and-effect relationships to members of the general public; to employees in your own organization, such as co-workers or executives outside your specialty; or to other readers. The following reader-centered guidelines will help you do so effectively in any situation.

GUIDELINES FOR EXPLAINING A CAUSE-AND-EFFECT RELATIONSHIP

1. **Begin by identifying the cause or effect that you are going to explain.** Let your readers know from the beginning exactly what you are going to explain. This advance notice will help them better understand what follows.
2. **Carefully explain the links that join the cause and effect that you are describing.** Remember that you are not simply listing the steps in a process. You want your readers to understand how each step leads to the next one.
3. **If you are dealing with several causes or effects, group them into categories.** Categories help readers to understand a complex set of factors.
4. **Include graphics if they will help your readers understand the relationship you are explaining.** Among the many kinds of graphics that assist readers in visualizing cause-and-effect relationships are those used to describe processes, including flowcharts, diagrams, and drawings.

LEARN MORE The cause-and-effect pattern is often combined with other patterns. See page 227.

LEARN MORE For advice about constructing graphics, go to Chapter 14 (page 292) and Chapter 15 (page 315).

Example Description of a Cause-and-Effect Relationship

Figure 9.11 shows a passage that uses a cause-and-effect relationship to explain how CDs work.

How Light Makes Music

When you listen to your favorite songs on a CD, you are enjoying the music that light makes.

Your CD has three layers. On the bottom is a stiff, protective layer of acrylic. Next is a thin layer of reflective aluminum, which is coated with a clear plastic layer that is 1.2 mm thick. Your CD player projects a shaft of light, in the form of a laser beam, at a tiny spot on the reflective aluminum. As your CD spins, the player reads the variations in the intensity of the light that is reflected from the aluminum.

What causes the intensity of the reflected light to vary? Although a CD seems smooth, its ability to make music depends on millions of pits in the clear plastic layer. Only about 0.5 microns deep and several microns long, they are burned into the aluminum side of the clear plastic layer when the CD is manufactured. Despite being "clear," the plastic layer absorbs some light. It absorbs less where the pits are because the plastic is thinner there. As a CD spins, areas with and without pits pass rapidly under the CD player's laser beam. By reading the variations in the intensity of the reflected light, the CD player makes music.

A Laser Puts Music on a CD by Creating Pits in the Aluminum Side of the Clear Plastic Layer

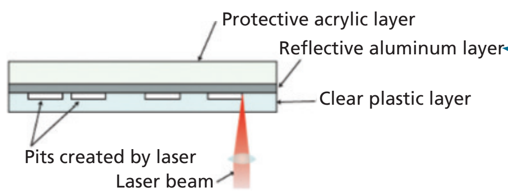


FIGURE 9.11

Passage That Uses Text and a Graphic to Explain a Cause-and-Effect Relationship

This passage describes a cause-and-effect relationship to explain how a CD player creates music from a CD. The same technology is used for DVDs.

This paragraph provides background that helps readers understand the cause-and-effect explanation given in the next paragraph.

In this explanation, the effect (variations in the intensity of light) is described first. The explanation follows. In other cause-and-effect passages, the order is reversed.

Many kinds of graphics are used with explanations of cause and effect. In this case, the author uses a diagram to provide a visual description of the process by which pits that "make" the music are created on a CD.

HOW TO PERSAUDE READERS THAT A CAUSE-AND-EFFECT RELATIONSHIP EXISTS

About many events, people disagree. They may disagree about past events, such as what caused damage to a jet engine's turbine blade or what caused the disappearance of the Inca civilization in Central America. Alternatively, they may disagree about the future. Examples include disagreements about the effects of growing genetically modified crops or the effect on sales that a proposed price reduction would have on company profits.

Whether you are writing about causes of a past event or the effects of a future action, your goal is to persuade your readers to accept your explanation. The guidelines below will help you argue persuasively, as will the guidelines in Chapter 5, "Planning Your Persuasive Strategies."

GUIDELINES FOR PERSUADING READERS TO ACCEPT YOUR VIEW OF CAUSE AND EFFECT

1. **State your claim at the beginning of your passage.** By letting readers know your claim in advance, you will help them see—and evaluate—the way your evidence supports the claim.
2. **Choose evidence your readers will find credible.** As explained in Chapter 5, different kinds of evidence are credible in different situations

LEARN MORE For more advice about persuading readers, see Chapter 5, **Planning Your Persuasive Strategies**, page 104.

and industries. You will have to understand your readers in order to determine whether data, expert testimony, or some other form of evidence will be most persuasive for them.

3. **Explain your line of reasoning.** The heart of your explanation is the link you draw between the cause and the effect you are discussing. Explain them thoroughly.
4. **Avoid faulty logic.** If your readers find your logic to be faulty, they will reject your explanation. See below for descriptions of two logical fallacies that are common in arguments concerning cause and effect.
5. **Address counterarguments.** To persuade readers to accept your account of a cause-and-effect relationship, you must persuade them to reject alternative explanations. Therefore, you need to identify the other explanations they might consider and explain why yours is better.
6. **Include graphics if they will help your readers understand the relationship you are discussing.** Especially helpful can be graphics such as flowcharts, diagrams, and drawings that describe processes.

LEARN MORE For advice about constructing graphics, go to Chapter 14 (page 292) and Chapter 15 (page 315).

Logical Fallacies Common in Arguments About Cause and Effect

The following logical fallacies can undermine arguments about cause and effect.

- **Post hoc, ergo propter hoc fallacy.** This fallacy occurs when a writer argues that because an event occurred after another event, it was caused by that event. For example, in an attempt to persuade his employer, a furniture manufacturer, to switch to computerized machinery, Samuel argued that a competitor's profits had risen substantially after making that switch. Samuel's boss pointed out that the competitor's sales increase may have been caused by other changes made at the same time, such as creation of new designs or reconfiguration of sales districts. Samuel's commission of this fallacy didn't mean he was incorrect. However, to persuade his boss that computerization had caused the sales increase, Samuel needed to do more than simply state that it had preceded the increase.
- **Overgeneralization.** Writers overgeneralize when they draw conclusions on insufficient evidence. For instance, writers overgeneralize if they draw a conclusion about the causes of a manufacturing error after examining only 2 percent of the faulty products.

WEB To see other communications that explain or persuade about cause-and-effect relationships, go to your English CourseMate at *www.cengagebrain.com.*

Example Passage Persuading About a Cause-and-Effect Relationship

Figure 9.12 shows a passage in which the writer uses the guidelines for persuading about cause and effect to convince readers that the collision of a huge asteroid with the earth caused the extinction of the dinosaurs.

FIGURE 9.12

Passage Persuading That a Particular Cause Created a Specific Effect

WHAT CAUSED THE DEATH OF THE DINOSAURS?

One theory is that a comet, asteroid or other huge extraterrestrial body slammed into the Earth 65 million years ago and ended the 160-million year reign of the dinosaurs. According to this theory, the extraterrestrial body raised a huge dust cloud. Within days the black cloud spread over the Earth, darkening the sun. The air turned cold, and many dinosaurs died. Snow fell. Freezing darkness gripped the Earth for weeks. Plants, cut off from the sunlight that feeds them, couldn't survive. Without plants, the rest of the herbivorous dinosaurs followed, and the carnivores soon afterward. Along with a number of other species, the dinosaurs were gone forever.

Effect to be explained is announced.

Possible cause is announced.

Link between effect and cause is explained: An asteroid created a dust cloud that killed the dinosaurs.

Although many leading paleontologists and evolutionary biologists now accept the asteroid-impact theory, and despite popular accounts implying that the question is settled, it is not. A scattering of critics continue to challenge the whole notion.

Still, the theory is compelling. Every few months a new piece of evidence is added to the list, and most, to the critics' consternation, support the idea of an extraterrestrial impact.

Just recently, for example, scientists at the Scripps Institute of Oceanography, in La Jolla, California, found evidence of organic molecules in the layer of sediments laid down at the time the dinosaurs died; the molecules are exceedingly rare on Earth but relatively common in some meteorites and so, presumably, in some asteroids.

Evidence of link is presented: rare molecules in sediment indicate an asteroid may have hit Earth when dinosaurs died.

To put the discovery in perspective, and to appreciate the arguments on both sides of the impact debate, one must first understand the nature of the original finding.

In 1980, Luis Alvarez, a Nobel laureate in physics, his son Walter, a geologist, both at the University of California, Berkeley, and two associates published the theory that a massive impact took place at the end of the Cretaceous Period.

Additional evidence of link.

The team had found a rare substance in the thin layer of sedimentary clay deposited just on top of the highest, and therefore the most recent, stratum of rock contemporary with those bearing dinosaur fossils. It was the element iridium, which is almost nonexistent in the Earth's crust but 10,000 times more abundant in extraterrestrial rocks such as meteorites and asteroids. Deposits above and below the clay, which is the boundary layer separating the Cretaceous layer from the succeeding Tertiary, have very little iridium.

Because the same iridium anomaly appeared in two other parts of the world, in clay of exactly the same age, the Alvarez team proposed that the element had come from an asteroid that hit the Earth with enough force to vaporize, scattering iridium atoms in the atmosphere worldwide. When the iridium settled to the ground, it was incorporated in sediment laid down at the time.

Additional evidence continued.

More startling was the team's proposal that the impact blasted so much dust into the atmosphere that it blocked the sunlight and prevented photosynthesis (others suggested that a global freeze would also have resulted). They calculated that the object would have had to be about six miles in diameter.

Link is restated.

Since 1980, iridium anomalies have been found in more than 80 places around the world, including deep-sea cores, all in layers of sediment that formed at the same time.

Additional evidence of link.

One of the most serious challenges to the extraterrestrial theory came up very quickly. Critics said that the iridium could have come from volcanic eruptions, which are known to bring up iridium from deep within the Earth and feed it into the atmosphere. Traces of iridium have been detected in gases escaping from Hawaii's Kilauea volcano, for example.

Challenge to link is explained: molecules perhaps from volcano, not asteroid.

The new finding from Scripps appears to rule out that explanation, though, as a source for iridium in the Cretaceous–Tertiary (K–T) boundary layer. Chemists Jeffrey Bada and Nancy Lee have found that the same layer also contains a form of amino acid that is virtually nonexistent on Earth—certainly entirely absent from volcanoes—but abundant, along with many other organic compounds, in a type of meteor called a carbonaceous chondrite.

Challenge is refuted by new evidence: Other molecules couldn't have come from volcano.

LEARN MORE Exercises for writing about cause and effect are at the book's website and on page 228.

"Death of Dinosaurs: A True Story?" by Boyce Rensberger, from *Science Digest, 94*, 5, May 1986, pp. 28–32.

DESCRIBING A PROBLEM AND ITS SOLUTION

Problems and their solutions will be one of the most frequent topics of your on-the-job writing. Sometimes, you will write about a current problem in order to propose a solution to it. At other times, you will write about a past problem, telling how it was solved. The following sections provide advice for writing effectively in both situations.

Proposing the Solution to a Problem

LEARN MORE Chapter 24 on Writing Reader-Centered Proposals provides additional information on organizing with the problem-and-solution pattern, which provides the overall structure for proposals.

In proposals to readers outside your organization, you will probably be seeking contracts worth thousands or even millions of dollars. When writing proposals to readers inside your organization, you might be urging support for a large research project or suggesting an improvement in a policy or procedure. Always, your goal will be to persuade your readers to support or approve the problem-solving project you propose.

LEARN MORE The problem-and-solution pattern is often combined with other patterns. See page 227.

LEARN MORE For advice about constructing graphics, go to Chapter 14 (page 292) and Chapter 15 (page 315).

GUIDELINES FOR PERSUADING READERS TO ACCEPT YOUR PROPOSED SOLUTION

1. **Describe the problem in a way that makes it seem significant to your readers.** Remember that your aim is to persuade them to take the action you recommend. They will not be very interested in taking action to solve a problem they regard as insignificant.
2. **Describe your method.** Readers want enough detail to feel confident that it is practical and technically sound. Depending on your reader and the situation, this might require a great deal of information or relatively little.
3. **When describing your method, explain how it will solve the problem.** Provide the evidence and reasoning needed to persuade your readers that your method will, in fact, solve their problem.
4. **Anticipate and respond to objections.** As when reading any persuasive segment, your readers may object to your evidence or your line of reasoning. Devote special attention to determining what those objections are so you can respond to them.
5. **Specify the benefit.** With as much specificity as will interest them, describe the benefits they and their organization will enjoy if they support or fund your proposed action.
6. **Include graphics if they will help your readers understand and approve your proposed solution.** Review opportunities to use graphics that can help your readers understand the problem and your proposed solution and that can highlight the benefits to your readers of supporting the action you propose. Among the graphics often used in problems and their solutions are tables, flowcharts, drawings, photographs, and diagrams.

Example Memo Proposing the Solution to a Problem

As shown in the memo in Figure 9.13, the writer uses the problem-and-solution strategy to recommend that her employer investigate the Kohle Reduktion method of steelmaking. Proposals for further study are common in the workplace.

FIGURE 9.13

Memo Proposing the Solution to a Problem

MANUFACTURING PROCESSES INSTITUTE
Interoffice Memorandum

June 21, 2013

To Cliff Leibowitz

From Candace Olin

RE Suggestion to Investigate Kohle Reduktion Process for Steelmaking

As we have often discussed, it may be worthwhile to set up a project investigating steelmaking processes that could help the American industry compete more effectively with the more modern foreign mills. I suggest we begin with an investigation of the Kohle Reduktion method, which I learned about in the April 2013 issue of *High Technology*.

A major problem for American steelmakers is the process they use to make the molten iron ("hot metal") that is processed into steel. Relying on a technique developed on a commercial scale over 100 years ago by Sir Henry Bessemer, they make the hot metal by mixing iron ore, limestone, and coke in blast furnaces. To make the coke, they pyrolize coal in huge ovens in plants that cost over $100 million and create enormous amounts of air pollution.

Problem is identified.

Problem is explained.

In the Kohle Reduktion method, developed by Korf Engineering in West Germany, the hot metal is made without coke. Coal, limestone, and oxygen are mixed in a gasification unit at 2500°. The gas rises in a shaft furnace above the gasification unit, chemically reducing the iron ore to "sponge iron." The sponge iron then drops into the gasification unit, where it is melted and the contaminants are removed by reaction of the limestone. Finally, the hot metal drains out of the bottom of the gasifier.

Solution is announced.

Solution is explained.

The Kohle method, if developed satisfactorily, will have several advantages. It will eliminate the air pollution problem of coke plants, it can be built (according to Korf estimates) for 25% less than conventional furnaces, and it may cut the cost of producing hot metal by 15%.

Link between problem and solution is explained.

This technology appears to offer a dramatic solution to the problems with our nation's steel industry: I recommend that we investigate it further. If the method proves feasible and if we develop an expertise in it, we will surely attract many clients for our consulting services.

WEB To see other communications that explain or persuade about problem-and-solution relationships, go to your English CourseMate at ***www.cengagebrain.com***.

LEARN MORE Exercises for writing about problems and their solutions are at the book's website and on page 228.

Passage Reporting on a Past Problem-Solving Project

Reports on past problem-solving projects are often used to teach other employees how to approach similar challenges. They are also used to demonstrate a company's capabilities in proposals.

GUIDELINES FOR DESCRIBING PROBLEMS AND THEIR SOLUTIONS

1. **Begin by identifying the problem.** Make the problem seem significant to your readers. Emphasize the aspects of the problem most directly affected by your solution.
2. **Describe your method.** Provide the details needed by your readers.
3. **Describe the results.** Enumerate the benefits produced. Tell what was learned.
4. **Include graphics that will help your readers understand and use your communication.**

Passage Reporting on a Past Problem-Solving Project

In the passage shown in Figure 9.14, Rashid uses the problem-solution pattern of organization.

FIGURE 9.14

Passage in Which the Writer Describes How a Problem Was Solved in the Past

Rashid describes the general problem: Coal-fired power plants must reduce emissions.

He then focuses on the main issue: Retrofitting with a collection of specialized systems is very expensive.

He uses a photo to enable readers to see what the facility looks like.

Rashid explains that an integrated system can solve the problem.

He highlights the results by presenting them in a table.

Rashid highlights two other benefits of the system.

Pollution Control System Reduces Cost and Makes Fertilizer

Coal-fired power plants produce 36% of electricity worldwide. They also cause air pollution that creates health hazards and damages the environment. To comply with government regulations in the U.S. and elsewhere, thousands of older plants must greatly reduce their emissions or close permanently.

Because pollution control systems have been specialized, power plants need to install several to meet environmental standards: one for sulfur dioxide, another for mercury, and still others for particulates and nitrous oxides. For older plants, retrofitting with several systems can be prohibitively expensive.

Source: Powerspan Corporation

ECO Demonstration Facility

At the 50-year-old Burger Plant in Shadyside, Ohio, Powerspan Corporation has successfully demonstrated its patented Electro-Catalytic Oxidation (ECO) system, which combines the functions of four control technologies. Installed as a single unit, it costs much less than the four systems it would replace.

ECO Pilot Test Restults

Pollutant	*Removal Efficiency*
SO2 (sulfur dioxide)	98%
NOx (nitrogen oxides)	90%*
Hg (mercury)	80–90%

*Inlet NOx is 0.4 lb/mmBtu

The ECO system not only reduced emissions effectively, but also produced byproducts sold as feedstock to a fertilizer manufacturer, producing a new (though modest) income stream for the plant.

The ECO system can also reduce fuel costs for older plants in areas like Ohio with abundant local deposits of high-sulfur coal. Decades ago these plants had to replace this inexpensive, local resource with more-expensive low-sulfur coal imported from other regions. The more sulfur in the coal, the better the system works, according to Powerspan.

© Cengage Learning

COMBINATION OF PATTERNS

This chapter describes eight organizational patterns in isolation from one another. In practice, you will almost always need to weave two or more together. In a short memo, for instance, you might describe a problem in two sentences, identify its causes in three more, briefly compare alternative solutions, and finally recommend one.

The outline displayed in Figure 9.15 shows how six patterns were integrated in a 25-page feasibility report.

WEB To see other communications that use combinations of patterns, go to your English CourseMate at *www.cengagebrain.com*.

FIGURE 9.15

Outline of a Report That Weaves Together Six Organizational Patterns

Like many technical communications, this report interweaves six organizational patterns.

Solar Roofs for New Restaurants
A Feasibility Report for the Brendon's Restaurant Chain

I. Introduction
- A. The Brendon's Restaurant commissioned us to determine the feasibility of covering its restaurant roofs with photovoltaic cells (solar cells) that generate electricity
- B. Background
  1. Brendon's builds 30 new restaurants a year
  2. Brendon's is committed to environmental responsibility
  3. Federal government has goal of one million solar roofs in the U.S. by 2010
  4. Experiences of other companies
     a. Europe
     b. Asia
     c. United States

II. Technical Assessment
- A. Problems
  1. Solar cells do not generate enough electricity to pay for themselves (though this technology is advancing rapidly)
  2. Solar cells collect heat, so additional power would be needed to cool the building
  3. Putting solar cells on top of the regular roof would add 15% to construction time
- B. Potential Solutions (Used by Applebee's Restaurant in Salisbury, North Carolina)
  1. Use the collected heat to preheat the large amount of water used by the restaurant
     a. Collect the heat under the solar cells (instead of venting it)
     b. Use electricity from the solar cells to power fans that blow hot air to the preheating system
  2. Use large solar panels that can serve as the roof itself

III. Components of System
- A. Structure of the Solar Panels
- B. Structure of the Heat Ducts
- C. Structure of the Water Heating System

IV. Construction Schedule

V. Cost Comparison

VI. Conclusion

To organize this part, the writers **classified** the companies according to their location (partitioning).

They organized Chapter II around a **problem** and its possible **solution.**

When describing the location of the solar cells, the writers organized by **cause and effect.**

The writers organized each of these subsections by **partitioning** the component into its major subparts.

They organized their discussion of the construction schedule by gathering the steps into related groups of steps (**segmenting** the process).

The writers used the divided pattern for **comparisons** in their section on cost.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. To choose the appropriate principle of classification for organizing a group of items, you need to consider your readers and your purpose. Here are three topics for classification, each with two possible readers. First, identify a purpose that each reader might have for consulting a communication on that topic. Then identify a principle of classification that would be appropriate for each reader and purpose.
   a. *Types of instruments or equipment used in your field*
      Student majoring in your field
      Director of purchasing in your future employer's organization
   b. *Intramural sports*
      Director of intramural sports at your college
      Student
   c. *Flowers*
      Florist
      Owner of a greenhouse that sells garden plants
2. Use a principle of classification to create a hierarchy having at least two levels. Here are some possible topics.
   - Tablet computers
   - Cameras
   - Physicians
   - Exercise machines
   - Skills you will need on the job
   - Tools, instruments, or equipment you will use on the job
   - Items used in your field (rocks if you are a geologist; power sources if you are an electrical engineer)

   After you have selected a topic, identify a reader and a purpose for your classification. Depending on your instructor's request, show your hierarchy in an outline or use it to write a brief discussion of your topic. In either case, state your principle of classification. Does your hierarchy have one and only one place for every item at each level?
3. Partition an object in a way that will be helpful to someone who wants to use it. Some objects are suggested below. Whichever one you choose, describe a specific instance of it. For example, describe a particular brand and model of food processor rather than a generic food processor. Be sure that your hierarchy has at least two levels, and state the basis of partitioning you use at each level. Depending on your instructor's request, show your hierarchy in an outline or use it to write a brief discussion of your topic.
   - Aqualung
   - Microwave oven
   - Graphing calculator
   - Bicycle
   - Some instrument or piece of equipment used in your field that has at least a dozen parts
4. Segment a procedure to create a hierarchy you could use in a set of instructions. Give it at least two levels. Some topics are listed below. Show the resulting hierarchy in an outline. Be sure to identify your readers and purpose. If your instructor requests, use the outline to write a set of instructions.
   - Changing an automobile tire
   - Making homemade yogurt
   - Starting an aquarium
   - Rigging a sailboat
   - Developing a roll of film
   - Some procedure used in your field that involves at least a dozen steps
   - Some other procedure of interest to you that includes at least a dozen steps
5. Segment a procedure to create a hierarchy you could use in a general description of a process. Give it at least two levels. Some suggested topics are listed below. Show the resulting hierarchy in an outline. Be sure to identify your readers and purpose. If your instructor requests, use the outline to write a general description of the process addressed to someone unfamiliar with it.
   - How the human body takes oxygen from the air and delivers it to the parts of the body where it is used
   - How television signals from a program originating in New York or Los Angeles reach television sets in other parts of the country
   - How aluminum is made
   - Some process used in your field that involves at least a dozen steps
   - Some other process of interest to you that includes at least a dozen steps
6. One of your friends is thinking about making a major purchase. Some possible items are listed below. Create an outline with at least two levels that compares two or more good alternatives. If your instructor requests, use that outline to write your friend a letter.
   - Stereo
   - Smartphone
   - Binoculars
   - Bicycle
   - DVD player
   - Some other type of product for which you can make a meaningful comparison on at least three important points

7. Think of some way in which things might be done better in a club, business, or some other organization. Imagine that you are going to write a letter to the person who can bring about the change you are recommending. Create an outline with at least two levels in which you compare the way you think things should be done and the way they are being done now.
8. A friend has asked you to explain the causes of a particular event. Some events are suggested below. Write your friend a brief letter explaining the causes.
   - Static on radios and televisions
   - Immunization from a disease
   - Freezer burn in foods
   - Yellowing of paper
9. Think of a problem you feel should be corrected. The problem might be noise in your college library, shoplifting from a particular store, or the shortage of parking space on campus. Briefly describe the problem and list the actions you would take to solve it. Next, explain how each action will contribute to solving the problem. If your instructor requests, use your outline to write a brief memo explaining the problem and your proposed solution to a person who could take the actions you suggest.


Scorpp/Shutterstock.com

10 | Developing an Effective, Professional Style

"You need to use a more professional style, not write like a college student." This is the first response many college students and new graduates hear in their internships or first professional jobs. This advice, always meant to be helpful, can be mystifying. Unless you have been immersed in the workplace, it's not obvious what a professional style is. Further, a surprisingly large number of factors shape your writing style, though not more that you can handle if you know what they are.

WEB To read additional information, see more examples, and access links related to this chapter's advice, go to your English CourseMate at *www .cengagebrain.com.*

Overall, these factors fall into three major groups: the personality or "voice" you project in your writing, the way you construct your sentences, and the words you choose. This chapter provides practical advice about each one. While reading this chapter, discussing it in class, applying it to your writing projects, and listening to your instructor's feedback, concentrate on developing your abilities to do the following:

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Create an effective, professional voice that builds your reader's confidence in you.
2. Construct sentences your reader will find easy to understand, easy to remember, and interesting.
3. Choose words that convey your meaning clearly and precisely to your specific reader.

A special challenge we all face when developing our writing style is that readers don't always interpret our writing in the way we think they will. We might think we've chosen just the right word, our readers think it is too vague or stuffy. We might think we are sounding formal and smart, they might think we are being long-winded and tedious. For this reason, as you are developing your own professional writing style, pay special attention to your instructor's feedback. He or she can help you learn how your writing is likely to sound to workplace readers.

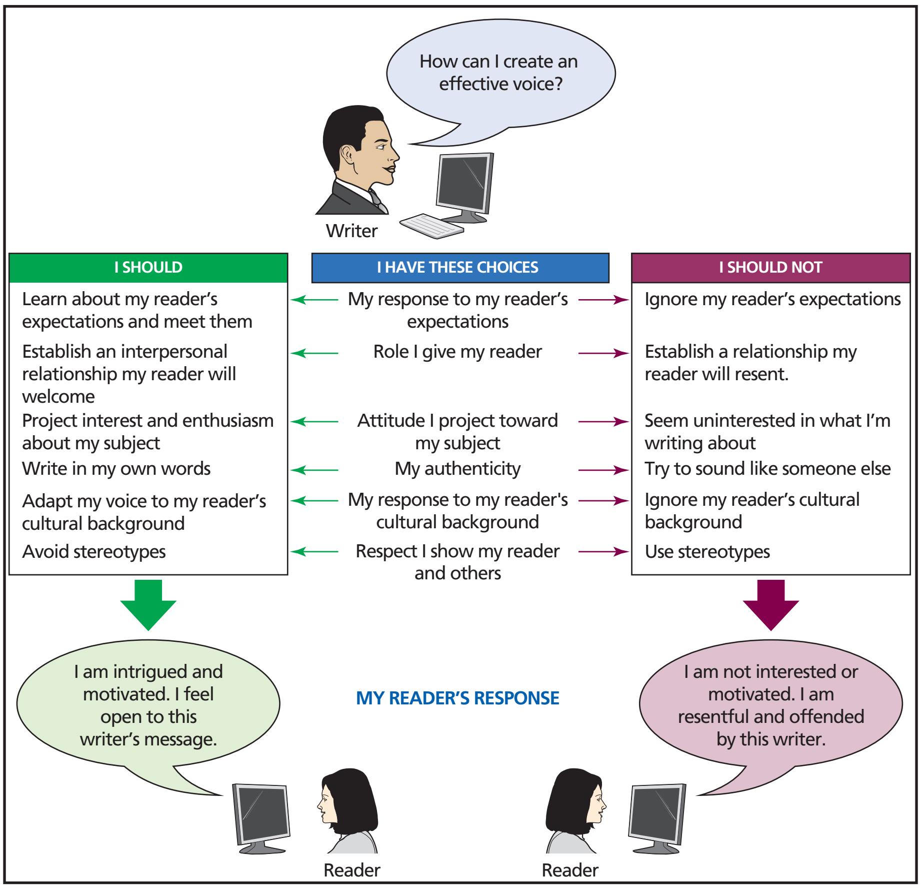
Your instructor's feedback will be especially valuable when you are developing your professional writing style.

HOW TO CREATE AN EFFECTIVE, PROFESSIONAL VOICE

What, exactly, is voice? While reading something you've written, your readers "hear" your voice. Based on what they hear, they draw conclusions about your knowledge, expertise, character, and attitudes. The conclusions they draw can greatly enhance—or detract from—the effectiveness of your communications. The following guidelines suggest six strategies that will help you create an effective, professional voice. Each is associated with choices that affect your readers' impressions of you. These choices and guidelines are summarized in Figure 10.1.

FIGURE 10.1

How to Create an Effective Voice



© Cengage Learning 2014

Guideline 1 | Find out what's expected

To a large extent, an effective voice is one that matches your readers' sense of what's appropriate. When successful employees are asked to identify the major weaknesses in the writing of new employees, they often cite the inability to use a voice and style that are appropriate to their readers.

Here are three questions that can help you match your voice to your readers' expectations:

Questions for determining what your readers expect

- **How formal do your readers think your writing should be?** An informal style sounds like conversation. You use contractions (*can't, won't*), short words, and colloquial words and phrasing. A formal style sounds more like a lecture or speech, with longer sentences, formal phrasing, and no contractions.
- **How subjective or objective do your readers believe your writing should be?** In a subjective style, you would introduce yourself into your writing by saying such things as "I believe . . ." and "I observed . . . ." In an objective style, you would mask your presence by stating your beliefs as facts ("It is true that . . .") and by reporting about your own actions in the third person ("The researcher observed . . .") or the passive voice ("It was observed that . . .").
- **How much "distance" do your readers expect you to establish between them and you?** In a personal style, you appear very close to your readers because you do such things as use personal pronouns (*I, we*) and address your readers directly. In an impersonal style, you distance yourself from your readers—for instance, by avoiding personal pronouns and by talking about yourself and your readers in the third person ("The company agrees to deliver a fully operable model to the customer by October 1").

Here are some major factors that may influence your readers' expectations about style:

- Your professional relationship with your readers (customers? supervisors? subordinates?)
- Your purpose (requesting something? apologizing? advising? ordering?)
- Your subject (routine matter? urgent problem?)
- Type of communication (e-mail? letter? formal report?)
- Your personality
- Your readers' personalities
- Customs in your employer's organization
- Customs in your field, profession, or discipline

To learn what style your readers expect, follow the advice in Chapter 3: Ask people who know (including even your readers) and look for communications similar to the one you are writing.

What If the Expected Style Is Ineffective?

Note that sometimes the expected style may be less effective than another style you could use. For example, in some organizations the customary and expected style is a widely (and justly) condemned style called *bureaucratese*. Bureaucratese is characterized by wordiness that buries significant ideas and information, weak verbs that disguise action, and abstract vocabulary that detaches meaning from the practical world of people, activities, and objects. Often, such writing features an inflated vocabulary and a general pomposity that slows or completely blocks comprehension. Here's an example:

> According to optimal quality-control practices in manufacturing any product, it is important that every component part that is constituent of the product be examined and checked individually after being received from its supplier or other source but before the final, finished product is assembled. (45 words)

Bureaucratese

The writer simply means this:

> Effective quality control requires that every component be checked individually before the final product is assembled. (16 words)

Plain English

Here is another pair of examples:

> Over the most recent monthly period, there has been a large increase in the number of complaints that customers have made about service that has been slow. (27 words)

Bureaucratese

> Last month, many more customers complained about slow service. (9 words)

Plain English

Bureaucratese is such a serious barrier to understanding that many states in the United States have passed laws *requiring* "Plain English" in government publications and other documents such as insurance policies. This chapter's guidelines will help you avoid bureaucratese. However, some managers and organizations want employees to use that puffed-up style, thinking it sounds impressive. If you are asked to write in bureaucratese, try to explain why a straightforward style is more effective, perhaps sharing this book. If you fail to persuade, be prudent. Use the style that is required. Even within the confines of a generally bureaucratic style, you can probably make improvements. For instance, if your employer expects a wordy, abstract style, you may still be able to use a less inflated vocabulary.

TRY THIS Plain English guidelines exist for almost every profession from architecture to statistics. Find some that apply to your major online. If there aren't any for your field, try a closely related one. For example, if you don't find Plain English for "zoology," try "biology."

Guideline 2 | Consider the roles your voice creates for your readers and you

When you choose the voice with which you will address your readers, you define a role for yourself. As manager of a department, for instance, you could adopt the voice of a stern taskmaster or an open-minded leader. The voice you choose also implies a role for your readers. And their response to the role given to them can significantly influence your communication's overall effectiveness. If you choose the voice of a leader who respects your readers, they will probably accept their implied role as valued colleagues. If you choose the voice of a superior, unerring authority, they may resent their implied role as error-prone inferiors—and resist the substance of your message.

TRY THIS What style do administrators at your college use? Find a letter or notice from one of the offices at your school. Is the style closer to Plain English or bureaucratese? What adjective would you use to describe the writer's voice? Do different offices use different voices? If so, why?

By changing your voice in even a single sentence, you can increase your ability to elicit the attitudes and actions you want to inspire. Consider the following statement drafted by a divisional vice president.

> I have scheduled an hour for you to meet with me to discuss your department's failure to meet its production targets last month.

In this draft, the vice president uses a domineering voice.

In this sentence, the vice president has chosen the voice of a powerful person who considers the reader to be someone who can be blamed and bossed around, a role the reader probably does not find agreeable. By revising the sentence, the vice president creates a much different pair of roles for herself and her readers.

In this revision, she creates a supportive voice.

> Let's meet tomorrow to see if we can figure out why your department had difficulty meeting last month's production targets.

The vice president transformed her voice into that of a supportive person. The reader became someone interested in working with the writer to solve a problem that stumps them both. As a result of these changes in voice and roles, the meeting is likely to be much more productive.

Guideline 3 | Consider how your attitude toward your subject will affect your readers

In addition to communicating attitudes about yourself and your readers, your voice communicates an attitude toward your subject. Feelings are contagious. If you write about your subject enthusiastically, your readers may catch your enthusiasm. If you seem indifferent, they may adopt the same attitude.

E-mail presents a special temptation to be careless about voice because it encourages spontaneity. When you feel a flash of irritation, you may fire off an angry reply you'll soon wish you hadn't. The danger is increased by the ease with which e-mails can be forwarded to readers you didn't intend to see your message. Never include anything in an e-mail that you wouldn't be prepared for a large audience to read. Check carefully for statements that your readers might interpret as conveying a different attitude, such as anger or sarcasm, than you intend.

Guideline 4 | Say things in your own words

This guideline urges you to avoid a mistake made by many new employees: They assume that a professional voice has no trace of the writer, that it is the same for every person. Trying to create prose that sounds *unlike* them, they end up sounding inauthentic, phony—as if they were trying to persuade their readers that they are someone they aren't.

Too often, they also imagine that in order to sound professional, they need to puff up their prose with big words and long sentences, believing that this style will make them seem sophisticated, impressive. However, writers who write this way usually come across as pompous and difficult to understand.

Whether you are writing in an informal or formal style, choose words and express your ideas in ways that feel genuine to you.

Instead, write clear, straightforward sentences containing words you would normally use.

Don't misunderstand this advice. It does *not* mean that you should always use an informal, colloquial style. We all have more than one style. At school, you probably speak differently talking with a professor than when chatting with your friends. Yet, in each case you are able to choose words and express your ideas in ways that feel genuine to you. Similarly, at work choose from among your styles the one that is appropriate to each situation.

To check whether you are using your own voice, try reading your drafts aloud. Where the phrasing seems awkward or the words are difficult for you to speak, you may have adopted someone else's voice—or slipped into bureaucratese, which reflects no one's voice. Reading your drafts aloud can also help you spot other problems with voice—such as sarcasm or condescension.

Sometimes it's appropriate to suppress your own voice.

Despite the advice given in this guideline, it will sometimes be appropriate for you to suppress your own voice. For example, when a report, proposal, or other document is written by several people, the contributors usually strive to achieve a uniform voice so that all the sections will fit together stylistically. Similarly, certain kinds of official documents, such as an organization's policy statements, are usually written in the employer's style, not the individual writer's style. Except in such situations, however, let your own voice speak in your writing.

Guideline 5 | Global Guideline: Adapt your voice to your readers' cultural background

From one culture to another, general expectations about voice vary considerably. Understanding the differences between the expectations of your culture and those of your readers in another culture can be especially important because, as Guideline 2 explains, the voice you use tells your readers about the relationship you believe you have with them.

Consider, for instance, the difficulties that may arise if employees in the United States and in Japan write to one another without considering the expectations about voice that are most common in each culture. In the United States and Europe, employees often use an informal voice and address their readers by their first names. In Japan, writers commonly use a formal style and address their readers by their titles and last names. If a U.S. writer used a familiar, informal voice in a letter, memo, or e-mail to Japanese readers, these readers might feel that the writer has not properly respected them. On the other hand, Japanese writers may seem distant and difficult to relate to if they use the formality that is common in their own culture when writing to U.S. readers.

Directness is another aspect of voice. The Japanese write in a more personal voice than do people from the United States, whose direct, blunt style the Japanese find abrupt (Ruch, 1984). Like businesspeople in the United States, the Dutch also use a straightforward voice that causes the French to regard writers from both countries as rude (Mathes & Stevenson, 1991). When writing to people in other cultures, try to learn and to use the voice that is customary there. Library and Internet research provide helpful information about many cultures. You can also learn about the voice used in your readers' culture by studying communications they have written. If possible, ask for advice from people who are from your readers' culture or who are knowledgeable about it.

LEARN MORE For more advice about adapting communications to your readers' cultural background, go to Chapter 3, page 69.

Guideline 6 | Ethics Guideline: Avoid stereotypes

Let's begin with a story. A man and a boy are riding together in a car. As they approach a railroad crossing, the boy shouts, "Father, watch out!" But it is too late. The car is hit by a train. The man dies, and the boy is rushed to a hospital. When the boy is wheeled into the operating room, the surgeon looks down at the child and says, "I can't operate on him. He's my son."

When asked to explain why the boy would call the deceased driver "Father" and the living surgeon would say "He's my son," people offer many guesses. Perhaps the driver is a priest or the boy's stepfather or someone who kidnapped the boy as a baby. Few guess that the surgeon must be the boy's mother. Why? Our culture's stereotypes about the roles men and women play are so strong that when people think of a surgeon, many automatically imagine a man.

Stereotypes, Voice, and Ethics

What do stereotypes have to do with voice and ethics? Stereotypes are very deeply embedded in a culture. Most of us are prone to use them occasionally, especially when conversing informally. As a result, when we use more colloquial and conversational language to develop our distinctive voice for our workplace writing, we may inadvertently employ stereotypes. Unfortunately, even inadvertent uses of stereotypes have serious consequences for individuals and groups. People who are viewed in terms of stereotypes lose their ability to be treated as individual human beings.

Further, if they belong to a group that is unfavorably stereotyped, they may find it nearly impossible to get others to take their talents, ideas, and feelings seriously. The range of groups disadvantaged by stereotyping is quite extensive. People are stereotyped on the basis of their race, religion, age, gender, sexual orientation, weight, physical handicap, and ethnicity. In some workplaces, manual laborers, union members, clerical workers, and others are the victims of stereotyping by people in white-collar positions.

The following suggestions will help you avoid stereotypes.

LEARN MORE For a discussion of stereotypes and word choice, see page 249.

AVOIDING STEREOTYPES

- **Avoid describing people in terms of stereotypes.** In your reports, sales presentations, policy statements, and other communications, avoid giving examples that rely upon or reinforce stereotypes. For example, don't make all the decision makers men and all the clerical workers women.
- **Mention a person's gender, race, or other characteristic only when it is relevant.** To determine whether it's relevant to describe someone as a member of a minority group, ask yourself if you would make a parallel statement about a member of the majority group. If you wouldn't say, "This improvement was suggested by Jane, a person without any physical disability," don't say, "This improvement was suggested by Margaret, a person with a handicap." If you wouldn't say, "The Phoenix office is managed by Brent, a hard-working white person," don't say, "The Phoenix office is managed by Terry, a hard-working Mexican-American."
- **Avoid humor that relies on stereotypes.** Humor that relies on a stereotype reinforces the stereotype. Refrain from such humor not only when members of the stereotyped group are present, but at all times.

HOW TO CONSTRUCT SENTENCES YOUR READER WILL FIND EASY TO UNDERSTAND, EASY TO REMEMBER, AND INTERESTING

Without realizing it, you make many choices with each sentence you write. The choices you make, the way you build your sentences, can have a significant impact on how easy your sentences will be for your reader to understand and remember, as well as how well your communications will hold your reader's interest. The following six guidelines suggest ways to make your six most important choices. Figure 10.2 summarizes the choices and this overall piece of advice.

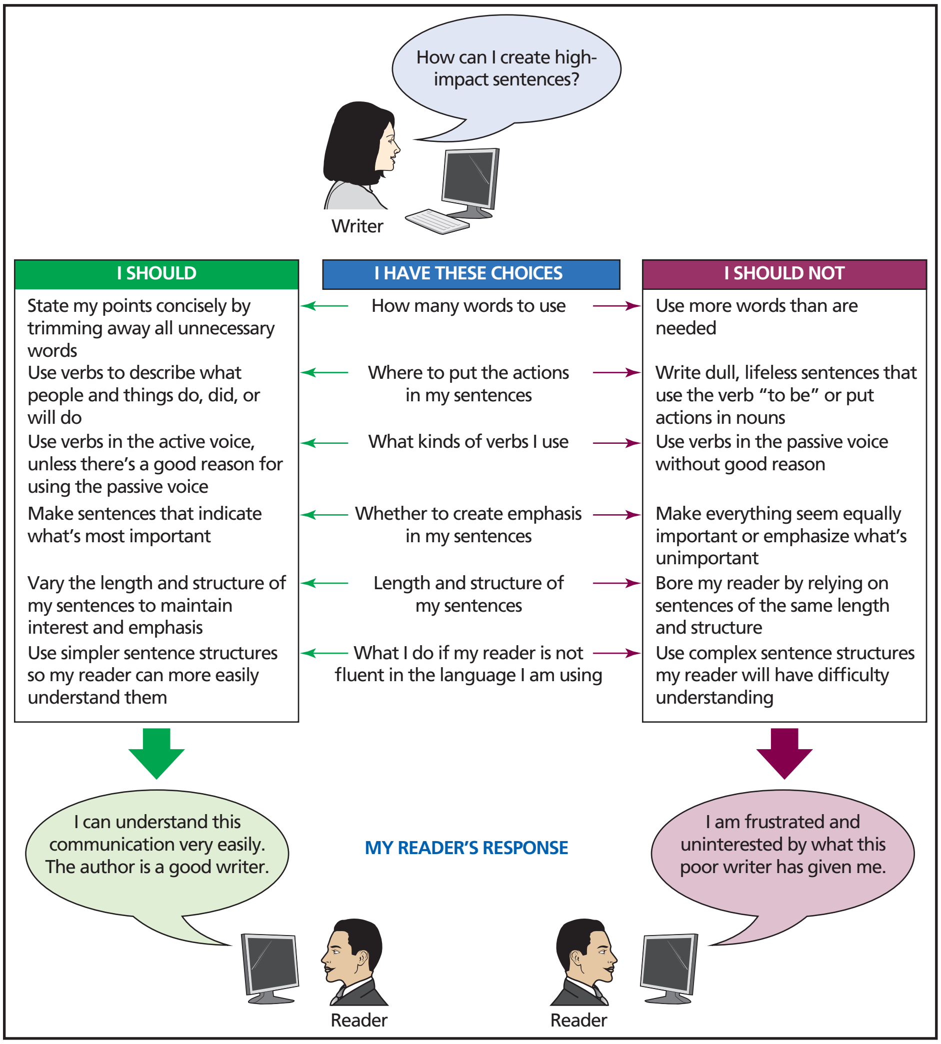


FIGURE 10.2

How to Write Effective Sentences

Guideline 1 | Simplify your sentences

The easiest way to increase usefulness is to simplify your sentences. Reading is *work*. Psychologists say that much of the work is done by short-term memory. It must figure out how the words in each sentence fit together to create a specific meaning. Fewer words mean less work. In addition, research shows that when you express your message concisely, you make it more forceful, memorable, and persuasive (F. Smith, 2004).

SIMPLIFYING SENTENCES

1. **Eliminate unnecessary words.** Look for places where you can convey your meaning more directly. Consider this sentence:

   The physical size of the workroom is too small to accommodate this equipment.

   Wordy

With unnecessary words removed in two places, the sentence is just as clear and more emphatic:

Unnecessary words deleted

> The workroom is too small for this equipment.

2. **Avoid wordy phrases.** Unnecessary words can also be found in many common phrases. "Due to the fact that" can be shortened to "Because." Similarly, "They do not pay attention to our complaints" can be abbreviated to "They ignore our complaints." "At this point in time" is "Now."
3. **Place modifiers next to the words they modify.** Short-term memory relies on word order to indicate meaning. If you don't keep related words together, your sentence may say something different from what you mean.

> Mandy found many undeposited checks in the file cabinets, which were worth over $41,000.

Technically, this sentence says that the file cabinets were worth over $41,000. Of course, readers would probably figure out that the writer meant the checks were worth that amount because it is unlikely that the file cabinets were. But readers arrive at the correct meaning only after performing work they would have been saved if the writer had kept related words together by putting *which were worth over $41,000* after *checks* rather than *file cabinets.*

4. **Combine short sentences.** Often, combining two or more short sentences makes reading easier by reducing the total number of words and helping readers see the relationships among the points presented.

Separate

> Water quality in Hawk River declined in March. This decline occurred because of the heavy rainfall that month. All the extra water overloaded Tomlin County's water treatment plant.

Combined

> Water quality in Hawk River declined in March because heavy rainfalls overloaded Tomlin County's water treatment plant.

Guideline 2 | Put the action in your verbs

Most sentences are about action. Sales rise, equipment fails, engineers design, managers approve. Clients praise or complain, and technicians advise. Yet, many people bury the action in nouns, adjectives, and other parts of speech. Consider the following sentence:

Original

> Our department accomplished the conversion to the new machinery in two months.

It could be energized by putting the action (*converting*) into the verb:

Revised

> Our department converted to the new machinery in two months.

Not only is the revised version briefer, it is also more emphatic and lively. Furthermore, according to researchers E. B. Coleman and Keith Raynor (1964), when you put action in your verbs, you can make your prose up to 25 percent easier to read.

To create sentences that focus on action, do the following:

FOCUSING SENTENCES ON ACTION

- **Avoid sentences that use the verb *to be* or its variations (*is, was, will be,* and so on).** The verb *to be* often tells what something is, not what it does.

  The sterilization procedure is a protection against reinfection. — Original

  The sterilization procedure protects against reinfection. — Revised

- **Avoid sentences that begin with *It is* or *There are.***

  It is because the cost of raw materials has soared that the price of finished goods is rising. — Original

  Because the cost of raw materials has soared, the price of finished goods is rising. — Revised

  There are several factors causing the engineers to question the dam's strength. — Original

  Several factors cause the engineers to question the dam's strength. — Revised

- **Avoid sentences where the action is frozen in a word that ends with one of the following suffixes: -tion, -ment, -ing, -ion, -ance.** These words petrify the action that should be in verbs by converting them into nouns.

  Consequently, I would like to make a recommendation that the department hire two additional programmers. — Original

  Consequently, I recommend that the department hire two additional programmers. — Revised

Although most sentences are about action, some aren't. For example, topic and forecasting statements often introduce lists or describe the organization of the discussion that follows.

There are three main reasons the company should invest money to improve communication between corporate headquarters and the out-of-state plants. — Topic sentence for which the verb *to be* is appropriate

Guideline 3 | Use the active voice unless you have a good reason to use the passive voice

Another way to focus your sentences on action and actors is to use the *active voice* rather than the *passive voice.* To write in the active voice, place the actor—the person or thing performing the action—in the subject position. Your verb will then describe the actor's action.

Active voice

Subject ↓ Verb ↓

The consultant recommended these changes.

↑ Actor ↑ Action

In the passive voice, the subject of the sentence and the actor are different. The subject is *acted upon* by the actor.

Passive voice

Subject ↓ Verb ↓

The changes were recommended by the consultant.

↑ Action ↑ Actor

Here are some additional examples:

Passive voice

The Korean ore was purchased by us.

Active voice

We purchased the Korean ore.

Research shows that readers comprehend active sentences more rapidly than passive ones (Layton & Simpson, 1975). Also, the active voice eliminates the vagueness and ambiguity that often characterize the passive voice. In the passive voice, a sentence can describe an action without telling who did it. For example, "The ball was hit" is a grammatically correct sentence but doesn't tell who or what hit the ball. With the active voice, the writer identifies the actor: "Linda hit the ball."

The following sentence illustrates the importance of ensuring that readers understand who the actor is.

Passive voice

The operating temperatures must be checked daily to protect the motor from damage.

Will the supervisor of the third shift know that he is the person responsible for checking temperatures? In the passive voice, this sentence certainly allows him to imagine that someone else, perhaps a supervisor on another shift, is responsible.

There are some places where the passive voice is appropriate.

Although the passive voice generally reduces readability, it has some good uses. One occurs when you don't want to identify the actor. The following sentence is from a memorandum in which the writer urges all employees to work harder at saving energy but, avoids causing embarrassment and resentment by naming the guilty parties.

Passive voice

The lights on the third floor have been left on all night for the past week, despite the efforts of most employees to help us reduce our energy bills.

Also, consider this sentence:

Passive voice

I have been told that you may be using the company telephone for an excessive number of personal calls.

Perhaps the person who told the writer about the breach of corporate telephone policy did so in confidence. If the writer decided that it would be ethically acceptable to communicate this news to the reader without naming the person who made the report, then she has used the passive voice effectively. (Be careful, however, to avoid using the passive voice to hide an actor's identity when it is unethical to do so—for instance, when trying to avoid accepting responsibility for your employer's actions.)

Another good reason for using the passive voice is discussed in Chapter 8, page 197.

Guideline 4 | Emphasize what's most important

Another way to write clear, forceful sentences is to direct your readers' attention to the most important information you are conveying.

EMPHASIZING WHAT'S MOST IMPORTANT

1. **Place the key information at the end of the sentence.** As linguist Joseph Williams (2005) points out, you can demonstrate to yourself that the end of the sentence is a place of emphasis by listening to yourself speak. Read the following sentences aloud:

   Her powers of concentration are extraordinary.

> Last month, he topped his sales quota even though he was sick for an entire week.

As you read these sentences aloud, notice how you naturally stress the final words *extraordinary* and *entire week.*

To position the key information at the end of a sentence, you may sometimes need to rearrange your first draft.

> The department's performance has been superb in all areas.

Original

> In all areas, the department's performance has been superb.

Revised

2. **Place the key information in the main clause.** If your sentence has more than one clause, use the main clause for the information you want to emphasize. Compare the following versions of the same statement.

> Although our productivity was down, our profits were up.

Original

> Although our profits were up, our productivity was down.

Revised

In the first version, the emphasis is on profits because *profits* is the subject of the main clause. The second version emphasizes productivity because *productivity* is the subject of the main clause. (Notice that in each of these sentences, the emphasized information is not only in the main clause but also at the end of the sentence.)

3. **Emphasize key information typographically.** Use boldface and italics. Be careful, however, to use typographical highlighting sparingly. When many things are emphasized, none stand out.
4. **Tell readers explicitly what the key information is.** You can also emphasize key information by announcing its importance to your readers.

> Economists pointed to three important causes of the stock market's decline: uncertainty about the outcome of last month's election, a rise in inventories of durable goods, and — *most important* — signs of rising inflation.

Guideline 5 | Vary your sentence length and structure

If all the sentences in a sentence group have the same structure, two problems arise: Monotony sets in, and (because all the sentences are basically alike) you lose the ability to emphasize major points and deemphasize minor ones.

You can avoid such monotony and loss of emphasis in two ways:

- **Vary your sentence length.** Longer sentences can be used to show the relationships among ideas. Shorter sentences provide emphasis in the context of longer sentences.

> In April, many amateur investors believed that another rally was about to begin. Because exports were increasing rapidly, they predicted that the dollar would strengthen in global monetary markets, bringing foreign investors back to Wall Street. Also, unemployment dropped sharply, which they interpreted as an encouraging sign for the economy. They were wrong on both counts. Wall Street interpreted rising exports to mean that goods would cost more at home, and it predicted that falling unemployment would mean a shortage of workers, hence higher prices for labor. Where amateur investors saw growth, Wall Street saw inflation.

This short sentence receives emphasis because it comes after longer ones.

The final sentence is also emphasized because it is much shorter than the preceding one.

- **Vary your sentence structure.** For example, the grammatical subject of the sentence does not have to be the sentence's first word. In fact, if it did, the English language would lose much of its power to emphasize more important information and to deemphasize less important information.

  One alternative to beginning a sentence with its grammatical subject is to begin with a clause that indicates a logical relationship.

Introductory clause

> After we complete our survey, we will know for sure whether the proposed site for our new factory was once a Native American camping ground.

Introductory clause

> Because we have thoroughly investigated all the alternatives, we feel confident that a pneumatic drive will work best and provide the most reliable service.

Guideline 6 | Global Guideline: Adapt your sentences for readers who are not fluent in your language

The decisions you make about the structure of your sentences can affect the ease with which people who are not fluent in English can understand your message. Companies in several industries, including oil and computers, have developed simplified versions of English for use in communications for readers in other cultures. In addition to limited vocabularies, simplified English has special grammar rules that guide writers in using sentences that will be easy for their readers to understand. Because many readers may not need this degree of simplification, learn as much as possible about your specific readers. Also, remember that simplifying your sentence structure should not involve simplifying your thought.

LEARN MORE For more advice on adapting communications to your readers' cultural background, go to Chapter 3, page 69 and see the other Global Guidelines throughout this book.

GUIDELINES FOR CREATING SENTENCES FOR READERS WHO ARE NOT FLUENT IN ENGLISH

- **Use simple sentence structures.** The more complex your sentences, the more difficult they will be for readers to understand.
- **Keep sentences short.** A long sentence can be hard to follow, even if its structure is simple. Set twenty words as a limit.
- **Use the active voice.** Readers who are not fluent in English can understand the active voice much more easily than they can understand the passive.

WEB For more on simplified versions of English, go to your English CourseMate at *www.cengagebrain.com*.

CHOOSE WORDS THAT CONVEY YOUR MEANING CLEARLY AND PRECISELY

When selecting words, your first goal should be to increase the usefulness of your writing by enabling the reader to grasp your meaning and obtain the information he or she wants quickly and accurately. Your word choices also affect your reader's attitudes toward you and your subject matter. The following seven guidelines are summarized in Figure 10.3. The most important point to remember is that words that are understandable and meaningful to one reader may not be to another. Choose your words in the same way you make all of your other decisions about writing: with your specific reader in mind.

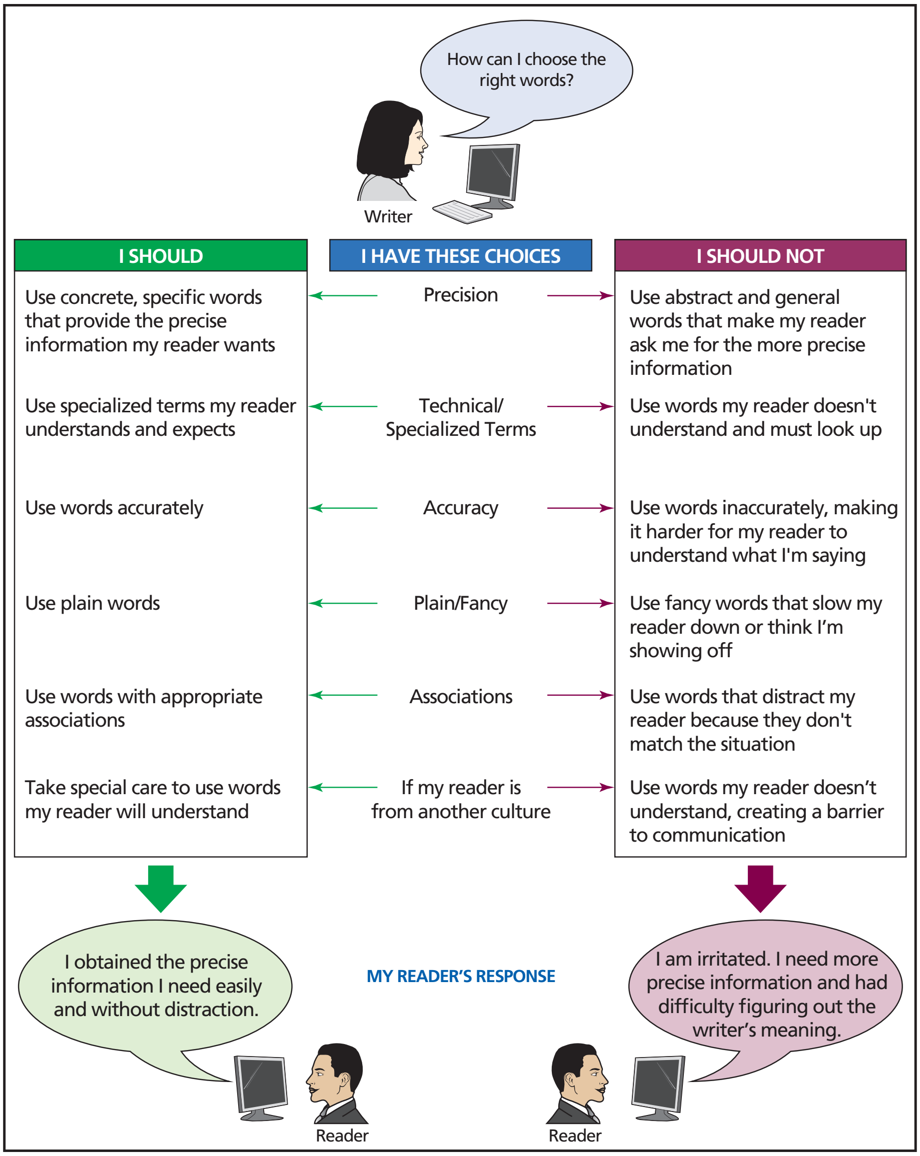


FIGURE 10.3

How to Decide Which Words to Use

Guideline 1 | Use concrete, specific words

Almost anything can be described either in relatively abstract, general words or in relatively concrete, specific ones. You may say that you are writing on a piece of *electronic equipment* or that you are writing on *a laptop computer connected to a color laser printer.* You may say that your employer produces *consumer goods* or that it makes *cell phones.*

When groups of words are ranked according to degree of abstraction, they form *hierarchies.* Figure 10.4 shows such a hierarchy in which the most specific terms identify concrete items that we can perceive with our senses; Figure 10.5 shows a hierarchy in which all the terms are abstract, but some are more specific than others.

You can increase the clarity, and therefore the usefulness, of your writing by using concrete, specific words rather than abstract, general ones. Concrete words help your readers understand precisely what you mean. If you say that your

TRY THIS Pick a group of words used in your major, hobby, or sport. List words in ranked order, moving from more abstract to more concrete.

company produces television shows for a *younger demographic segment*, they won't know whether you mean *teenagers* or *toddlers*. If you say that you study *natural phenomena*, your readers won't know whether you mean *volcanic eruptions* or the *migration of monarch butterflies*.

Such vagueness can hinder readers from getting the information they need in order to make decisions and take action. Consider the following sentence from a memo addressed to an upper-level manager who wanted to know why production costs were up:

Original | The cost of one material has risen recently.

This sentence doesn't give the manager the information she needs to take remedial action. In contrast, the following sentence, using specific words, tells precisely what the material is, how much the price has risen, and the period in which the increase took place.

Revised | The cost of the bonding agent has tripled in the past six months.

FIGURE 10.4

Hierarchy of Related Words That Move from Abstract to Concrete

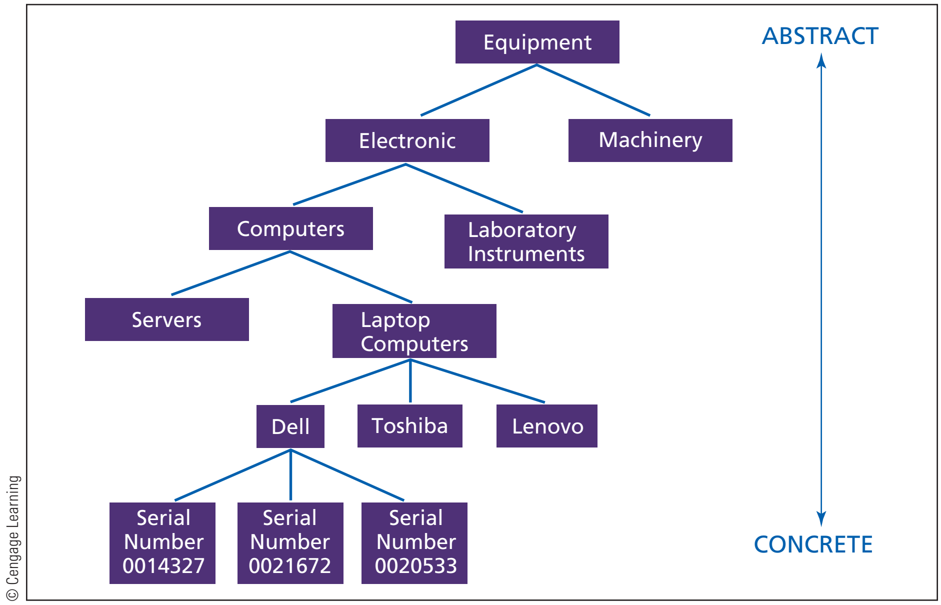
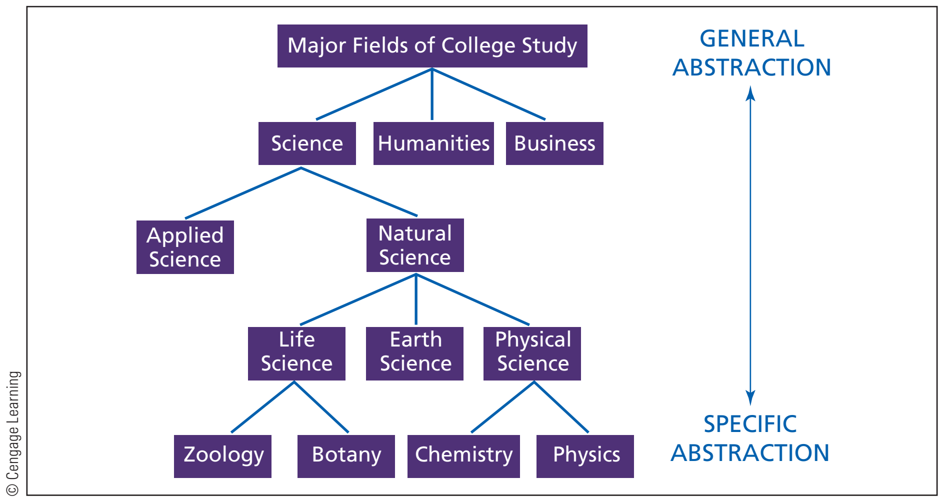


FIGURE 10.5

Hierarchy of Related Words That Move from a General to a Specific Abstraction



Of course, abstract and general terms do have important uses. For example, in scientific, technical, and other specialized fields, writers often need to make general points, describe the general features of a situation, or provide general guidance for action. Your objective when choosing words is not to avoid abstract, general words altogether, but rather to avoid using them when your readers will want more specific ones.

Guideline 2 | Use specialized terms when—and only when—your readers will understand them

You can increase the usefulness and persuasiveness of your writing by using wisely the specialized terms of your own profession.

In some situations, specialized terms help you communicate effectively:

- **They convey precise, technical meanings economically.** Many terms have no exact equivalent in everyday speech.
- **They help you establish credibility.** By using the special terms of your field accurately, you show your fellow specialists that you are adept in it.

However, you should avoid using technical terms your readers won't understand. Consider the following sentence:

> The major benefits of this method are smaller in-gate connections, reduced breakage, and minimum knock-out—all leading to great savings.

Although this sentence would be perfectly clear to any manager who works in a foundry that manufactures parts for automobile engines, it would be unintelligible to most other people because it includes the specialized terms *in-gate connections* and *knock-out*.

How to Explain Unfamiliar Terms If You Must Use Them

Sometimes you may need to use specialized terms even though some people in your audience may not understand them. For instance, you may be writing to a group of readers that includes people in your field and others outside of it, or you may be explaining an entirely new subject to your readers. In such cases, there are several ways to define the terms for readers who are not familiar with them.

DEFINING TERMS YOUR READERS DON'T KNOW

1. **Give a synonym.** Example: On a boat, a rope or cord is called a line.
2. **Give a description.** Example: The exit gate consists of two arms that hold a jug while it is being painted and then allow it to proceed down the production line.
3. **Make an analogy.** Example: An atom is like a miniature solar system in which the nucleus is the sun and the electrons are the planets that revolve around it.
4. **Give a classical definition.** In a classical definition, you define the term by naming some familiar group of things to which it belongs and then

identifying the key distinction between the object being defined and the other members of the group. Examples:

WORD	GROUP	DISTINGUISHING CHARACTERISTIC
A crystal is a	solid	in which the atoms or molecules are arranged in a regularly repeated pattern.
A burrow is a	hole in the ground	dug by an animal for shelter or habitation.

Guideline 3 | Use words accurately

Whether you use specialized terms or everyday ones and whether you use abstract, general terms or concrete, specific ones, you must use all your words accurately. This point may seem obvious, but inaccurate word choice is all too common in on-the-job writing. For example, people often confuse *imply* (meaning to *suggest* or *hint,* as in "He implied that the operator had been careless") with *infer* (meaning to draw a *conclusion based upon evidence,* as in "We infer from your report that you do not expect to meet the deadline"). It's critical that you avoid such errors. They distract your readers from your message by drawing their attention to your problems with word choice, and they may lead your readers to believe that you are not skillful or precise in other areas — such as laboratory techniques or analytical skills.

How can you ensure that you use words accurately? There's no easy way. Consult a dictionary whenever you are uncertain. Be especially careful when using words that are not yet part of your usual vocabulary. Pay attention as well to the way words are used by other people.

Guideline 4 | Choose plain words over fancy ones

You can also make your writing easy to understand by avoiding using fancy words where plain ones will do. At work, some writers do just the opposite, perhaps thinking that fancy words sound more official or make them sound more knowledgeable. The following list identifies some commonly used fancy words; it includes only verbs, but might have included nouns and adjectives as well.

FANCY VERBS	EQUIVALENT COMMON VERBS
ascertain	find out
commence	begin
compensate	pay
constitute	make up
endeavor	try
expend	spend
fabricate	build
facilitate	make easier
initiate	begin
prioritize	rank
proceed	go
terminate	end
transmit	send
utilize	use

There are two important reasons for preferring plain words over fancy ones:

- **Plain words promote efficient reading.** Research has shown that even if your readers know both the plain word and its fancy synonym, they will still comprehend the plain word more rapidly (F. Smith, 2004).
- **Plain words reduce your risk of creating a bad impression.** If you use words that make for slow, inefficient reading, you may annoy your readers or cause them to conclude that you are behaving pompously, showing off, or trying to hide a lack of ideas and information behind a fog of fancy terms. Consider, for instance, the effect of the following sentence in a job application letter:

> I am transmitting the enclosed résumé to facilitate your efforts to determine the pertinence of my work experience to your opening.

Pompous word choices

Don't misunderstand this guideline. It doesn't suggest that you should use only simple language at work. When addressing people with vocabularies comparable to your own, use all the words at your command, provided that you use them accurately and appropriately. This guideline merely cautions you against using needlessly inflated words that bloat your prose and open you to criticism from your readers.

Guideline 5 | Choose words with appropriate associations

The three previous guidelines for choosing words relate to the literal or dictionary meaning of words. At work, you must also consider the associations your words have for your readers. In particular, be especially sensitive to your words' *connotation* and *register.*

Connotation

Connotation is the extended or suggested meaning that a word has beyond its literal meaning. For example, according to the dictionary, *flatfoot* and *police detective* are synonyms, but they connote very different things: *flatfoot* suggests a plodding, perhaps not very bright cop, while *police detective* suggests a trained professional.

Verbs, too, have connotations. For instance, to *suggest* that someone has overlooked a key fact is not the same as to *insinuate* that she has. To *devote* your time to working on a client's project is not the same as to *spend* your time on it.

Research on the impact of connotation

The connotations of your words can shape your audience's perceptions of your subject matter. Researchers Raymond W. Kulhavy and Neil H. Schwartz (1981) demonstrated those effects in a classic experiment for which they created two descriptions of a company that differed in only seven out of 246 words. In one, the seven words suggested stiffness, such as *required* and *must*. In the other, those seven words were replaced by ones that suggested flexibility, such as *asked* and *should*. None of the substitutions changed the facts of the overall passage. Here's a sentence from the first version:

> Our sales team is constantly trying to locate new markets for our various product lines.

First version

In the second version of this sentence, the researchers replaced the flexible word *trying* with the stiff word *driving.*

> Our sales team is constantly driving to locate new markets for our various product lines.

Second version

The researchers found that people who read the flexible version believed that the company would actively commit itself to the welfare and concerns of its employees, voluntarily participate in affirmative action programs for women and minorities, receive relatively few labor grievances, and pay its employees well. People who read that version also said they would recommend the company to a friend as a place to work. People who read the stiff version reported opposite impressions of the company. That readers' impressions of the company could be affected so dramatically by just seven nonsubstantive words highlights the great importance of paying attention to the connotations of the words you use.

Register

Linguists use the term *register* to identify a second characteristic exhibited by words: their association with certain kinds of communication situations or context. For example, in an ad for a restaurant we might expect to see the claim that it offers *amazingly* delicious food. However, we would not expect to see a research company boast in a proposal for a government contract that it is capable of conducting *amazingly* good studies. The word *amazingly* is in the register of consumer advertising, but not in the register of research proposals.

If you inadvertently choose words with the wrong register, your readers may infer that you don't fully grasp how business is conducted in your field, and your credibility can be lost.

Guideline 6 | Global Guideline: Consider your readers' cultural background when choosing words


© Yuri Arcurs/Shutterstock.com

At work, even small departments often include a rich diversity of employees.

Take special care in your choice of words when writing to readers in other cultures. Some words whose meaning is obvious in your own culture can be misunderstood or completely mystifying to readers from other cultures. Misunderstanding can even occur when you are writing to readers in other cultures where the native language is English. In the United States, people play football with an oblong object which they try to carry over a goal line or kick through uprights. In England, India, and many other parts of the world, football is played with a round object that people are forbidden to carry and attempt to kick into a net—a game called soccer in the United States.

The following guidelines will help you choose words your readers will understand in the way you intend. Of course, different readers in other cultures have different levels of facility with English, so follow the guidelines only to the extent that your readers require.

GUIDELINES FOR CHOOSING WORDS FOR INTERCULTURAL COMMUNICATIONS

- **Use simple words.** The more complex your vocabulary, the more difficult it will be for readers not fluent in English to understand you.
- **Use the same word each time you refer to the same thing.** For instance, in instructions, don't use both "dial" and "control" for the part of a test instrument. In context, those two terms may be synonyms in your

language, but they will each be translated into a different word in the other language, where the translated words may not be synonyms.

- **Avoid acronyms your readers won't understand.** Most acronyms that are familiar to you will be based on words in *your* language: AI for Artificial Intelligence; ACL for Anterior Cruciate Ligament.
- **Avoid slang words and idioms.** Most will have no meaning for people in other cultures. Instead of "We want a level playing field," say "We want the decision to be made fairly." Instead of saying "We want to run an idea past you," say "We'd like your opinion of our idea."

LEARN MORE For more advice on adapting communications to your readers' cultural background, go to Chapter 3, page 69, and see the other Global Guidelines throughout this book.

Guideline 7 | Ethics Guideline: Use inclusive language

When constructing your voice, use language that includes all persons instead of excluding some. For example, avoid sexist language because it supports negative stereotypes. Usually these stereotypes are about women, but they can also adversely affect men in certain professions such as nursing. By supporting negative stereotypes, sexist language can blind readers to the abilities, accomplishments, and potential of very capable people. The same is true of language that insensitively describes people with disabilities, illnesses, or other limitations.

LEARN MORE For another discussion of stereotypes and ethics, see page 236.

USING INCLUSIVE LANGUAGE

1. **Use nouns and pronouns that are gender-neutral rather than ones containing the word *man*.**

   Instead of: businessman, workman, mailman, salesman

   Use: businessperson, manager, *or* executive; worker; mail carrier; salesperson

   Instead of: man-made, man hours, man-sized job

   Use: synthetic, working hours, large job

2. **Use plural pronouns or *he or she* instead of sex-linked pronouns when referring to people in general.**

   Instead of: "Our home electronics cater to the affluent shopper. She looks for premium products and appreciates a stylish design."

   Use the plural: "Our home electronics cater to affluent shoppers. They look for premium products and appreciate a stylish design."

   Instead of: "Before the owner of a new business files the first year's tax returns, he might be wise to seek advice from a certified public accountant."

   Use *he or she*: "Before the owner of a new business files the first year's tax returns, he or she might be wise to seek advice from a certified public accountant."

3. **Refer to individual men and women in a parallel manner.**

   Instead of: "Mr. Sundquist and Anna represented us at the trade fair."

   Use: "Mr. Sundquist and Ms. Tokagawa represented us at the trade fair" or "Christopher and Anna represented us at the trade fair."

WEB For additional suggestions about ways to avoid sexist and discriminatory language, go to your English CourseMate at ***www.cengagebrain.com.***

4. **Revise salutations that imply the reader of a letter is a man.**
   Instead of: Dear Sir, Gentlemen
   Use: The title of the department or company or the job title of the person you are addressing: Dear Personnel Department, Dear Switzer Plastics Corporation, Dear Director of Research
5. **When writing about people with disabilities, refer to the person first, then the disability.**
   Instead of: the disabled
   Use: people with disabilities

CONCLUSION

Your writing style can make a great deal of difference to the success of your writing. The voice you use, the sentence structures you employ, and the words you select affect both your readers' attitudes toward you and your subject matter and also the usefulness and persuasiveness of your writing. This chapter has suggested many things you can do to develop a highly usable, highly persuasive style. Underlying all these suggestions is the advice that you take the reader-centered approach of considering all your stylistic choices from your readers' point of view.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

You can download Expertise Exercises 2 through 5 from your English CourseMate at www.cengagebrain.com.

EXERCISE YOUR EXPERTISE

1. Imagine that you are the head of the Public Safety Department at your college. Faculty and staff have been parking illegally, sometimes where there aren't parking spots. Sometimes individuals without handicaps are parking in spots reserved for those with handicaps. Write two memos to all college employees announcing that beginning next week, the Public Safety Department will strictly enforce parking rules—something it hasn't been doing. Write the first memo in a friendly voice and the second in a stern voice. Then compare the specific differences in organization, sentence structure, word choice, and other features of writing to create each voice. (Thanks to Don Cunningham, Auburn University, for the idea for this exercise.)
2. Without altering the meaning of the following sentences, reduce the number of words in them.
   a. After having completed work on the data-entry problem, we turned our thinking toward our next task, which was the processing problem.
   b. Those who plan federal and state programs for the elderly should take into account the changing demographic characteristics in terms of size and average income of the composition of the elderly population.
   c. Would you please figure out what we should do and advise us?
   d. The result of this study will be to make total whitewater recycling an economical strategy for meeting federal regulations.
3. Rewrite the following sentences in a way that will keep the related words together.
   a. This stamping machine, if you fail to clean it twice per shift and add oil of the proper weight, will cease to operate efficiently.
   b. The plant manager said that he hopes all employees would seek ways to cut waste at the supervisory meeting yesterday.

c. About 80 percent of our clients, which include over 1,500 companies throughout North and South America and a few from Africa, where we've built alliances with local distributors, find the help provided at our website to be equivalent in most cases to the assistance supplied by telephone calls to our service centers.
d. Once they wilt, most garden sprays are unable to save vegetable plants from complete collapse.

4. Rewrite the following sentences to put the action in the verb.
   a. The experience itself will be an inspirational factor leading the participants to a greater dedication to productivity.
   b. The system realizes important savings in time for the clerical staff.
   c. The implementation of the work plan will be the responsibility of a team of three engineers experienced in these procedures.
   d. Both pulp and lumber were in strong demand, even though rising interest rates caused the drying up of funds for housing.
5. Rewrite the following sentences in the active voice.
   a. Periodically, the shipping log should be reconciled with the daily billings by the Accounting Department.
   b. Fast, accurate data from each operating area in the foundry should be given to us by the new computerized system.
   c. Since his own accident, safety regulations have been enforced much more conscientiously by the shop foreman.
   d. No one has been designated by the manager to make emergency decisions when she is gone.
6. Create a one-sentence, classical definition for a word used in your field that is not familiar to people in other fields. The word might be one that people in other fields have heard of but cannot define precisely in the way specialists in your field do. Underline the word you are defining. Then circle and label the part of your definition that describes the familiar group of items that the defined word belongs to. Finally, circle and label the part of your definition that identifies the key distinction between the defined word and the other items in the group. (Note that not every word is best defined by means of a classical definition, so it may take you a few minutes to think of an appropriate word for this exercise.)
7. Create an analogy to explain a word used in your field that is unfamiliar to most readers. (Note that not every word is best defined by means of an analogy, so it may take you a few minutes to think of an appropriate word for this exercise.)

EXPLORE ONLINE

Using your desktop publishing program, examine the readability statistics for two communications. These might be two projects you're preparing for courses, or they might be a course project and a letter or e-mail to a friend or family member. What differences, if any, do you notice in the statistics? What accounts for the differences? Are the statistics helpful to you in understanding and constructing an effective writing style in either case? Read the explanations of the scores that are provided with your desktop publishing program; these may be provided in the program's Help feature. Do the interpretations of your scores agree with your own assessment of your communications? If not, which do you think is more valid? (To learn how to obtain the readability statistics with your program, use its Help feature.)

COLLABORATE WITH YOUR CLASSMATES

Working with another student, examine the memo shown in Figure 10.6. Identify places where the writer has ignored the guidelines given in this chapter. You may find it helpful to use a dictionary. Then write an improved version of the memo by following the guidelines in this chapter.

APPLY YOUR ETHICS

1. Find a communication that fails to use inclusive language and revise several of the passages to make them inclusive.
2. The images in advertising often rely on stereotypes. Find one advertisement that perpetuates one or more stereotypes and one that calls attention to itself by using an image that defies a stereotype. Evaluate the ethical impact of each image. Present your results in the way your instructor requests.

FIGURE 10.6

Memo for Collaboration Exercise

MEMO

July 5, 2013

TO Gavin MacIntyre, Vice President, Midwest Region

FROM Nat Willard, Branch Manager, Milwaukee Area Offices

The ensuing memo is in reference to provisions for the cleaning of the six offices and two workrooms in the High Street building in Milwaukee. This morning, I absolved Thomas's Janitor Company of its responsibility for cleansing the subject premises when I discovered that two of Thomas's employees had surreptitiously been making unauthorized long-distance calls on our telephones.

Because of your concern with the costs of running the Milwaukee area offices, I want your imprimatur before proceeding further in making a determination about procuring cleaning services for this building. One possibility is to assign the janitor from the Greenwood Boulevard building to clean the High Street building also. However, this alternative is judged impractical because it cannot be implemented without circumventing the reality of time constraints. While the Greenwood janitor could perform routine cleaning operations at the High Street establishment in one hour, it would take him another ninety minutes to drive to and fro between the two sites. This is more time than he could spare and still be able to fulfill his responsibilities at the High Street building.

Another alternative would be to hire a full-time or part-time employee precisely for the High Street building. However, that building can be cleaned so expeditiously, it would be irrational to do so.

The third alternative is to search for another janitorial service. I have now released two of these enterprises from our employ in Milwaukee. However, our experiences with such services should be viewed as bad luck and not affect our decision, except to make us more aware that making the optimal selection among companies will require great care. Furthermore, there seems to be no reasonable alternative to hiring another janitorial service.

Accordingly, I recommend that we hire another janitorial service. If you agree, I can commence searching for this service as soon as I receive a missive from you. In the meantime I have asked the employees who work in the High Street building to do some tidying up themselves and to be patient.

© Cengage Learning


Scorpp/Shutterstock.com

11 | Beginning a Communication

As you learned in Chapter 1, reading is a dynamic interaction between your readers and your words and graphics. Your readers' response to one sentence or paragraph can influence their reactions to all the sentences and paragraphs that follow. Consequently, the opening sentence or section takes on special importance. It helps to establish the frame of mind readers bring to your entire communication.

In this chapter, you will learn six reader-centered strategies for beginning your communications in highly useful and highly persuasive ways. Rarely, if ever, will you use all six at once. To decide which strategy or which combination of strategies to use in a particular circumstance, you will need to build on the knowledge of your readers that you gained while defining your communication's objectives (Chapter 3).

WEB For additional information related to this chapter, go to your English CourseMate at *www .cengagebrain.com.*

For some types of communication, usually long ones such as empirical research reports and proposals, there are highly conventional ways of beginning. These conventions represent specialized ways of employing the more general strategies described in this chapter, which can be employed in any communication of any length. A final section of this chapter discusses a related issue: what to do if you find that the organization that employs you is engaging in unethical practices.

While reading this chapter, discussing it in class, and applying its advice to projects assigned by your instructor, focus on developing your ability to do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Motivate your readers to pay attention.
2. Help your readers find what they need.
3. Encourage readers to read your message with an open mind.
4. Identify the background information your readers need.

5. Pick the right length for your introduction.
6. Adapt your beginning to your readers' cultural background.
7. Address unethical practices.

HOW TO MOTIVATE YOUR READERS TO PAY ATTENTION


Tan Kian Khoon/Shutterstock.com


Elena Elisseeva/Shutterstock.com

People are more likely to be persuaded by messages they think deeply about.

Sometimes the most important function of a beginning is simply to persuade readers to devote their full attention to the message. At work, people complain that they receive too many e-mails, memos, and reports. As they look at each communication, they ask, "Why should I read this?" Your goal is to convince them not only to pay *some* attention to your message, but also to pay *close* attention. Doing so will be especially important when your communication is primarily persuasive, as when you are writing a proposal or recommendation. In a classic study, Petty and Cacioppo (1986) demonstrated that the more deeply people think about a message while reading or listening to it, the more likely they are to hold the attitudes it advocates, resist attempts to reverse those attitudes, and act upon those attitudes.

To grab your readers' attention, you must do two things at the outset:

- Announce your topic.
- Tell your readers how they will benefit from the information you are providing.

Be sure to do *both* things. Don't assume that your readers will automatically see the value of your information after you have stated your topic. Benefits that appear obvious to you may not be obvious to them. Compare the following sets of statements:

STATEMENTS OF TOPIC ONLY (AVOID THEM)	STATEMENTS OF TOPIC AND BENEFIT (USE THEM)
This memo tells about the new technology for reducing carbon dioxide emissions.	This memo answers each of the five questions you asked me last week about the new technology reducing carbon dioxide emissions.
This report discusses step-up pumps.	Step-up pumps can save us money and increase our productivity.
This manual concerns the Cadmore Industrial Robot 2000.	This manual tells how to prepare the Cadmore Industrial Robot 2000 for difficult welding tasks.

Guideline 1 | Provide an informative subject line for e-mails and memos

LEARN MORE To learn about subject lines, go to Chapter 23, pages 472, 478, 480, and 481.

E-mails, memos, and some letters have two beginnings: the first sentence and the subject line. Both can influence whether readers continue reading. In e-mails, the subject line is especially important because many readers use it to determine whether to open the message at all.

To write an effective subject line, name your topic precisely and indicate what you have to say about it that will benefit your readers.

> Subject: Springer Valves

Topic only

> Subject: Recommendation for Improving Springer Valves

Topic plus benefits (reader will find recommendations)

> Subject: Data

Vague

> Subject: Analysis of Probe Data

Precise (names kind of data and indicates reader will benefit by finding an analysis of it)

Guideline 2 | Refer to Your Readers' Request

At work, you will often write because a co-worker, manager, or client has asked you for a recommendation or information. To establish the reader benefit of your reply, simply refer to the request.

> As you requested, I am enclosing a list of the steps we have taken in the past six months to tighten security in the Information Technology Department.

> Thank you for your inquiry about the capabilities of our Model 1770 color laser printer.

References to readers' requests

Guideline 3 | Offer to Help Your Readers Solve a Problem

The third strategy for highlighting reader benefits at the beginning of a communication is to tell your readers that your communication will help them solve a problem they are confronting. Most employees think of themselves as problem solvers. Whether the problem involves technical, organizational, or ethical issues, they welcome communications that help them find a solution.

Communication experts J. C. Mathes and Dwight W. Stevenson (1991) have suggested an especially powerful approach to writing beginnings that builds on readers' concerns with problem solving. First, list problems that are important to the people you are going to address in your communication. From the list, pick one that the information and ideas you will provide can help them solve. When you've done that, you have begun to think of yourself and your readers as partners in a joint problem-solving effort in which your communication plays a critical role. The following diagram illustrates this relationship.

JOINT PROBLEM-SOLVING EFFORT

© Cengage Learning

Writer and readers are problem-solving partners.

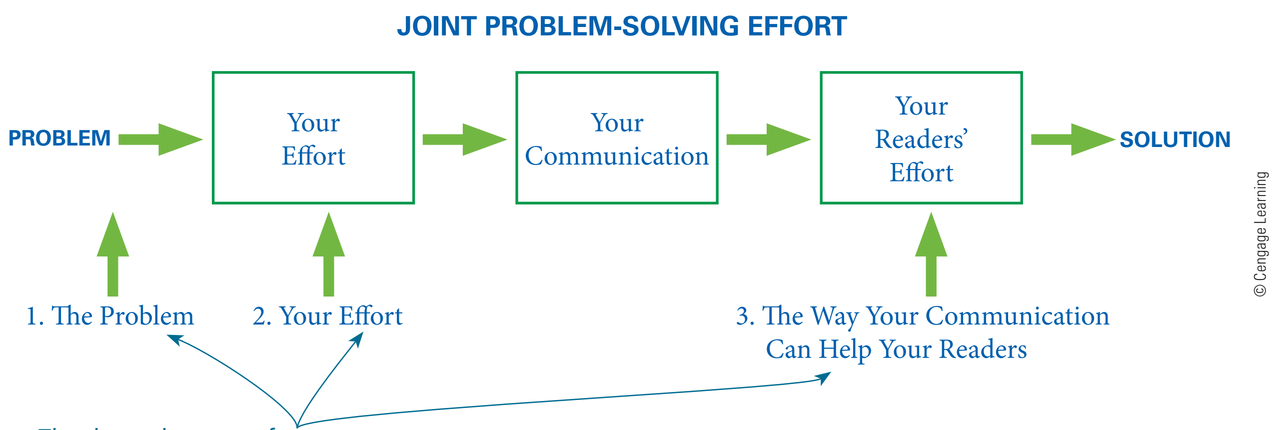
Once you have determined how to describe a problem-solving partnership between you and your readers, draft the beginning of your communication using the following strategy:

ESTABLISHING A PROBLEM-SOLVING PARTNERSHIP WITH YOUR READERS

To establish a problem-solving partnership, tell your readers these three things.

1. **Tell your readers the problem you will help them solve.** Be sure to identify a problem your readers deem important.
2. **Tell your readers what you have done toward solving the problem.** Review the steps you have taken as a specialist in your own field, such as developing a new feature for one of your employer's products or investigating products offered by competitors. Focus on activities that will be significant to your readers rather than listing everything you've done.
3. **Tell your readers how your communication will help them as they perform their part of your joint problem-solving effort.** For example, you might say that it will help them compare competing products, understand a new policy for handling purchase orders, or develop a new marketing plan.

The following diagram shows the relationships among the three elements in this type of reader-centered beginning.



The three elements of a beginning that describes a problem-solving situation

Carla, a computer consultant, used this strategy when she wrote the beginning of a report about her trip to Houston, where she studied the billing system at a hotel her employer recently purchased. First, she identified the problem that her communication would help her readers solve: The Houston hotel was making little money, perhaps because its billing system was faulty. Next, she reviewed what she had done in Houston to help her readers solve this problem: She evaluated the billing system and formulated possible improvements. Finally, she determined how her report would help her readers perform their own problem-solving activities: It would help them choose the best course of action by providing data and recommendations on which they could base their decision.

Here is how Carla wrote the beginning of her report:

Carla names the problem her report will help solve.

Carla describes her work toward solving the problem.

Carla tells how her report will help her readers do their part toward solving the problem.

> Last year, our Houston hotel posted a profit of only 4 percent, even though it is almost always 78 percent filled. A preliminary examination of the hotel's operations suggests that its billing system may generate bills too slowly and it may be needlessly ineffective in collecting overdue payments. After examining the hotel's billing cycle and collection procedures, I identified four ways to improve them. To aid in the evaluation of my recommendations, this report discusses the costs and benefits of each one.

Must You Always Provide All This Information?

Beginnings that use this strategy may be shorter or longer than Carla's. Just make sure your readers understand all three elements of the problem-solving situation. If one or more of the elements will be obvious to them, there's no benefit in discussing them in detail. For example, if the only persons who would read Carla's report were thoroughly familiar with the details of the problem in Houston and the work she did there, Carla could have written a very brief beginning:

> In this report, I evaluate the billing system in our Houston hotel and recommend ways of improving it.

She included more explanation because she knew her report would also be read by people who were hearing about her trip for the first time.

Here are some situations in which a full description of the problem-solving situation usually is desirable:

Circumstances in which you may need to describe the problem-solving situation in detail

- **Your communication will be read by people outside your immediate working group**. The more distant some or all of your readers are, the less likely that all of them will be familiar with your message's context.
- **Your communication will have a binding and a cover.** Bound documents are usually intended for large groups of current readers and they are often filed for consultation by future readers. Both groups are likely to include at least some readers who will have no idea of the problem-solving situation you are addressing.
- **Your communication will be used to make a decision involving a significant amount of money**. Such decisions are often made by high-level managers who need to be told about the organizational context of the reports they read.

Defining the Problem in Unsolicited Communications

In your career, you will have many occasions to make a request or recommendation without being asked to do so. When writing these unsolicited communications, you may need to persuade your readers that a problem even exists. This can require some creative, reader-centered thinking.

Consider the way Roberto accomplished this goal. He works for a company that markets computer programs used to control manufacturing processes. One program contained bugs that Roberto wanted to fix because he sympathized with the customers who called for help in overcoming problems caused by the bugs. However, Roberto knew that his boss did not want to assign computer engineers to this task. Instead, she wanted the engineers to spend all their time on her top priority, which

TRY THIS Think of a way that one of your professors could improve a course you have taken with him or her. Identify ways the professor could better achieve his or her goal by making the change you have in mind. Write the opening sentences of a letter or e-mail you might send to the professor with your suggestion.

was to develop new products rapidly. Consequently, Roberto wrote his boss a memo that opened by discussing the difficulty the company had been having in releasing new products on time. He then showed how much time the computer engineers needed to spend helping customers overcome problems caused by the bugs rather than working on new products. By tying his request to a problem that his reader found significant (rather than to the problems that actually prompted him to write), Roberto succeeded in being assigned to fix the two most serious bugs.

HOW TO HELP YOUR READERS FIND WHAT THEY NEED

As you know, workplace readers read with a purpose: they want information and ideas that will enable them to do something. Usually, this goal means that they are looking for something in particular. One important function of the beginning for most communications is to help them find it.

Guideline 1 | State your main point

Often what readers want most is your main point. What do you conclude from your research? What are you requesting? What do you recommend that we do? The details will also be important. Initially, however, they usually want the bottom line.

To decide what your main point is, focus on what your readers will most want to learn, not on what you would most like to say. While the two are not always different, they often are. Here are three reader-centered statements of main points.

Each of these beginnings states reader-centered main point.

From the beginning of a memo written in a manufacturing company:

> We should immediately suspend all purchases from Cleves Manufacturing until it can guarantee us that the parts it supplies will meet our specifications.

From the beginning of a memo written to a department head in a civil engineering company:

> I request a budget of $45,000 to prepare a proposal for constructing the McEewn water treatment plant.

From a research report:

> The test results show that the walls of the submersible room will not be strong enough to withstand the high pressures of a deep dive.

Guideline 2 | Provide a forecasting statement

LEARN MORE For more on forecasting statements, turn to page 188.

Unless your communication is very short, you can help readers locate the information they want by providing a forecasting statement that describes its overall organization. With this information, skimming readers can navigate more quickly to the information that most interests them.

The writers use sentences to forecast the organization of their report.

> In this report, we state the objectives of the project, compare the three major technical alternatives, and present our recommendation. The final sections include a budget and a proposed project schedule.

This booklet covers the following topics:

- Principles of Sound Reproduction
- Types of Speakers
- Choosing the Speakers That Are Right for You
- Installing the Speakers

These writers use a list to forecast their booklet's organization.

Guideline 3 | Include a summary

At work, it's quite common for communications as short as a page or two to start with a brief summary of the entire message. These summaries help busy managers learn the main points without reading the entire document, and they give these readers an overview of the communication's content and organization.

In short communications, such as memos and letters, opening summaries often consist of only a few sentences in the opening paragraph or paragraphs.

Here is the opening paragraph of a one-page test report.

> On June 29 and 30, we used a computer simulation to test the prototype design for a robotic welder. In the simulation, we required the robot to spot weld front and back panels on an assembly line. We also tested the robot's ability to weld accurately throughout the full range of distances and angles in the technical specifications. The robot performed front welds accurately at all distances, but could not make back welds at certain angles. Consequently, the mountings for four actuators are being redesigned.

In this opening, the writer summarizes a one-page report by briefly identifying the purpose of the test, test method, test results, and future action. Each topic is described in a paragraph in the rest of the report.

In the paragraphs that follow this summary, the writer describes the major features of the robotic welder, capabilities of the simulation program as well as the welding tasks given the robot, test results, and changes to be made in the design.

For longer communications, especially those that are long enough to have covers and tables of contents, the summaries are longer and often printed on a separate page. These longer summaries are described in Chapter 13, "Writing Reader-Centered Front and Back Matter."

HOW TO ENCOURAGE READERS TO READ YOUR MESSAGE WITH AN OPEN MIND

Other chapters have emphasized that the way you begin your communications can have a strong effect on your readers' response to everything that follows. As they read your recommendations, will they strive to understand your reasoning or look for flaws in your logic? When they open your instructions, will they decide to follow each step meticulously or will they decide to toss your instructions aside and attempt the procedure on their own?

Ordinarily, you will have no trouble eliciting a receptive response because you will be communicating with fellow employees, customers, and others who want the information you are providing. In certain circumstances, however, your readers may have a more negative attitude toward your message. In such situations, you will need to take special care in drafting the beginning of your communication if you are to win a fair hearing for your message.

Your readers' initial attitude toward your message will be negative if the answer to any of the following questions is "yes." If that is the case, try to pinpoint the attitudes that are likely to shape your readers' reactions to your communication, and then craft your beginning accordingly.

Questions for determining whether readers might resist your message

- Does your message contain bad news for your readers?
- Does your message contain ideas or recommendations that will be unwelcome to your readers?
- Do your readers feel distrust, resentment, or competitiveness toward you, your department, or your company?
- Are your readers likely to be skeptical of your knowledge of your subject or situation?
- Are your readers likely to be suspicious of your motives?

The strategy that is most likely to promote a positive initial reaction or to counteract a negative one differs from situation to situation. However, here are three strategies that often work.

STRATEGIES FOR ENCOURAGING OPENNESS

- **Present yourself as a partner, not as a critic or a competitor.** Suggest that you are working with your readers to help solve a problem they want to solve or to achieve a goal they want to achieve. (See page 255.)
- **Delay the presentation of your main point.** An initial negative reaction may prompt your readers to aggressively devise counterarguments to each point that follows. Therefore, if you believe that your readers may react negatively to your main point, consider making an exception to Guideline 1, (page 258), which tells you to state your main point in your beginning. If you delay the presentation of your main point, your readers may consider at least some of your other points objectively before discovering your main point and reacting against it.
- **Establish your credibility.** As Chapter 5 suggests, people are more likely to respond favorably to a message if they have confidence in the person delivering it. Consequently, you can promote openness to your message if you begin by convincing your readers that you are an expert in your subject and knowledgeable about the situation. This does not mean, however, that you should announce your credentials in the beginning of every communication. If you needlessly present your credentials, you merely burden your readers with unnecessary information. Avoid discussing your qualifications when writing to people, such as your co-workers, who have already formed a favorable opinion of your expertise.

LEARN MORE See also Chapter 5's discussion of the indirect pattern of organization (page 119).

LEARN MORE See also Chapter 5's suggestions for building credibility (page 115).

Although these strategies will often encourage openness, don't employ them mechanically. Always keep in mind the particular attitudes, experiences, and expectations of your readers as you craft the beginning of a communication.

You might do this by telling yourself a story about your readers. The central figure in your story should be your reader—an individual if you are writing to one person, or a typical member of your audience if you are writing to a group. Begin your story a few minutes before this person picks up your communication and continue it until the moment he or she reads your first words. Although you would not actually include the story in your communication, creating it can help you decide how to begin.

Here is the story that Jolene, a software engineer at an insurance company, wrote to help herself understand the readers of an instruction manual she was preparing.

> It's Monday afternoon. After half a day of orientation meetings and tours, Bob, the new trainee, sits down at a computer to learn our data entry system. He was a French major who has never used a data entry program. Now, in two hours, he is supposed to work his way through this manual and then enter some sample policy information. He feels rushed, confused, and quite nervous. He knows that the information is critical, and he does not want to make an error.
>
> Despite his insecurity, Bob will not ask questions of the experienced agent in the next office because (being new to the company) he doesn't want to make a bad impression by asking dumb questions.
>
> Bob picks up the instruction manual for the SPRR program that I am writing; he hopes it will enable him to learn the program quickly, without making mistakes and without needing to ask embarrassing questions.

Jolene predicts her readers' attitudes by imagining a story about one of them.

This story helped Jolene to focus on several important facts: The reader will be anxious, hurried, and uncertain. These insights helped her write an effective opening for her manual:

> This manual tells you how to enter policy information into our SPRR system. It covers the steps for opening a file for a new policy, entering the relevant information, revising the file, and printing a paper copy for your permanent records.
>
> By following these instructions carefully, you can avoid making time-consuming errors. In addition, the SPRR system is designed to detect and flag possible errors so you can double-check them.

Jolene adopts a helpful tone.

Jolene reassures her readers.

By identifying her readers' probable feelings, Jolene was able to create a beginning for her manual that reduced her readers' anxiety and encouraged them to be more open to her instructions.

HOW TO IDENTIFY THE BACKGROUND INFORMATION YOUR READERS NEED

Sometimes readers need background information to understand fully what you are going to tell them. Sometime they don't. Ultimately, you must determine whether and what kind of background might be needed in any particular communication, based on your understanding of the specific readers you are addressing. However, you might be especially alert to your readers' possible needs in the following circumstances.

Signs that your readers need background information

- **Your readers need to grasp certain general principles in order to understand your specific points.** For instance, your discussion of the feasibility of locating a new plant in a particular city may depend on a particular analytical technique that you will need to explain to your readers.

- **Your readers are unfamiliar with technical terms you will be using.** For example, as a specialist in international trade, you may need to explain certain technical terms to the board of directors before you present your strategies for opening up foreign markets.
- **Your readers are unfamiliar with the situation you are discussing.** For example, imagine that you are reporting to the executive directors of a large corporation about labor problems at one of the plants it recently acquired in a takeover. To understand and weigh the choices that face them, the directors will need an introduction to the plant and its labor history.

Not all background information belongs at the beginning of your communication. Information that pertains only to certain segments should appear at the beginning of those segments. In the beginning of your communication, include only background information that will help your readers understand your overall message.

HOW TO PICK THE RIGHT LENGTH FOR YOUR INTRODUCTION

There is no rule of thumb that tells how long the beginning should be. A good, reader-centered beginning may require only a phrase or may take several pages. You need to give your readers only the information they don't already know. Just be sure they know the following:

What your readers need to know

- The reason they should read the communication (page 142)
- The main point of the communication (page 258)
- The organization and scope of the communication (page 258)
- The background information they need in order to understand and use the communication (page 261)

If you have given your readers all this information—and have encouraged them to receive your message openly (page 254)—then you have written a good beginning, regardless of how long or short it is.

Here is an opening prepared by a writer who followed all the guidelines given in this chapter.

Brief beginning

> In response to your memo dated November 17, I have called Goodyear, Goodrich, and Firestone for information about the ways they forecast their needs for synthetic rubber. The following paragraphs summarize each of those phone calls.

The following opening, from a two-paragraph memo, is even briefer:

Briefer beginning

> We are instituting a new policy for calculating the amount that employees are paid for overtime work.

At first glance, this single sentence may seem to violate all the guidelines. It does not. It identifies the topic of the memo (overtime pay), and the people to whom the memo is addressed will immediately understand its relevance to them. It also declares the main point of the memo (a new policy is being instituted). Moreover, because the memo itself is only two paragraphs long, its scope is readily apparent.

The brevity of the memo also suggests its organization—namely, a brief explanation of the new policy and nothing else. The writer has correctly judged that his readers need no background information.

Figure 11.1 shows a relatively long beginning from a report written by a consulting firm hired to recommend ways to improve the food service at a hospital. Like the brief beginnings given above, it is carefully adapted to its readers and to the situation.

Examples of longer beginnings are shown in Figures 11.1 and 11.2.

Figure 11.2 shows the long beginning of a 500-page service manual for the Detroit Diesel Series 53 engine manufactured by General Motors.

FIGURE 11.1

Beginning of a Recommendation Report

INTRODUCTION

Wilton Hospital has added 200 patient beds through construction of the new West Wing. Since the wing opened, the food-service department has had difficulty meeting this extra demand. The director of the hospital has also reported the following additional problems:

The writers open their summary by stating the problem they will address. It is one that's important to their readers.

1. Difficulties operating at full capacity. The equipment, some of it thirty years old, breaks down frequently. Absenteeism has risen dramatically.
2. Costs of operation that are well above average for the hospital industry nationally and in this region.
3. Frequent complaints about the quality of the food from both the patients and the hospital staff who eat in the cafeteria.

The writers detail the subparts of the problem.

To study these problems, we have monitored the operation of the food-service department and interviewed patients, food-service employees, and staff who eat in the cafeteria. In addition, we have compared all aspects of the department's facilities and operations with those at other hospitals of roughly the same size.

The writers present themselves as the reader's problem-solving partners.

- They tell what they have done to help solve the problem.
- They tell how the report will assist their readers in doing their part of the problem-solving effort.

In this report, we discuss our findings concerning the food-service department's kitchen facilities. We briefly describe the history and nature of these facilities, suggest two alternative ways of improving them, and provide a budget for each. In the final section of this report, we propose a renovation schedule and discuss ways of providing food service while the renovation work is being done. (Our recommendations about staffing and procedures will be presented in another report in thirty days.)

The writers tell how they have organized their report.

To indicate the scope of this report, the writers highlight a topic it will not cover.

The first alternative costs about $730,000 and would take four months to accomplish. The second costs about $1,100,000 and would take five months. Both will meet the minimum needs of the hospital; the latter can also provide cooking for the proposed program of delivering hot meals to housebound persons in the city.

They assist their readers by summarizing their main points.

FIGURE 11.2

Beginning of a Service Manual

The writers tell what the manual is about in the first sentence.

In the following sentences, they describe the manual's scope.

The writers indicate the organization of the manual.

They provide a guide to the usefulness of the manual.

The writers provide background information that is implicit throughout the rest of the manual.

They provide additional background information, including cautions.

General Information **DETROIT DIESEL 53**

• SCOPE AND USE OF THE MANUAL

This manual covers the basic Series 53 Diesel Engines built by the Detroit Diesel Corporation. Complete instructions on operation, adjustment (tune-up), preventive maintenance and lubrication, and repair (including complete overhaul) are covered. The manual was written primarily for persons servicing and overhauling the engine and, in addition, contains all of the instructions essential to the operators and users. Basic maintenance and overhaul procedures are common to all Series 53 engines and, therefore, apply to all Inline and Vee models.

The manual is divided into numbered sections. The first section covers the engine (less major assemblies). The following sections cover a complete system such as the fuel system, lubrication system or air system. Each section is divided into subsections which contain complete maintenance and operating instructions for a specific subassembly on the engine. For example, Section 1, which covers the basic engine, contains subsection 1.1 pertaining to the cylinder block, subsection 1.2 covering the cylinder head, etc. The subjects and sections are listed in the Table of Contents on the preceding page. Pages are numbered consecutively, starting with a new Page 1 at the beginning of each subsection. The illustrations are also numbered consecutively, beginning with a new Fig. 1 at the start of each subsection.

Information regarding a general subject, such as the lubrication system, can best be located by using the Table of Contents. Opposite each subject in the Table of Contents is a section number which registers with a tab printed on the first page of each section throughout the manual. Information on a specific subassembly or accessory can then be found by consulting the list of contents on the first page of the section. For example, the cylinder liner is part of the basic engine. Therefore, it will be found in Section 1. Looking down the list of contents on the first page of Section 1, the cylinder liner is found to be in subsection 1.6.3. An Alphabetical Index at the back of the manual has been provided as an additional aid for locating information.

SERVICE PARTS AVAILABILITY

Genuine Detroit Diesel service parts are available from authorized Detroit Diesel distributors and service dealers throughout the world. A complete list of all distributors and dealers is available in the Worldwide Distributor and Dealer Directory, 6SE280. This publication can be ordered from any authorized distributor.

CLEARANCES AND TORQUE SPECIFICATIONS

Clearances of new parts and wear limits on used parts are listed in tabular form at the end of each section throughout the manual. It should be specifically noted that the "New Parts" clearances apply only when all new parts are used at the point where the various specifications apply. This also applies to references within the text of the manual. The column entitled "Limits" lists the amount of wear or increase in clearance which can be tolerated in used engine parts and still assure satisfactory performance. It should be emphasized that the figures given as "Limits" must be qualified by the judgment of personnel responsible for installing new parts. These wear limits are, in general, listed only for the parts more frequently replaced in engine overhaul work. For additional information, refer to the paragraph entitled *Inspection* under *General Procedures* in this section.

Bolt, nut and stud torque specifications are also listed in tabular form at the end of each section.

PARTS REPLACEMENT

Before installing a new or used part, check it thoroughly to make sure it is the proper part for the job. The quality of the replacement part must be equivalent to the quality of the original Detroit Diesel component being replaced and must meet DDC specifications for new or reusable parts.

Parts must also be clean and not physically damaged or defective. For example, bolts and bolt hole threads must not be damaged or distorted. Gasketing must have all holes completly punched with no residual gasket material left clinging to the top or bottom. Flatness and fit specifications in the service manual must be strictly

CAUTION: Failure to inspect parts thoroughly before installation, failure to install the proper parts, or failure to install parts properly can result in component or engine malfunction and/or damage and may also result in personal injury.

Page 4 May, 1990 © Copyright 1990 Detroit Diesel Corporation

HOW TO ADAPT YOUR BEGINNING TO YOUR READERS' CULTURAL BACKGROUND

Readers' expectations and preferences about the beginning of a communication are shaped by their culture. The suggestions you have just read are suitable for readers in the United States and some other Western countries. However, customs vary widely. For example, the French often open their business correspondence in a more formal way than do people in the United States. In some Spanish-speaking cultures, business letters often begin with statements that seem very elaborate to U.S. readers. In Japan, business letters often begin with a reference to the season. The following example shows one writer's way of adapting to the expectations of a Japanese businessperson (Human Japanese, 2005):

> Here in Seattle, fall has finally arrived, and the days continue to become shorter and shorter. At night it's now cold enough that one needs a sweater to go outside.

Beginning of a business letter to a Japanese reader

Next, the letter moves to the main topic:

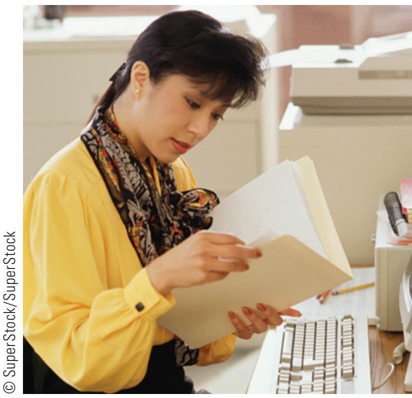
> The reason I'm writing you is that . . . .

Be cautious, though, when writing to a person from another culture. Avoid operating solely on generalizations or stereotypes. Individuals from the same culture can differ from one another in many ways. Also, don't confuse cultural background with race or national origin. People of a particular race or national origin live in many different cultures, and cultures may have members who are from different races or national origins. When writing to readers from another culture, as when writing to readers from your own, learn about the specific persons you are addressing.

© Richard Lord/The Image Works

ETHICS GUIDELINE: HOW TO ADDRESS UNETHICAL PRACTICES

So far, the guidelines in this chapter have focused on the ways to begin a communication. In contrast, this guideline concerns situations in which people at work sometimes hesitate to begin writing or speaking at all. Suppose you learn that your employer is engaged in an action you consider to be unethical. Or, suppose you are asked to write something that violates your sense of what is ethical. Should you speak up or express your concerns in writing? New employees are sometimes advised to wait until they have achieved security and status before trying to bring about change. But that means you could spend years before addressing a practice you regard as unethical. Ignoring an unethical act could be seen as unethical in itself.



© SuperStock/SuperStock

When determining how to draw attention to something you consider to be unethical, you face a challenge similar to that of figuring out how to begin a memo in which you will recommend a course of action with which you believe your readers will disagree (see pages 259–260). Here are three strategies that could enable you to open a discussion based on your values without jeopardizing your future with your employer's organization.

- **Plant the seeds of change**. Instead of trying to alter the situation immediately, plant the seeds of change. For instance, if your employer is thinking of modifying working conditions in a factory, you might inquire, "How would this modification affect workers on the assembly line?" Or, you might ask, "Would this modification be fair to the assembly line workers?" By posing such questions, you extend the range of issues being considered, and you can subtly let others know the values that shape your understanding of the situation. In addition to asking questions, there are many other ways you can introduce your values into the discussion. Think creatively. Taking even a small step toward improving a situation is an ethical act. Moreover, in many circumstances, it's only through a long series of small steps that large improvements are achieved.

Stephen Coburn/Shutterstock.com

Readers from different cultures may or may not have different expectations about the ways a work-related communication will begin.

Strategies for changing unethical practices without risking your job

- **Use reason rather than accusation.** Your values are much more likely to prevail if you engage people with other views in a reasoned discussion than if you accuse and condemn them. It's not usually possible to persuade people by attacking them. They merely become defensive. Instead, ask them to share their sense of the values that apply to the situation. Appeal to their sense of fairness and of what is right and wrong.
- **Remain open to others' views.** One reason to avoid taking a rigid stand is that it impairs your ability to understand others' views of the situation. People reguarly differ on ethical matters, and your own view is not necessarily shared by others. Strive for solutions that will satisfy both you and others. One possibility is to employ a strategy similar to that described earlier in this chapter (page 255): Identify the values that the other people hold that would lead them to endorse the same course of action that your values lead you to advocate.

You may someday witness a practice that is so outrageous that you will be willing to risk future promotions and even your job in order to stop it. If you find yourself in that situation, seek the aid of influential people inside your company. If the practice you object to violates the law or a government regulation, alert the appropriate agency. This is called *whistleblowing.* Federal law and some state laws are intended to protect whistleblowers, and some laws even reward whistleblowers by giving them a portion of any financial settlement that is made. Still, many whistleblowers do lose their jobs or continue to work under hostile conditions. If you are thinking of whistleblowing, consider the possibility of first attempting a nonconfrontational approach to the problem.

CONCLUSION

The beginning is often the most important part of a communication. That's because it can influence the ideas and attitudes your readers derive from the rest of your communication, and it can even determine whether they will read further.

This chapter has suggested that in writing a beginning you start by trying to identify your readers' attitudes toward your message and then determining what you can say to help them understand and use what follows. This reader-centered approach will enable you to create beginnings that prompt your readers to pay careful attention, encourage them to treat your information and ideas with an open mind, and help them read efficiently.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Select a communication written to professionals in your field. This might be a letter, memo, manual, report, or article in a professional journal. (Do not choose a textbook.) Identify the guidelines from this chapter that the writer applied when drafting the communication's beginning. Is the beginning effective in achieving the writer's usefulness and persuasiveness goals? If so, why? If not, how could the beginning be improved?
2. The instructions for many consumer products contain no beginning section at all. For instance, the instructions for

some lawnmowers, cake mixes, and detergents simply provide a heading that says "Instructions" and then start right in. Find such a set of instructions and—in terms of the guidelines given in this chapter—evaluate the writer's decision to omit a beginning.

EXPLORE ONLINE

The home page of a website typically looks very different from the opening of a printed document. Nonetheless, the home page has many of the same reader-centered goals as the printed opening. Examine the ways that two websites follow this chapter's guidelines. Consider such things as the communication functions performed by the images, layout, text (if any), and words used for buttons and links. One of the home pages you study should be for a company that sells consumer products such as cars. The other should be for a nonprofit organization or government agency. Present your analysis in the way your instructor requests.

COLLABORATE WITH YOUR CLASSMATES

1. The following paragraphs are from the beginning of a report in which the manager of a purchasing department asks for better-quality products from the department in the company that provides abrasives. Is this an effective beginning for what is essentially a complaint? Why or why not? Working with another student, analyze this beginning in terms of this chapter's guidelines.

   > I am sure you have heard that the new forging process is working well. Our customers have expressed pleasure with our castings. Thanks again for all your help in making this new process possible.
   >
   > We are having one problem, however, with which I have to ask once more for your assistance. During the seven weeks since we began using the new process, the production line has been idle 28 percent of the time. Also, many castings have had to be remade. Some of the evidence suggests that these problems are caused by the steel abrasive supplies we get from your department. If we can figure out how to improve the abrasive, we may be able to run the line at 100 percent of capacity.
   >
   > I would be most grateful for help from you and your people in improving the abrasive. To help you devise ways of improving the abrasive, I have compiled this report, which describes the difficulties we have encountered and some of our thinking about possible remedies.

2. Form a team of two or three students. Exchange the opening sections (paragraph or longer) of a project you are now preparing for your instructor. First, suggest specific revisions that would make your partner's opening more effective at achieving his or her usefulness and persuasiveness goals. Next, suggest an alternative opening that might also be effective.

APPLY YOUR ETHICS

It can be particularly challenging to write an effective opening for a communication in which you are advocating for change based on ethical grounds. Think of some organization's practice, procedure, or policy that your values lead you to believe should be changed. Identify the person or group within the organization that has the authority to make the change that you feel is needed. Then, following the advice given in this chapter, draft the opening paragraph of a letter, memo, e-mail, report, or other communication on the topic that you could send to this person or group.

Scorpp/Shutterstock.com

12 | Ending a Communication

WEB For additional information, examples, and links related to this chapter, go to your English CourseMate at *www .cengagebrain.com.*

At work, how can you end your communications most effectively? There are many options. Some resemble strategies you may have used when writing at school. Others will seem quite different. This chapter introduces you to some of your major options and gives you a way to choose among them. As you read it, discuss it in class with your instructor, and apply its advice to something you are writing, focus on developing your abilities to do the following:

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Define the goals for ending workplace communications you are writing.
2. Select the appropriate strategy or combination of strategies most likely to achieve your goals of specific communications.

HOW TO DEFINE THE GOALS FOR A COMMUNICATION'S ENDING

At work, you can use your communications' endings to achieve one or more of four goals.

Endings may serve one or more of these goals.

- **Help your readers recall your most important points.** Researchers have found that readers are better able to remember what is said at the end of a communication than information presented in the middle. Consequently, a skillfully written ending can increase a communication's usefulness and persuasiveness by stating or reviewing points that you want your readers to recall later.

- **Provide a transition that leads your readers out of the communication and into the larger stream of their activities.** Therefore, it provides an excellent opportunity to help readers by answering the question, "What should I do now?"
- **Emphasize your most important points.** The ending is your communication's final chance to influence readers' impressions of its subject matter. Consequently, it's an excellent place to highlight a communication's most persuasive points.
- **Reaffirm the relationship you've established and want to build and maintain with your readers.** Like a handshake at the end of a meeting, the ending is a way to move from the details of your message to focus on your desire and commitment to help your readers do their work and achieve their goals.

Which of these goals should you try to achieve in the ending of a communication you are writing? To choose, follow these three simple steps.

Steps for defining the goals for the ending of a communication you are writing

1. **Decide whether it is important for you to recommend, suggest, or indicate what your readers should do after reading.** If there's a way you think your readers should follow up on the information and ideas you've provided, a goal for your ending could be to tell them what the follow-up is.
2. **Decide whether you want to use your ending to influence your readers' attitudes.** If so, a goal for your ending could be to supplement or reinforce the other persuasive strategies you've used in your communication.
3. **Determine if your readers will desire or expect a certain kind of ending.** If so, a goal for your ending could be to conclude your communication in the way your readers desire or expect.

Of course, a communication's ending may have more than one goal.

HOW TO SELECT THE APPROPRIATE STRATEGY OR GROUP OF STRATEGIES FOR ENDING YOUR COMMUNICATION

The following nine guidelines suggest strategies you can use alone or in combination, in order to achieve the goals you have identified.

Guideline 1 | After you've made your last point, stop

Despite the important ways that endings can enhance the effectiveness of some communications, in other communications your best strategy will be to say what you have to say and stop, without adding any words after your last point. This situation can arise in short communications and when you are using an organizational pattern that brings you to a natural stopping place. Here are some examples.

Communications that you may want to end after the last point

- **Proposals.** You will usually end a proposal with a detailed description of what you will do and how you will do it. Because that's where your readers expect proposals to end, they will enjoy a sense of completion if you simply stop after presenting your last recommendation. Furthermore, by ending after your recommendations, you will have given them the emphasis they require.

- **Formal reports.** When you prepare a formal report (a report with a cover, title page, and binding), the convention is to end either with your conclusions or your recommendations—both appropriate subjects for emphasis.
- **Instructions.** You will usually end instructions by describing the last step.

If your analysis of your purpose, readers, and situation convinces you that you should add something after your last point, review this chapter's other guidelines to select the strategies that will best help you meet your objectives.

Guideline 2 | Repeat your main point

Because the end of a communication is a point of emphasis, you can use it to focus your readers' attention on the points you want to be foremost in their minds as they finish reading.

Consider, for instance, the ending of a classic article written to dispel a misunderstanding by family physicians about the proper way to prevent infections in wounds. The writers Mancusi-Ugaro and Rapport (1986) made their main point in the abstract at the beginning of the article, again in the fourth paragraph (where they supported it with a table), and in several other places. Nevertheless, they considered this point to be so important that they restated it in the final paragraph.

Ending that repeats the communication's main point

> Perhaps the most important concept to be gleaned from a review of the principles of wound management is that good surgical technique strives to maintain the balance between the host and the bacteria in favor of the host. The importance of understanding that infection is an absolute quantitative number of bacteria within the tissues cannot be overemphasized. Limiting, rather than eliminating, bacteria allows for normal wound healing.

The strategy of repeating your main point in your ending can also work well when you want to help your readers make a decision or persuade them to take a certain action. The following paragraph is the ending of a memo urging new safety measures:

Another example

> I cannot stress too much the need for immediate action. The exposed wires present a significant hazard to any employee who opens the control box to make routine adjustments.

Guideline 3 | Summarize your key points

The strategy suggested by this guideline is closely related to the preceding one. In repeating your main point (Guideline 2), you emphasize *only* the information you consider to be of paramount importance. In *summarizing,* you are concerned that your audience has understood the general thrust of your *entire* communication.

Here, for example, is the ending of a 115-page book entitled *Understanding Radioactive Waste,* which is intended to help the general public understand the impact of the nuclear power industry's plans to open new plants (Murray, 2003):

> It may be useful to the reader for us to now select some highlights, key ideas, and important conclusions for this discussion of nuclear wastes. The following list is not complete—the reader is encouraged to add items.

> 1. Radioactivity is both natural and manmade. The decay process creates alpha particles, beta particles, and gamma rays. Natural background radiation comes mainly from cosmic rays and minerals in the ground.
> 2. Radiation can be harmful to the body and to genes, but the low-level radiation effect cannot be proved. Many methods of protection are available.
> 3. The fission process gives useful energy in the form of electricity from nuclear plants, but it also produces wastes in the form of highly radioactive fission products. . . .

Key points are summarized.

This list continues for thirteen more items, but this sample should give you an idea of how this author ended with a summary of key points.

Notice that a summary at the end of a communication differs significantly from a summary at the beginning. Because a summary at the beginning is meant for readers who have not yet read the communication, it must include some information that will be of little concern at the end. For example, the beginning summary of a report on a quality-control study will describe the background of the study. In contrast, the ending summary would focus sharply on conclusions and recommendations.

TRY THIS Find a printed or online communication that ends in a way that is not described in this chapter. How would you describe the strategy? How effective is it, given the communication's purpose and audience?

Guideline 4 | Refer to a goal stated earlier in your communication

Many communications begin by stating a goal and then describe or propose ways to achieve it. If you end a communication by referring to that goal, you remind your readers of the goal and sharpen the focus of your communication. The following example comes from a seventeen-page proposal prepared by operations analysts in a company that builds customized, computer-controlled equipment used in print shops and printing plants. Notice how the ending refers to the beginning.

> To maintain our competitive edge, we must develop a way of supplying replacement parts more rapidly to our service technicians without increasing our shipping costs or tying up more money in inventory.

Beginning states a goal.

> The proposed reform of our distribution network will help us meet the needs of our service technicians for rapidly delivered spare parts. Furthermore, it does so without raising either our shipping expenses or our investment in inventory.

Ending refers to the goal.

The next example illustrates the way scientific articles often end by stating the answer to a question asked at the article's beginning. In this case, the researchers want to learn whether an electronic nose could be used to detect spoiled chicken in poultry factories and supermarkets (Rajamäki et al., 2006). The spelling follows conventions in the United Kingdom.

> The electronic nose is an instrument which comprises an array of electronic chemical sensors with partial specificity and an appropriate pattern-recognition system, capable of recognizing simple or complex odours. . . . The aim of this study was to determine whether it is possible to distinguish differently stored, MA-packaged, unmarinated broiler chicken cuts with an electronic nose.

Beginning states a goal.

Ending refers to the goal.

> The results were very promising when considering the possible applications of an electronic nose as a screening tool for quality control and inspection purposes. . . . An electronic nose [developed specifically for the chicken industry] would include only a few sensors reacting to spoilage parameters of poultry meat and would therefore cost less than larger electronic nose devices developed for detecting many kinds of volatile compounds in various applications.

Guideline 5 | Focus on a key feeling

When ending some communications, it may be more important to focus your readers' attention on a feeling rather than a fact. For instance, if you are writing instructions for a product manufactured by your employer, you may want your ending to encourage your readers' goodwill toward the product. Consider this ending of an owner's manual for a clothes dryer. Though the last sentence provides no additional information, it seeks to shape the readers' attitude toward the company.

Ending designed to build goodwill

> The GE Answer Center™ consumer information service is open 24 hours a day, seven days a week. Our staff of experts stands ready to assist you anytime.

The following ending is from a booklet published by the National Cancer Institute for people who have apparently been successfully treated for cancer but do not know how long the disease will remain in remission. It, too, seeks to shape the readers' feelings.

Ending designed to shape complex attitudes

> Cancer is not something anyone forgets. Anxieties remain as active treatment ceases and the waiting stage begins. A cold or cramp may be cause for panic. As 6-month or annual check-ups approach, you swing between hope and anxiety. As you wait for the mystical 5-year or 10-year point, you might feel more anxious rather than more secure.
>
> These are feelings that we all share. No one expects you to forget you have had cancer or that it might recur. Each must seek individual ways of coping with the underlying insecurity of not knowing the true state of his or her health. The best prescription seems to lie in a combination of one part challenging responsibilities that require a full range of skills, a dose of activities that seek to fill the needs of others, and a generous dash of frivolity and laughter.
>
> You still might have moments when you feel as if you live perched on the edge of a cliff. They will sneak up unbidden. But they will be fewer and farther between if you have filled your mind with thoughts having nothing to do with cancer.
>
> Cancer might rob you of that blissful ignorance that once led you to believe that tomorrow stretched on forever. In exchange, you are granted the vision to see each today as precious, a gift to be used wisely and richly. No one can take that away.

Guideline 6 | Tell your readers how to get assistance or more information

At work, a common strategy for ending a communication is to tell your readers how to get assistance or more information. These two examples are from a letter and a memo:

Endings that offer help

> If you have questions about this matter, call me at 523-5221.

> If you want any additional information about the proposed project, let me know. I'll answer your questions as best I can.

By ending in this way, you not only provide your readers with useful information, you also encourage them to see you as a helpful, concerned individual.

Guideline 7 | Tell your readers what to do next

In some situations, you can help your readers most by telling them what you think they should do next. If more than one course of action is available, tell your readers how to follow up on each of them.

> To buy this equipment at the reduced price, we must mail the purchase orders by Friday the 11th. If you have any qualms about this purchase, let's discuss them. If not, please forward the attached materials, together with your approval, to the Controller's Office as soon as possible.

Ending that tells readers exactly what to do

Guideline 8 | Identify any further study that is needed

Much of the work that is done on the job is completed in stages. For example, one study might answer preliminary questions and, if the answers look promising, an additional study might then be undertaken. Consequently, one common way of ending is to tell readers what must be found out next.

> This experiment indicates that we can use compound deposition to create microcircuits in the laboratory. We are now ready to explore the feasibility of using this technique to produce microcircuits in commercial quantities.

Ending that identifies next question needing study

Such endings are often combined with summaries, as in the following example:

> In summary, over the past several months our Monroe plant has ordered several hundred electric motors from a supplier whose products are inferior to those we require in the heating and air conditioning systems we build. Not only must this practice stop immediately, but also *we* should investigate the situation to determine why this flagrant violation of our quality-control policies has occurred.

Another example

Guideline 9 | Follow applicable social conventions

All the strategies mentioned so far focus on the subject matter of your communications. When writing the endings of your communications, it is also important to observe the social conventions that apply in each situation.

Some of those conventions involve customary ways of closing particular kinds of communication. For example, letters usually end with an expression of thanks, a statement that it has been enjoyable working with the reader, or an offer to be of further help if needed. In contrast, formal reports and proposals rarely end with such gestures.

Other conventions are peculiar to specific organizations. For example, in some organizations writers rarely end their memos with the kind of social gesture commonly provided at the end of a letter. In other organizations, memos often end with such a gesture, and people who ignore that convention risk seeming abrupt and cold.

Consider, too, the social conventions that apply to your relationship with your readers. Have they done you a favor? Thank them. Are you going to see them soon? Let them know that you look forward to the meeting.

CONCLUSION

This chapter has described nine reader-centered strategies for ending a communication. By considering your readers, your objectives, and the social conventions that apply in your situation, you will be able to choose the strategy or combination of strategies most likely to succeed in the particular communication you are writing.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

Select a communication written to professionals in your field. This might be a letter, memo, manual, technical report, or article in a professional journal. (Do not choose a textbook.) Identify the guidelines from this chapter that the writer applied when drafting that communication's ending. Is the ending effective in achieving the writer's usefulness and persuasiveness goals? If so, why? If not, how could it be improved?

EXPLORE ONLINE

For many websites, there is no single ending point. Visitors may leave the site at any point. In fact, links in many sites lead visitors directly to other sites. Visit three different kinds of sites, such as one that provides explanations or instructions, one that enables people to purchase products, and one created by an advocacy group. Within each site, identify the places where one or more of this chapter's guidelines are employed effectively.

COLLABORATE WITH YOUR CLASSMATES

1. The following paragraphs constitute the ending of a report to the U.S. Department of Energy concerning the economic and technical feasibility of generating electric power with a special type of windmill (Foreman). The windmills are called Diffuser Augmented Wind Turbines (DAWT). In this ending, the writer has used several of the strategies described in this chapter. Working with another student, identify these strategies.

> **Section 6.0**
>
> **Concluding Remarks**
>
> We have provided a preliminary cost assessment for the DAWT approach to wind energy conversion in unit systems to 150 kw power rating. The results demonstrate economic viability of the DAWT with no further design and manufacturing know-how than already exists. Further economic benefits of this form of solar energy are likely through:
>
> - Future refinements in product design and production techniques
> - Economies of larger quantity production lots
> - Special tax incentives
>
> Continued cost escalation on nonrenewable energy sources and public concern for safeguarding the biosphere environment will surely make wind energy conversion by DAWT-like systems even more attractive to our society. Promotional actions by national policy makers and planners as well as industrialists and entrepreneurs can aid the emergence of the DAWT from its research phase to a practical and commercial product.

2. Working with another student, describe the strategies for ending used in the following figures in this text:

FIGURE	PAGE	FIGURE	PAGE
1.4	11	8.2	190
2.7	48	25.1	534
2.8	49	27.3	569
5.6	120	28.7	591

APPLY YOUR ETHICS

Examine the student conduct code or values statement of your school. Which of the guidelines in this chapter does its ending follow? Why? Also, identify some of the specific values that underline the code's or values statement's provisions.

13 | Writing Reader-Centered Front and Back Matter

In the workplace, many communications longer than a page are held together with a paper clip or staple. Usually because of their importance or length, others have many of the features found in the books you buy for your classes. Some of these features are called *front matter* because they precede the opening chapter or section. Front matter includes the following items.

- Cover
- Title Page
- Executive Summary or Abstract
- Table of Contents
- List of Figures and Tables

The other book-like features are called *back matter*, for an obvious reason.

- Appendixes
- Reference List, End Notes, or Bibliography
- Glossary or List of Symbols
- Index

Communications with front and back matter are often accompanied by transmittal letters when they are delivered to their readers.

To assist you in creating these book-like elements effectively, this chapter begins with guidelines for planning front and back matter, followed by advice about writing each element. As you read the chapter, discuss it in class with your instructor, and apply its advice to communications you are writing, focus on learning how to do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Plan the front and back matter of a communication you are writing.
2. Write a reader-centered letter of transmittal.
3. Write reader-centered front matter.
4. Write reader-centered back matter.

HOW TO PLAN FRONT AND BACK MATTER FOR A COMMUNICATION YOU ARE WRITING

To plan front and back matter, begin in the same way you plan any other feature of your communication, by thinking about how your readers will use your communication, and how you want to influence their attitudes—as well as the expectations of your readers and employer.

Guideline 1 | Review the ways your readers will use the communication

Front and back matter can make especially important contributions to a communication's usefulness for its readers. The way you write your title and design your table of contents can increase the efficiency with which readers can locate the information they want. To help readers in this way, you need to know what your readers will be looking for and how they will use your communication. As you begin work on the front and back matter, review the information you developed while defining your communication's usefulness objectives (see Chapter 3).

Guideline 2 | Review your communication's persuasive goals

By thoroughly understanding your readers' goals, values, and attitudes, you can determine what should be included and emphasized in the executive summary to lead readers to make the decision or take the actions you advocate. Reviewing the information you developed while defining your communication's persuasive objectives, you can enhance the effectiveness of the executive summary and other elements of your front and back matter.

Guideline 3 | Find out what's required

Many organizations distribute instructions that tell employees in detail how to prepare front and back matter. These instructions, sometimes called *style guides*, can describe everything from the maximum number of words permitted in an executive summary to the size and color of the title on a report's cover. If you are writing to one of your employer's clients, the *client's* requirements may be the ones you need to follow. Whatever the source, obtain the relevant style guide and follow its requirements precisely.

Guideline 4 | Find out what's expected

Even if nothing is explicitly required, your employer and your readers probably have expectations about the way you draft front and back matter. Also, beyond what's required, there are often unspoken expectations about how the required elements will be prepared. Look at communications similar to the one you are preparing to learn what expectations you should meet.

A WORD ABOUT CONVENTIONS AND LOCAL PRACTICE

As mentioned above, many employers issue style guides that tell how they want their employees to write front and back matter. Of course, the instructions vary somewhat from organization to organization. For instance, one employer may want the title of any report to be placed in a certain spot on the cover, and another employer may want the title in another spot. Despite these variations, formal reports written on the job look very much alike. The formats described in this chapter reflect common practices in the workplace. You will have little trouble adapting them to other, slightly different versions when the need arises.

As you prepare front and back matter, remember that even if you are following a very comprehensive style manual, you increase your chances of achieving your communication goals by thinking continuously of your readers and applying this chapter's four guidelines.

HOW TO WRITE A READER-CENTERED TRANSMITTAL LETTER

When you prepare formal reports and proposals, you will often send them (rather than hand them) to your readers. In such cases, you will want to accompany them with a letter (or memo) of transmittal, which may be placed on top of your communication or bound into it. Transmittal letters typically contain the following elements:

- **Introduction.** In the introduction to your letter, introduce the accompanying communication and explain or remind readers of its topic. Begin on an upbeat note. Here is an example written to a client:

  > We are pleased to submit the enclosed report on evaluating three possible sites for your company's new manufacturing plant.

- **Body.** The body of a transmittal letter usually highlights the communication's major features. For example, researchers often state their main findings and the consequences of what they've learned, repeating information in their communication's abstract or summary.
- **Closing.** Transmittal letters commonly end with a short paragraph (often one sentence) that states the writer's willingness to work further with the reader or promises to answer any questions the reader may have.

Figure 13.1 shows a memo of transmittal.

WEB To view other examples of front and back matter, go to your English CourseMate at *www.cengagebrain.com.*

FIGURE 13.1

Memo of Transmittal Written at Work

This letter of transmittal accompanied the empirical research report shown in Figure 25.1 (page 518).

Margaret opens with an introductory sentence that mentions the accompanying report and tells its topic.

In the body of her brief memo, Margaret summarizes the report's findings that will be of most interest to her reader. To do this, she includes very precise information, using exact percentages in the first sentence, for instance. Note that she has not included the broader range of information included in the report's executive summary (page 283).

Again tailoring her memo to her reader, an executive decision maker, Margaret describes in specific detail the next step recommended by the research team.

Margaret closes on an upbeat note and indicates that she would welcome questions.

ELECTRONICS CORPORATION OF AMERICA

MEMORANDUM

To Myron Bronski, Vice-President, Research

From Margaret C. Barnett, Satellite Products Laboratory MCB

Date September 29, 2013

Re REPORT ON TRUCK-TO-SATELLITE TEST

On behalf of the entire research team. I am pleased to submit the attached copy of the operational test of our truck-to-satellite communication system.

The test shows that our system works fine. More than 91% of our data transmissions were successful, and more than 91% of our voice transmissions were of commercial quality. The test helped us identify some sources of bad transmissions, including primarily movement of a truck outside the "footprint" of the satellite's strongest broadcast and the presence of objects (such as trees) in the direct line between a truck and the satellite.

The research team believes that our next steps should be to develop a new antenna for use on the trucks and to develop a configuration of satellites that will place them at least 25° above the horizon for trucks anywhere in our coverage area.

We're ready to begin work on these tasks as soon as we get the okay to do so. Please let me know if you have any questions.

Encl: Report (2 copies)

HOW TO WRITE READER-CENTERED FRONT MATTER

The following sections will help you prepare each element of a communication's front matter in a reader-centered way.

Cover

A cover typically includes the communication's title, the name or logo of the organization that created it, and the date it was issued. In some organizations, covers also include the writer's name and a document number used for filing. To write a reader-centered title, use precise, specific terms that tell your current readers exactly what the communication is about and help your future readers determine whether the communication will be useful to them.

Figure 13.2 shows the cover of a research report.

Title Page

A title page repeats the information on the cover and usually adds more. For instance, your employer may want you to include contract or project numbers and such cross-referencing information as the name of the contract under which the work was performed. A title page may also provide copyright and trademark notices. Note that some employers require such information on the cover instead.

Figure 13.3 shows the title page of the report whose cover is shown in Figure 13.2.

Summary or Abstract

Most reports and proposals that have front matter include a summary, sometimes called an *abstract*. These summaries serve three purposes:

Purposes of summaries

- They help busy managers learn the main points without reading the entire document.
- They help all readers build a mental framework for organizing and understanding the detailed information they will encounter as they read on.
- They help readers determine whether they should read the full communication.

Writing Reader-Centered Summaries

There are three types of summaries. For each communication you write, choose the one that will give your readers the most help as they perform their tasks.

Three kinds of summaries

- **Descriptive summaries** resemble a prose table of contents. They help readers decide whether to read the communication by identifying major topics covered. They do not tell the main points made about each topic. Often, descriptive summaries are used for research reports that will be placed in widely available resources, such as government databases or libraries. To aid in computerized bibliographic searches, they often contain keywords that would be used by persons seeking the kind of information the document contains. Figure 13.4 (page 282) shows a descriptive summary.

FIGURE 13.2

Cover of a Formal Report

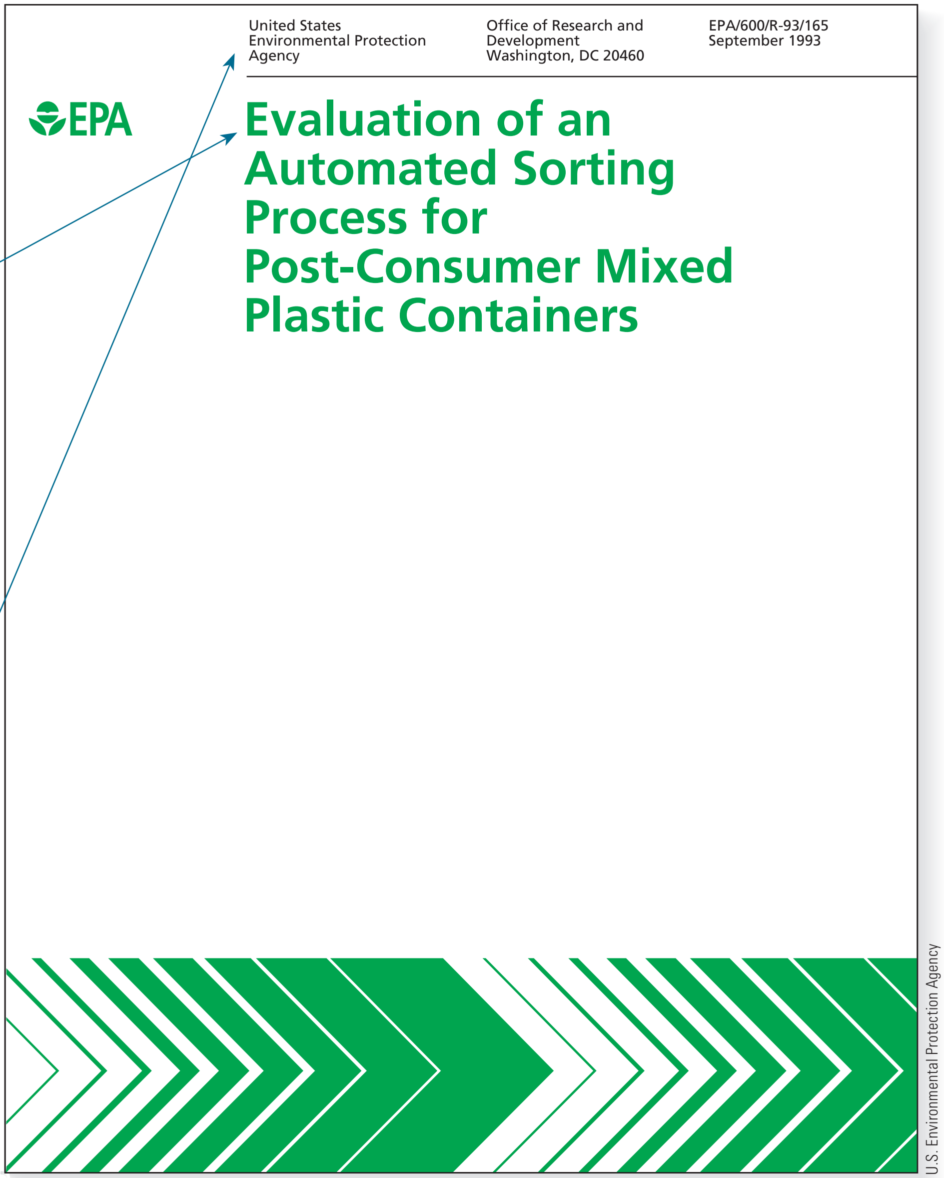
The authors give greatest visual prominence to the title of the report. Second-level prominence goes to the logo for the Environmental Protection Agency.

The title conveys very specific information about the report's contents:

- It says that the document contains an "evaluation of" rather than using the more general phrase "report on."
- It specifies that the sorting process is "automated."
- It indicates that the waste being sorted is "containers."
- It describes three specific characteristics of the containers: "post-consumer," "mixed," and "plastic."

In the small type across the top of the cover, the writers provide the following:

- Full name of the EPA.
- Name of the EPA office that sponsored the study, along with its address (because this document is available to members of the general public, who might want to contact the office).
- The report's filing number.
- The report's date.


United States Environmental Protection Agency

Office of Research and Development Washington, DC 20460

EPA/600/R-93/165 September 1993

EPA

Evaluation of an Automated Sorting Process for Post-Consumer Mixed Plastic Containers

U.S. Environmental Protection Agency

EPA/600/R-93/165
September 1993

EVALUATION OF AN AUTOMATED SORTING PROCESS FOR POST-CONSUMER MIXED PLASTIC CONTAINERS

by

David V. Bubenick
Charles N. Faulstich, Jr.
wTe Corporation
Bedford, MA 01730

and

Solid Waste Association of North America
Silver Spring, MD 20910

Cooperative Agreement No. 818238

Project Officer

Diana R. Kirk
Waste Minimization, Destruction, and Disposal Research Division
Risk Reduction Engineering Laboratory
Cincinnati, OH 45268

RISK REDUCTION ENGINEERING RESEARCH LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U. S. ENVIRONMENTAL PROTECTION AGENCY
CINCINNATI, OH 45268

Report number

Date

Title

Names and addresses of writers

Contract information

Name and address of project supervisor

Name and address of organization that paid for the report

U.S. Environmental Protection Agency

FIGURE 13.3

Title Page of the Report Whose Cover Is Shown in Figure 13.2

FIGURE 13.4

Descriptive Summary

In a descriptive summary, writers tell readers the topics discussed in a communication without telling what it says about each topic.

In this example, the writers do the following:

- Identify the intended audience and the way the handbook will assist them.
- Describe its contents.
- Tell how the information is presented.

SUMMARY

This handbook is intended to assist personnel involved with the design, construction, and installation of wells drilled for the purpose of monitoring groundwater for pollutants. It presents state-of-the-art technology that may be applied in diverse hydrogeologic situations and focuses on solutions to practical problems in well construction rather than on idealized practice. The information in the handbook is presented in both matrix and text form. The matrices use a numerical rating scheme to guide the reader toward appropriate drilling technologies for particular monitoring situations. The text provides an overview of the criteria that influence design and construction of groundwater monitoring in various hydrogeologic settings.

U.S. Environmental Protection Agency

- **Informative summaries** distill the main points from the full document, usually in a page or less, together with enough background information about purpose and method to help readers understand the context in which the key information was developed. Informative summaries are ideally suited to readers who want to make decisions or take other action based on the findings, conclusions, and recommendations reported in the document. Figure 13.5 shows an informative summary (named an abstract in this case) from the EPA report whose cover is shown in Figure 13.2.
- **Executive summaries** are a form of informative summaries tailored to the needs of executives and other decision makers who, pressed for time, want to extract the main points of a communication without reading all of it. Typically, executive summaries open by focusing on organizational questions and issues and briefly describe the investigative or research methods used by the writer. Often half or even more of the summary is devoted to precisely summarizing major conclusions and recommended actions—the type of information most helpful to decision makers. Figure 13.6 (page 284) shows an executive summary.

Summaries that appear in printed and online bibliographic resources are usually called *abstracts*. In many scientific and engineering fields, the term *abstract* is also used for the summary that appears at the front of long reports and proposals.

Whether you are writing a descriptive, informative, or executive summary, follow these reader-centered guidelines.

WRITING READER-CENTERED SUMMARIES

- **Make it 100 percent redundant with the communication.** This purposeful redundancy provides a complete and understandable message to the reader who reads nothing else in the communication. It also means that the summary can't serve as the introduction, even though the introduction that follows it may seem somewhat repetitious.

ABSTRACT

This project evaluates a proof-of-concept, pilot-scale, automated sorting system for mixed post-consumer plastic containers developed by the Rutgers University Center for Plastics Recycling Research (CPRR). The study evaluates the system's ability to identify and separately recover five types of plastic containers representative of those found in plastics recycling programs. It also addresses the system's potential for full-scale commercial application.

Three series of tests were performed: single composition, short-term tests; mixed composition, short-term tests; and mixed composition, extended tests. A total of 82 test runs were performed during which 66,632 bottles were processed.

The five bottle types considered were natural HDPE, PVC, clear PET, green PET, and opaque HDPE. The containers recovered at each product collection station were counted and the results compared to pre-established recovery goals. Bottle counts were then converted to weight recoveries using average bottle weights. The resulting product purity/contamination weight percents were compared to allowable product contamination limits representative of industry practice. From a detailed videotape analysis of a representative test, an exact profile of bottle feed timing and sequence was reconstructed. This analysis provided valuable insight into system feed and transport dynamic as well as an understanding of how product contamination occurs.

The system produced statistically reproducible results and proved to be mechanically reliable. However, it failed to achieve all of the commercial-level container recovery and product contamination limit goals. It was concluded that bottle singulation and spacing greatly influenced the effectiveness of the identification/separation equipment.

This work was submitted by wTe Corporation in fulfillment of Contract No. 850-1291-4. The contract was administered by the Solid Waste Association of North America and sponsored by the U.S. Environmental Protection Agency. This report covers from May 1992 to July 1993.

i

U.S. Environmental Protection Agency

FIGURE 13.5

Abstract from the Report Whose Cover Is Shown in Figure 13.2

In this abstract, the researchers included the key information from each of their report's sections.

Because the research reported in this document is for the purpose of testing a general approach to sorting waste, neither the report nor the abstract included a recommendation. (Compare with the executive summary in Figure 13.6)

In the first sentence, the researchers announce the general **objective** of their study. Later in the paragraph, they identify its specific goals.

The researchers provide detailed information about their **method,** which is important because the method is what they were testing. They provide precise details, such as the exact number of test runs and precise number of bottles processed.

The researchers present their **results,** relating them directly to the primary research questions: Would the method work and, if so, would it work well enough to be commercially successful?

As is often required in government-sponsored projects, the researchers provide information about the sponsors and administrators of the study.

The researchers state the **conclusion** they drew from their analysis of the results.

FIGURE 13.6

Executive Summary

In this executive summary, the writers include the key information from each of the report's sections, condensing a 28-page report into fewer than 250 words.

Because an executive summary is addressed to decision makers, the writers present the information on which their readers would decide what action to take. (Compare with the abstract in Figure 13.5)

In their first sentence, the writers state the **main point** they make in the body of their report: The airport should purchase a new system.

Because their readers would not be familiar with the details of the Accounting Department's computers, the writers provide the **background information** these readers need in order to understand the rest of the executive summary.

The writers pinpoint the **problem.**

They briefly describe the three **possible solutions** they investigated. Their language echoes the statements they made in the preceding list of the problem's sources.

The writers conclude their summary with their **recommendation and the reason for it**.

EXECUTIVE SUMMARY

The Accounting Department recommends that Columbus International Airport purchase a new operating system for its InfoMaxx Minicomputer. The airport purchased the InfoMaxx Minicomputer in 2005 to replace an obsolete and failing Hutchins computer system. However, the new InfoMaxx computer has never successfully performed one of its key tasks: generating weekly accounting reports based on the expense and revenue data fed to it. When airport personnel attempt to run the computer program that should generate the reports, the computer issues a message stating that it does not have enough internal memory for the job.

Our department's analysis of this problem revealed that the InfoMaxx would have enough internal memory if the software used that space efficiently. Problems with the software are as follows:

1. The operating system, BT/Q-91, uses the computer's internal memory wastefully.
2. The SuperReport program, which is used to generate the accounting reports, is much too cumbersome to create reports this complex with the memory space available on the InfoMaxx computer.

Consequently, we evaluated three possible solutions:

1. Buying a new operating system (BT/Q-101) at a cost of $3500. It would double the amount of usable space and also speed calculations.
2. Writing a more compact program in LINUX, at a cost of $5000 in labor.
3. Revising SuperReport to prepare the overall report in small chunks, at a cost of $4000. SuperReport now successfully runs small reports.

We recommend the first alternative, buying a new operating system, because it will solve the problem for the least cost. The minor advantages of writing a new program in LINUX or of revising SuperReport are not sufficient to justify their cost.

- **Mirror the structure of the overall communication.** Include information from each major part of the communication, presented in the order of the parts in the overall communication.
- **Meet the needs of your readers.** For instance, if you know that your readers will be primarily interested in a novel method you used, provide more detail about the method than you would for readers who are primarily interested in your results. Likewise, in deciding what to include from any part of the full document, pick the information your specific readers will find most useful.
- **Be specific.** Replace general terms with precise ones. Instead of saying that it was "hot," say that it was "150°." Rather than saying the less expensive alternative "saved money," say that it saved "$43,000 per month." The more specific your abstract, the more useful it will be to your readers.
- **Keep it short.** Summaries are typically only 2 to 5 percent of the length of the body of the communication (not counting attachments and appendixes). That's between half a page and a whole page for every twenty pages in the body of your communication.
- **Write concisely.** Abstracts need to be lean but highly informative. Keep them short by eliminating unnecessary words, not by leaving out information important to your readers.

LEARN MORE For more strategies for writing concisely, see Guideline 1 for constructing sentences in Chapter 10, page 236.

Table of Contents

By providing a table of contents, you help readers who want to find a specific part of your communication without reading all of it. Your table of contents also assists readers who want an overview of the communication's scope and contents before they begin reading it in its entirety.

Tables of contents are constructed from chapter or section titles and from headings. They are most useful to readers if they have two (perhaps three) levels. The highest level consists of the chapters or section titles. Often they are generic: Introduction, Method, Results, and so on. The second level consists of the major headings within each chapter or section. These second-level entries in the table of contents guide readers more directly to the information they are seeking. Using features of Microsoft Word, you can create a table of contents automatically from your communication's headings.

Creating and reviewing your table of contents can help you polish the body of your communication. If you find that your table of contents wouldn't provide as much guidance as your readers would like, that's a sign that you may need to rephrase some of your headings or add additional ones.

Figure 13.7 shows the table of contents from the report whose cover is shown in Figure 13.2. Note that the words *Table of* do not appear.

Lists of Figures and Tables

Some readers search for specific figures and tables. If your communication is more than about fifteen pages long, you can assist readers by preparing a list of figures and tables. Figure 13.8 shows the list of figures from the EPA report whose cover is shown in Figure 13.2. That report also contains a list of tables with the same format.

FIGURE 13.7

Table of Contents of the Report Whose Cover Is Shown in Figure 13.2

Front matter. Note that lowercase Roman numerals are used for the front matter's page numbers.

Body of report. In addition to the chapter titles, the writers included the second-level headings.

Back matter

CONTENTS

U.S. Environmental Protection Agency

FIGURES

U.S. Environmental Protection Agency

FIGURE 13.8

List of Figures from the Report Whose Cover Is Shown in Figure 13.2

The writers provided a list of figures to assist readers interested in finding or reviewing the information provided in them.

HOW TO WRITE READER-CENTERED BACK MATTER

Depending on your readers and purpose, you may include one or more of the following kinds of back matter: appendixes; reference list, works cited, or bibliography; glossary; and index.

Appendixes

Appendixes enable you to present information you want to make available to your readers even though you know it won't interest all of them. For instance, in a research report you might create an appendix for a two-page account of the calculations you used for data analysis. By placing this account in an appendix, you help readers who will want to use the same calculations in another experiment, but you save readers who aren't interested from the necessity of wading through the calculations while reading the body of your report. Appendixes can also assist readers by providing important reference information in a readily accessed place. That is a function of Appendix A in the back of this text.

When you create appendixes, list them in your table of contents (see Figure 13.7) and give each an informative title that indicates clearly what it contains. Also, mention each appendix in the body of your report at the point where your readers might want to refer to it: "Printouts from the electrocardiogram appear in Appendix II."

Begin each appendix on its own page. Arrange and label the appendixes in the same order in which they are mentioned in the body of the communication. If you have only one appendix, label it simply "Appendix." If you have more than one, you may use Roman numerals, Arabic numerals, or capital letters to distinguish them.

References List, Endnotes, or Bibliography

LEARN MORE For additional information about documenting your sources, including links to other documentation systems, go to Appendix A and to your English CourseMate at *www.cengagebrain.com.*

Place your reference list, endnotes, or bibliography immediately after the body of your communication or after the appendixes. Appendix A explains which sources to cite and how to construct reference lists, endnotes, and bibliographies.

Glossary and List of Symbols

When writing at work, you will sometimes use terms or symbols that are unfamiliar to some of your readers. If you use each term or symbol only once or in only one small segment of your communication, you can explain its meaning in the text. Imagine, however, that you are writing a report in which a special term appears on pages 3, 39, and 72. If you define the term every time it occurs, your report will be repetitious. On the other hand, if you define the term only the first time it appears, your readers may have forgotten the definition by the time they encounter the term again. To solve this problem, create a glossary. It will provide the definition where readers can easily locate it if they need to, but where it won't encumber their reading if they don't.

Figure 13.9 shows the first page of the glossary for the EPA report previously mentioned. The author has the terms to be defined in boldface and color so readers can find them easily. Figure 13.10 shows a list of symbols.

Index

If your communication is too long for your readers to thumb through quickly, give them a quick path to specific pieces of information by creating an index. Identify the kinds of information they might want to locate without reading the rest of the communication. If several index topics can be gathered under a single word, indent them under the main word to create second-level entries. See the example index in Figure 13.11.

Some desktop publishing programs can help you create an index by generating an alphabetized list of the words used in your communication. From this list, you can index those that will help your readers find the information they desire.

GLOSSARY OF TERMS

Availability — The probability that equipment will be capable of performing its specified function when called upon at any random point in time. Calculated as the ratio of run time to the sum of run time and downtime.

Bottle — A single plastic container, also referred to as a container.

Cascade — To sequentially increase the belt speed in a series of conveyors.

Contamination — Bottles improperly removed at a station.

Effective Bottle Feed Rate — The average rate at which a specific type of bottle is fed during a mixed composition test. Calculated as the total number of bottles of a specific type fed divided by the total run time for a specific test.

Extended Test — A test series consisting of many replicates at pre-selected conditions.

U.S. Environmental Protection Agency

FIGURE 13.9

First Page of the Glossary of the Report Whose Cover Is Shown in Figure 13.2

In this glossary, the writers provide precise definitions for key terms in their report.

They use bold type and color to make the terms being defined stand out.

List of Symbols

a_k	allpass filter coefficients
$\mathbf{a}$	vector of allpass filter coefficients
A	cross-sectional area
$A(z)$	allpass transfer function
B	area ratio
c	speed of sound
$\mathbf{c}$	vector of transfer functions or of cosine functions
C	scaling coefficient
$C(z)$	transfer function of a subfilter in the Farrow structure
d	fractional part of the total delay D
D	total delay to be approximated
$D(z)$	denominator of $A(z)$

Helsinki University of Technology, Laboratory of Acoustics and Audio Signal Processing, Finland. Courtesy of Vesa Valimaki, Helsinki University of Technology

FIGURE 13.10

List of Symbols

This list of symbols, from a study concerning computer modeling of music, is several pages long.

Knowing that readers will search for symbols they have seen in the text, the writer has placed the symbols on left side—the side seen first by people who read from left to right.

To aid the readers' search, the writer has arranged the symbols in alphabetical order.

FIGURE 13.11

Index

This index is from the service manual for a diesel engine used in farm machinery.

The writers use second-level headings to organize related topics.

To help readers scan through the index, the writers used white space and capital letters to break the index into sections.

DETROIT DIESEL 53

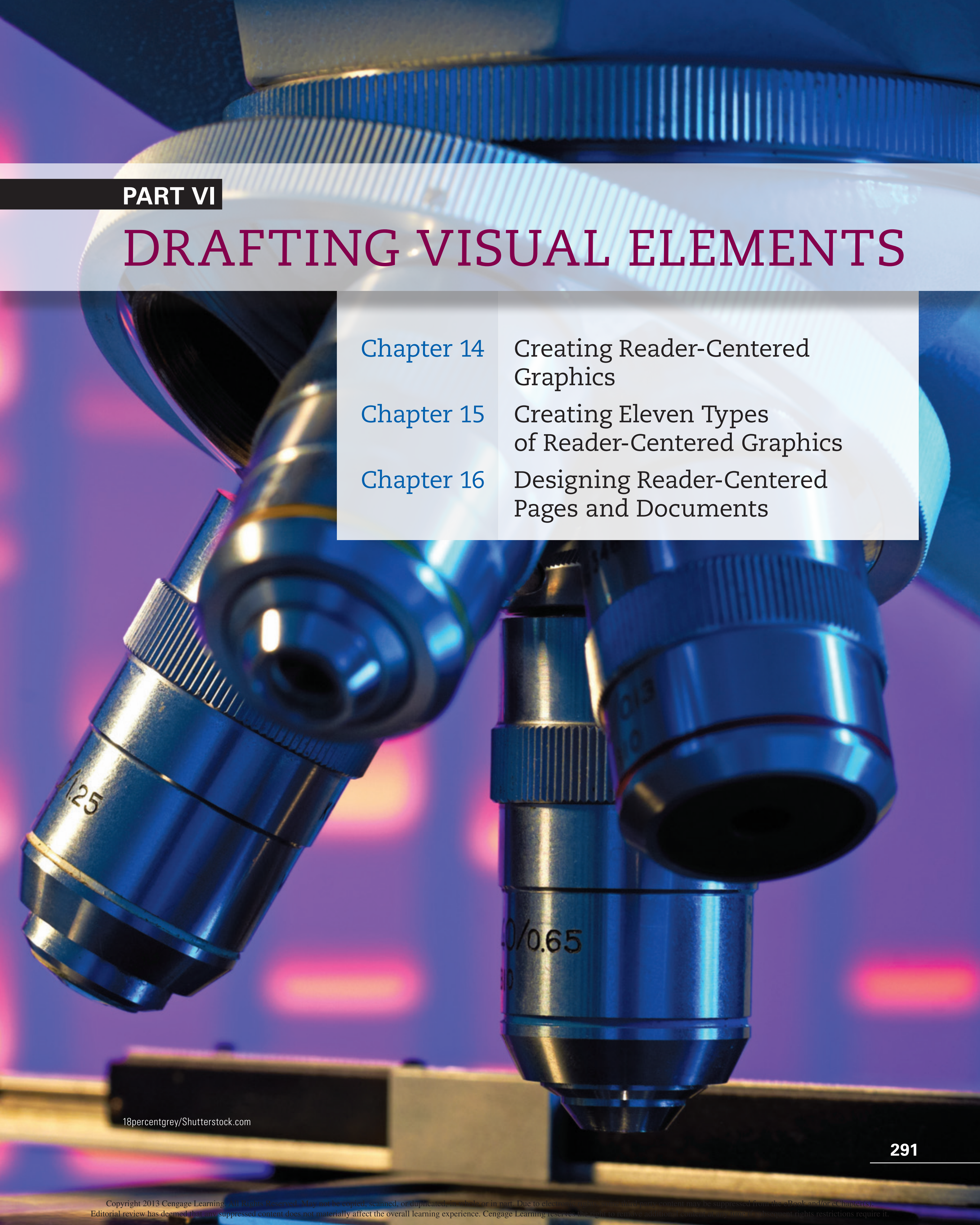
ALPHABETICAL INDEX

Subject — Section

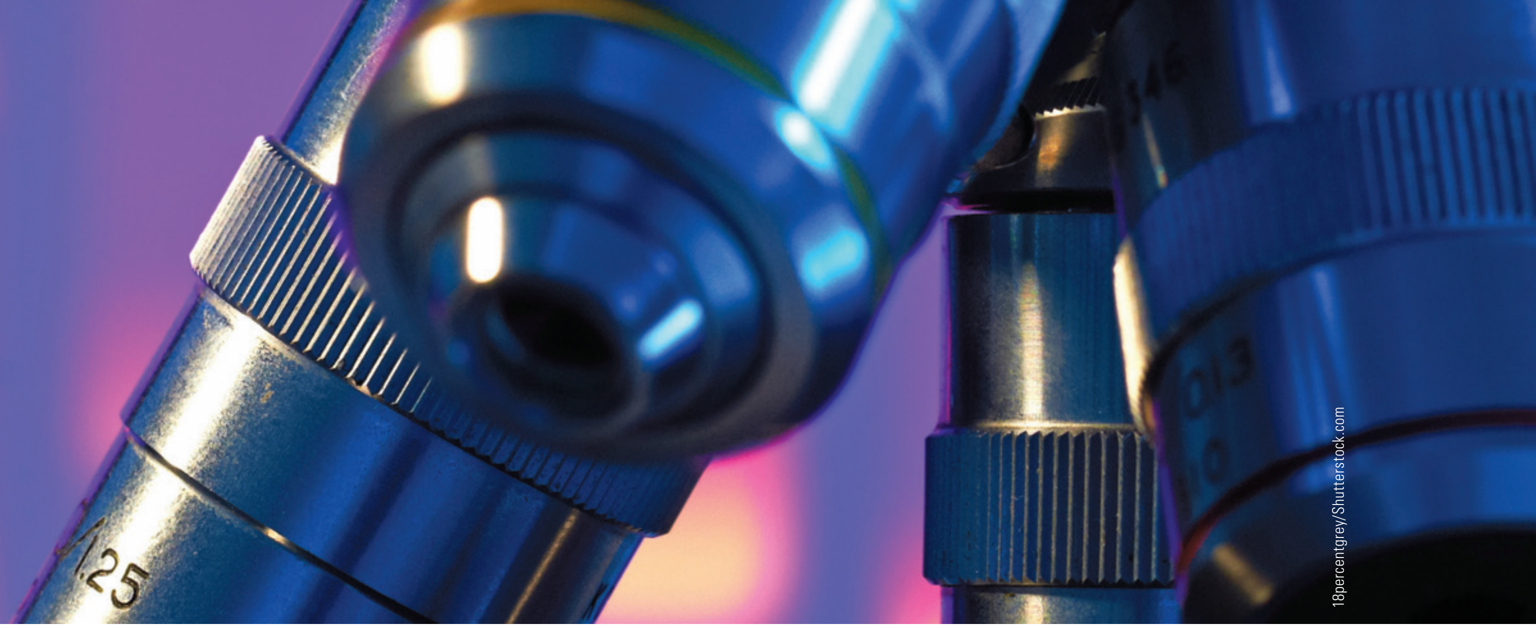
*General Information and Cautions Section

PART VI

DRAFTING VISUAL ELEMENTS



18percentgrey/Shutterstock.com



18percentgrey/Shutterstock.com

14 | Creating Reader-Centered Graphics

In communications you write at work, you will often convey some of your information and ideas in tables, graphs, photographs, flowcharts, drawings, and other visual representations. In fact, graphics are very common in communications written in many engineering, science, and other technical and specialized fields.

Why? They are able to convey some information much more concisely, clearly, memorably, and persuasively than words. Sometimes, they even replace words entirely, as in the wordless instructions shown in Figure 14.1.

Because graphics are such a powerful means of communication, developing your ability to create effective ones is just as important as your ability to write clear, informative, and compelling prose. Each one you create will have its own specific objectives, which include being useful to your readers and influencing their attitudes, even if only to persuade them that you are a skilled communicator.

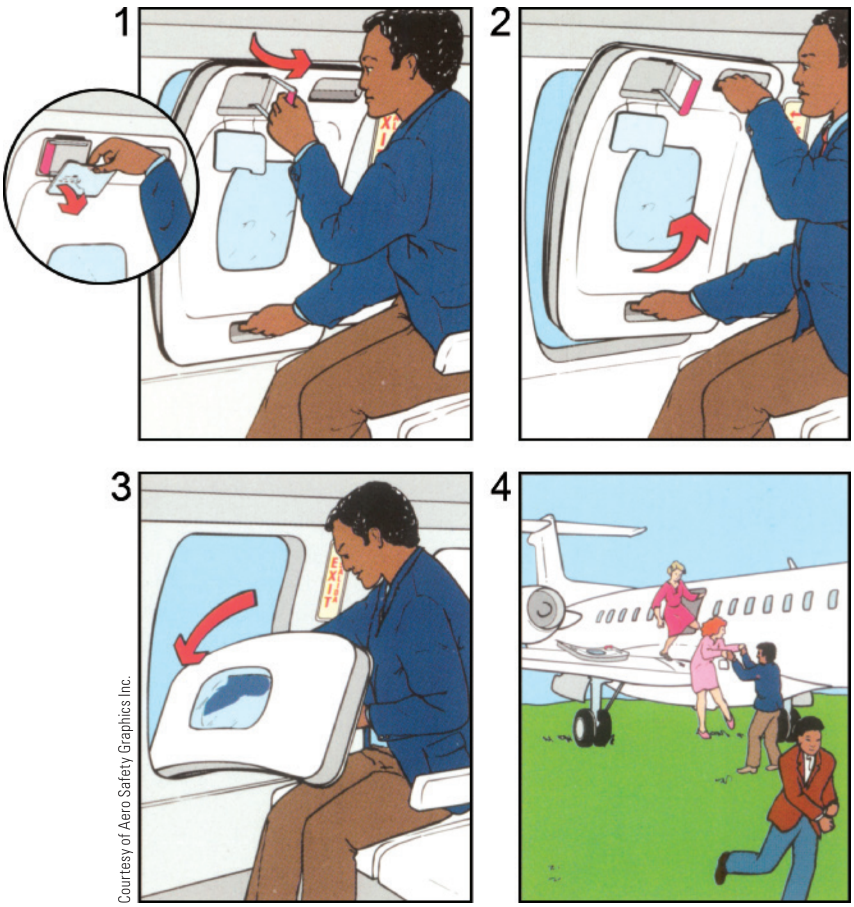
WEB For more information, examples, and links related to this chapter, go to your English CourseMate at *www.cengagebrain.com.*

Several factors influence the effectiveness of each graphic. This chapter describes and illustrates reader-centered strategies you can use to handle them. As you read this chapter, discuss it with your instructor in class, and apply its advice when creating graphics, focus on learning how to do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Identify places where graphics would increase your communication's usefulness and persuasiveness.
2. Choose the types of graphics best matched to your objectives.
3. Make your graphics easy for your readers to understand and use.
4. Use color to support your message.
5. Use graphics software and existing graphics effectively.
6. Integrate your graphics with your text.
7. Adapt your graphics when writing to readers.
8. Get permission and cite the sources for your graphics.
9. Avoid graphics that mislead.

The next chapter provides advice for constructing eleven types of graphics that are widely used in the workplace.



Courtesy of Aero Safety Graphics Inc.

FIGURE 14.1

Wordless Instructions for Leaving a Plane in an Emergency

Wordless instructions are often used when the readers do not share a common language, as is the case with airline passengers.

In these instructions, arrows show passengers how to remove the cover from the latch, pull the latch, remove the door, and throw the door out of the plane.

TRY THIS In addition to using arrows, what other design strategies help readers of the airline instructions understand what they should do? *Alternative:* Find a set of wordless instructions for something you own. What strategies did the designer use to make them easy to follow?

HOW TO IDENTIFY PLACES WHERE GRAPHICS WOULD INCREASE YOUR COMMUNICATION'S USEFULNESS AND PERSUASIVENESS

When planning, reviewing, and revising your communication, search actively for places where graphics can help you achieve your communication objectives. Contemporary society has become increasingly visual. More and more, people gain information through images rather than words. Paradoxically, though, most of us still think primarily of words when we want to convey information to others. Consequently, unless you devote time to looking for them, you may miss opportunities to increase your communication's effectiveness by replacing, supplementing, or reinforcing your words with visual presentations (Schriver, 1997).

Guideline 1 | Find places where graphics would make your communication easier for your reader to use

Begin by making a reader-centered search for places where graphics can increase your communication's usefulness to your readers—and perhaps save space as well. Look, for example, for places where graphics could help you achieve any of the following objectives. The Writer's Tutorial on pages 296 and 297 shows a sample graphic suited to each of these objectives.

- **Show your readers how something looks.** Drawings and photographs can often show the appearance of objects with greater clarity than words could achieve. For example, scientists use photographs to show the results of earthquakes, and NASA uses drawings to help readers visualize its space probes.
- **Show how something is constructed.** Drawings and photographs can show the structure of an object, such as the anatomy of a horse or the design of lasers used to make computer chips.
- **Show your readers how to do something.** Ideal for instructions, graphics explain procedures that would be much more difficult to describe—and understand—in prose.
- **Explain a process.** Many processes are best understood when visualized. For example, scientists use diagrams to help readers quickly understand how seawater picks up chemicals as it loops through hot-spring systems under the ocean.
- **Make particular facts easy to find and use.** From bus schedules to the nutrition tables on boxes and jars of food, tables and other graphics help readers quickly locate information they want to use.
- **Show trends and other numerical relationships.** Various graphics such as line graphs, bar graphs, and pie charts enable readers to grasp trends and other numerical relationships much more quickly than they could from sentences.

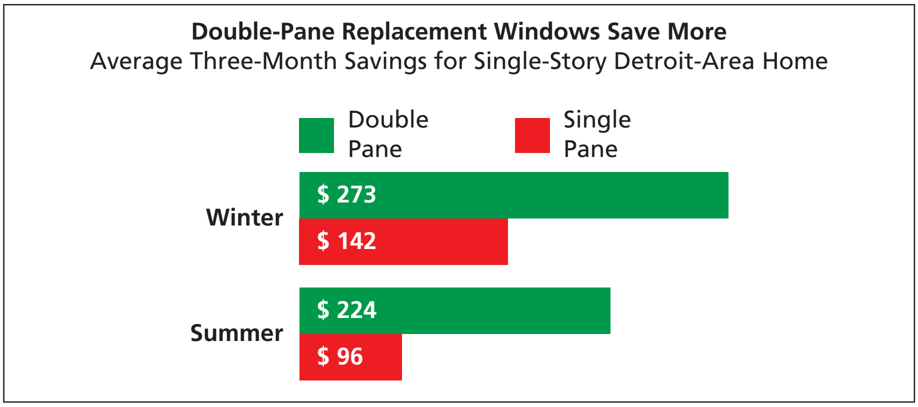


FIGURE 14.2

Graphic That Makes a Persuasive Point

With this bar graph, a company that installs replacement windows for older homes aims to persuade customers to purchase more expensive double-pane windows.

To emphasize the benefits of double-pane windows, the company used green to color the bars for the money saved by those windows. Green is associated with savings and environmental benefits. For the single-pane windows, the company used red, a color associated with financial loss.

Guideline 2 | Find places where graphics can increase your communication's persuasiveness

Graphics can greatly increase a communication's persuasive impact. Often this opportunity arises when a graphic enables you to support your persuasive points by conveying your data in an especially dramatic way (Kostelnick & Roberts, 1998). For example, a manufacturer of windows used the bar graph shown in Figure 14.2 to persuade home owners that they could greatly reduce heating and cooling bills by installing double-pane replacement windows, which cost more (and yield a greater profit) than single-pane windows.

Many other kinds of visual representations can enhance a communication's persuasiveness. A drawing, for instance, can help readers envision the desirable outcomes of projects you propose. A photograph of a polluted stream can forcefully portray a problem you want to motivate your readers to address.

When looking for places where graphics can help your communication achieve its goals, be careful to avoid including ones that don't serve a specific purpose. They will detract from your message. Worse, they may confuse your readers.

HOW TO CHOOSE THE TYPE OF GRAPHIC BEST MATCHED TO YOUR OBJECTIVES

Once you've decided where to use a graphic, identify the type that will be most effective at achieving your objectives. Most information can be presented in more than one type.

Numerical data can be presented in a table, bar graph, line graph, or pie chart. The components of an electronic instrument can be represented in a photograph, sketch, block diagram, or schematic. When deciding which type of graphic to use, consider both the tasks you want to help your readers perform and the way you want to affect their attitudes.

Guideline 1 | Consider your readers' tasks

Different types of graphics support different reading tasks. Consider, for example, Ben's choices.

Ben has surveyed people who graduated over the past three years from three departments in his college. Now he wants to report to the alumni what he has learned

WRITER'S TUTORIAL

GRAPHICS HELP READERS UNDERSTAND AND USE INFORMATION

Show Your Readers How Something Looks

NASA uses this drawing to show the public the appearance of a space probe sent to Saturn.

NASA artists chose to draw the probe from an angle of view that displays its key parts.

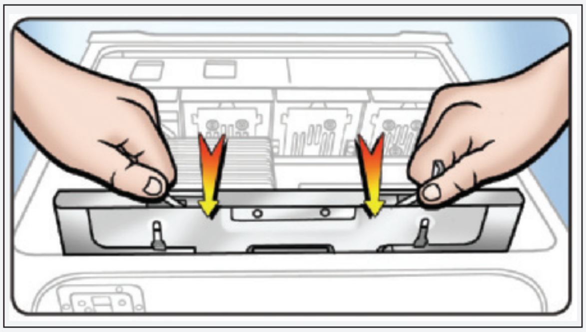
By including images of Saturn in the background, NASA helps readers imagine the satellite performing its mission.

Courtesy of NASA

Show Your Readers How to Do Something

Graphics can explain operations that would be difficult to describe—and understand—in prose. Writers used this drawing to help readers learn how to perform one step when replacing a computer's memory.

By showing the action from the same angle of view that a person performing this task would have, the writers prepared an easy-to-follow, reader-centered drawing.



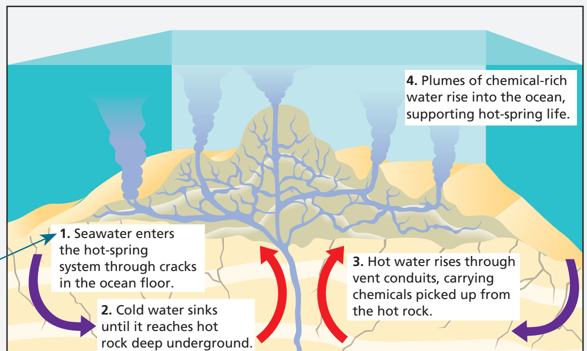
© 2009, 2010 Apple Inc. All rights reserved.

Explain a Process

To help readers understand how seawater picks up chemicals as it flows through hot-spring systems, a writer used this drawing.

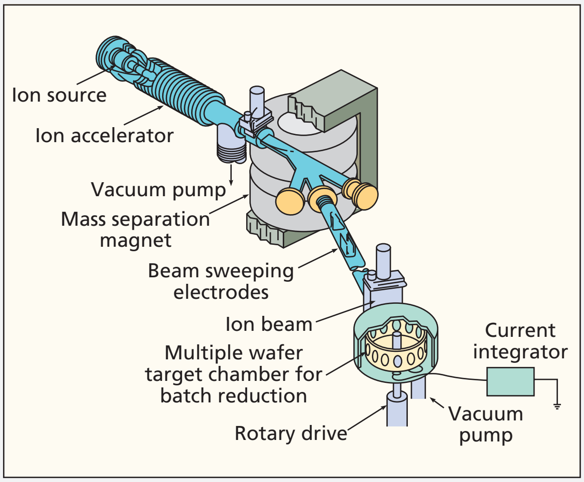
This drawing illustrates one way to integrate graphics with text to clarify meaning for readers.

- The text incorporated into the drawing explains the four major steps in the process.
- The caption below the figure describes the overall process.



Hot rock deep underground causes seawater to loop through hot springs, picking up heat and chemicals as it goes.

From "Life's Undersea Beginnings," by J. Cone, from *Earth*, 3, 38.



"Silicon Microelectrics Technology," *Bell Labs Technical Journal*, 2. 94, Autumn, 1997 - Reprinted by permission of Lucent Technologies, from *Bell Labs Technical Journal*, 1997, p. 94

Show How Something Is Constructed

Using this drawing, writers described the construction of lasers used to make computer chips.

By coloring the relevant parts blue, the writers highlighted the path of the laser beams.

To help readers identify the parts of the system, the writers not only placed each label close to the part it names but also drew arrows from each label to its part.

Kodak Developer	Developing Time (in Minutes)									
	SMALL TANK (Agitation at 30-Second Intervals)					LARGE TANK (Agitation at 1-Minute Intervals)				
	65°F (18° C)	**68°F (20° C)**	70°F (21° C)	72°F (22° C)	75°F (24° C)	65°F (18° C)	**68°F (20° C)**	70°F (21° C)	72°F (22° C)	75°F (24° C)
HC-110 (Dil B)	8½	**7½**	6½	6	5	9½	**8½**	8	7½	
D-76	9	**8**	7½	6½	5½	10	**9**	8	7	
D-76 (1:1)	11	**10**	9½	9	8	13	**12**	11	10	
MICRODOL-X	11	**10**	9½	9	8	13	**12**	11	10	
MICRODOL-X (1:3)*	—	—	15	14	13	—	—	17	16	
DK-50 (1:1)	7	**6**	5½	5	4½	7½	**6½**	6	5½	
HC-110 (Dil A)	4½†	**3¾†**	3¼†	3†	2½†	4¾†	**4¼†**	4†	3¾†	

* Gives greater sharpness than other developers shown in table.
† Avoid development times of less than 5 minutes if possible, because poor uniformity may result.

Note: Do not use developers containing silver halide solvents.

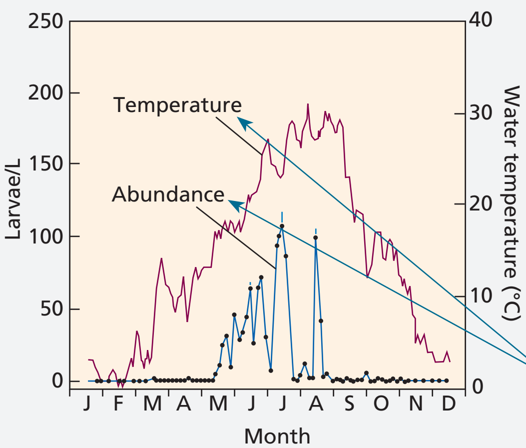
"Developing Time in Minutes," KODAK film. Reprinted courtesy of Eastman Kodak Company.

Display Information in a Useful Way

Kodak uses this table to help professional and amateur photographers find the optimum temperature and time for developing film.

By clearly distinguishing information for small and large tanks, Kodak has helped its readers focus on the part of the table that applies to the size of development tank they are using.

Kodak uses bold to highlight the columns for the temperature it recommends.



From J.A. Stroeckel, D.W. Schneider, L.A. Soeken, K.D. Blodgett, and R.E. Sparks, "Larval Dynamics of a Riverine Metapopulation: Implications for Zebra Mussel Recruitment, Dispersal, and Control in a Large-River System," *Journal of the North American Benthological Society*, 16 (1997): 591. Reprinted by permission of the Journal of the North American Benthological Society.

Show Trends or Other Numerical Relationships

A team of biological researchers used this graph to help readers see the relationship between the temperature of river water and the abundance of shellfish in the river.

This sophisticated graph has two X-axes, one for shellfish larvae (left side) and one for water temperature (right side).

To help their readers see which graphed line is for shellfish and which for water temperature, the researchers provided a label for each line.

about their average starting salaries. He could do this with a table, bar graph, or line graph (see Figure 14.3). Which type of graphic would be best? To decide, Ben must determine the specific task the alumni will want to perform by using the graphic. If they want to learn the average starting salary of people who graduated in their year from their department, a table will help them most. If they want to compare the average starting salaries in their department with the average starting salaries of people who graduated in that same year from the other departments, a bar graph will work best. And if the alumni's task will be to determine how the average starting salary

FIGURE 14.3

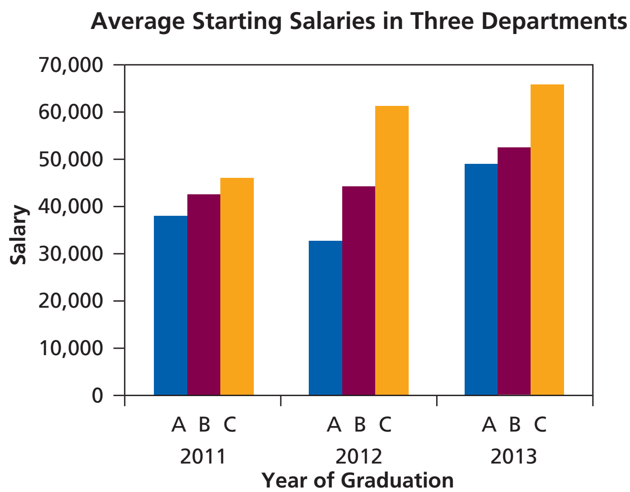
Three Ways of Showing Average Starting Salaries for Three Departments over Three Years

A table helps a reader who wants to quickly find a specific piece of information, such as the average starting salary for graduates of Department B in 2012.

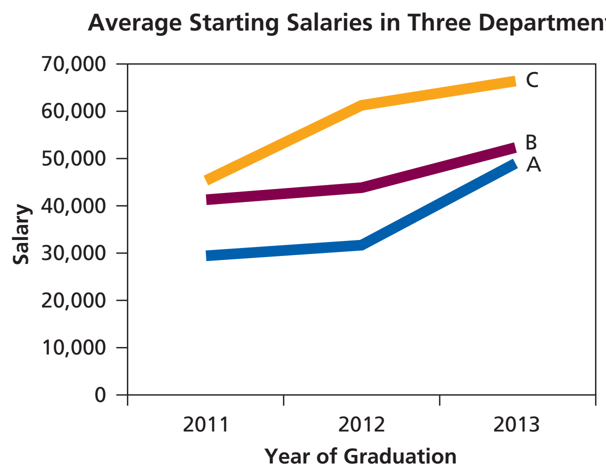
Average Starting Salaries in Three Departments

	Year of Graduation		
Department	2011	2012	2013
A	30,653	32,898	49,519
B	42,289	44,904	52,698
C	46,172	61,538	66,357

A bar graph helps a reader who wants to make comparisons, for instance, a comparison among the average starting salaries of three departments in 2012.



A line graph helps a reader who wants to see trends in the average starting salaries for one department or compare trends for two or more departments.



Calls to the National Help Line

Before Implementation	
February	3,242
March	3,023
April	3,319
May	3,390
After Implementation	
June	2,754
July	2,219
August	1,189

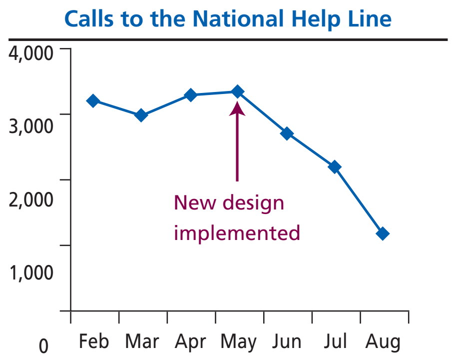


FIGURE 14.4

Comparison of the Persuasiveness of Data Presented in a Table and a Line Graph

in their department changed over the years and to compare that change with the changes experienced by the other departments, a line graph will be the most useful.

Guideline 2 | Consider your readers' attitudes

When selecting the type of graphic you will use, think about your readers' attitudes as well as their tasks. Pick the type of graphic that most quickly and dramatically communicates the evidence that supports your persuasive point.

Consider, for instance, Akiko's choices. Akiko recommended a change in the design of one of her company's products. In order to show how the company has benefited from this change, she has tallied the number of phone calls received by the company's toll-free help line during the months immediately before and after implementation of the new design. As Figure 14.4 shows, if Akiko presents her data in a table, her readers will have to do a lot of subtracting to appreciate the impact of her recommendation. If she presents her data in a line graph, they will be able to recognize her accomplishment at a glance.

At times, you may be able to meet your readers' needs only if you present your data in two ways. For instance, in scientific reports and journals, graphs are used in the text to provide readers with an overall understanding of the data. At the end of the report, the tables are presented for readers who want to examine the data in more detail, perhaps looking for other patterns in them.

Sometimes one type of graphic isn't enough.

HOW TO MAKE YOUR GRAPHICS EASY FOR YOUR READERS TO UNDERSTAND AND USE

Having chosen the type of graphic you will use, you must then design the item itself. When doing so, focus first on usefulness. Make your graphics, like your prose, easy for your readers to understand and use. Here are some suggestions.

Guideline 1 | Design your graphics to support your readers' tasks

First, follow this familiar, reader-centered strategy: Imagine your readers in the act of using your graphic. Then design it to support your readers' efforts. In drawings or photographs for step-by step instructions, for example, show objects from the same angle that your readers will see them when performing the actions you describe.

Likewise, in a table, arrange the columns and rows in an order that will help your readers rapidly find the particular pieces of information they are looking for. Maybe this means you should arrange the columns and rows in alphabetical order, according to a logical pattern, or by some other system. Use whatever arrangement your readers will find most efficient.

Guideline 2 | Consider your readers' knowledge and expectations

Of course, your readers will find your graphics useful and persuasive only if they can understand them. Some types are familiar to us all, but other types can be interpreted only by people with specialized knowledge. If you work in a field that employs specialized graphics, use these graphics only when communicating with readers in your field who will understand and expect them. However, when writing to other readers, use an alternative type of graphic—or include explanations these readers need in order to interpret the special-use graphic.

Guideline 2 | Simplify your graphics

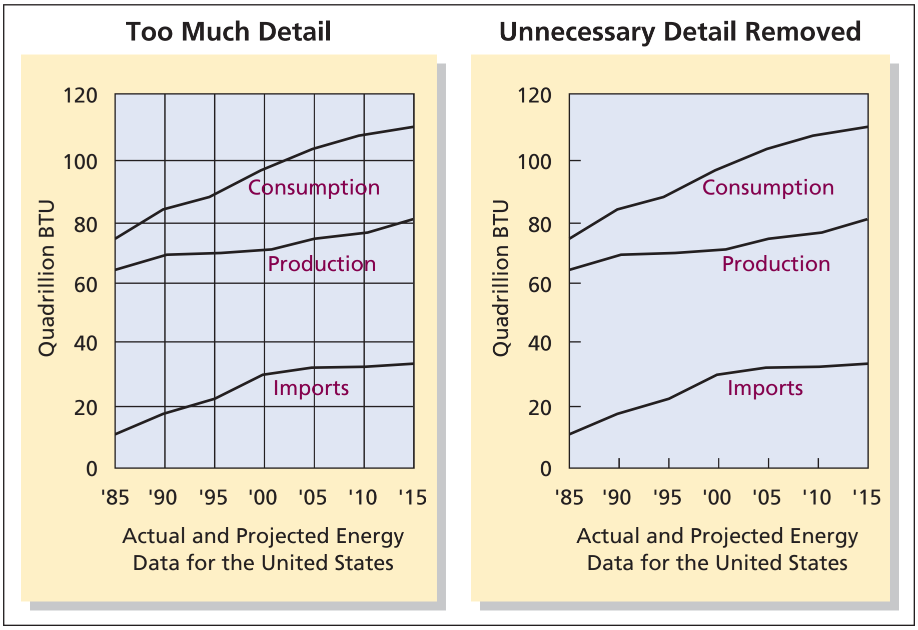
You can also make your graphics easy to understand and use by keeping them simple. Simplicity is especially important for graphics that will be read on a computer screen or from a projected image; people have more difficulty reading from these media than from paper. Here are some effective strategies for keeping your graphics simple.

- **Include only a manageable amount of material.** Sometimes, it's better to separate your information into two or more graphics than to cram it all into one.
- **Eliminate unnecessary details.** Like unnecessary words in prose, superfluous details in graphics create extra, unproductive work for readers and obscure the really important information. Figure 14.5 shows how the elimination of

FIGURE 14.5

A Line Graph with and without Grid Lines

Replacing the grid lines with tick marks helps the readers more easily follow the graphed lines and read the labels.



© Cengage Learning

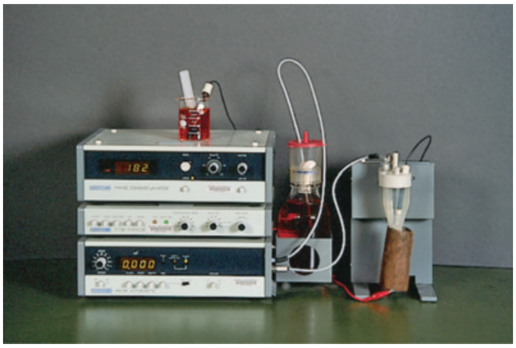
FIGURE 14.6

Two Photographs and a Drawing of the Same Equipment

Less Effective Photograph

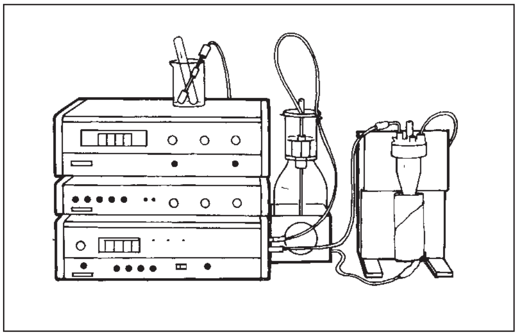
The cluttered background makes it difficult to identify the parts of the testing equipment.

More Effective Photograph



Removal of the clutter allows the parts to be distinguished.

Drawing



A line drawing shows very clearly some parts that are not obvious even in the uncluttered photograph.

Courtesy of Paul Anderson; © Cengage Learning

extraneous detail can simplify a graph. Figure 14.6 shows two ways to simplify a graphic showing complicated equipment by paring it down to the essentials.

Guideline 3 | Label the important content clearly

Labels help readers locate the information in a graphic and understand what it shows. In tables, label every row and column. In diagrams, label every part that is important to your readers. But avoid labeling other features. Unnecessary labels clutter a graphic, making it difficult to understand and use.

For each label, carefully choose the appropriate word or words and place them where they are easy to see. If necessary, draw a line from the label to the item. Avoid

FIGURE 14.7

Good Placement of Labels

This photograph shows a "seeing eye" robot developed at Utah State University to assist shoppers who are blind. It directs them to the products they want to purchase.

The creator of this graphic, Jeff D. Allred, placed the labels around the robot, person, and guide dog.

He printed the labels against white rectangles, an effective way of making the text readable when labels are placed inside a photograph. When creating photographs, people sometimes also place the arrows against a white background to make them easier to see.

In the labels, Jeff has printed each component's name in bold, followed by an explanation of the component and what it does.

© Jeffrey D. Allred

placing a label on top of an important part in your graphic. Figure 14.7 shows good placement of labels in a photograph. Note that labels placed in a graphic are much easier than a key for readers to use. See Figure 14.8.

Guideline 4 | Provide informative titles

Titles help readers to find the graphics they are looking for and also to know what the graphics contain once they locate them. Typically, titles include both a number (for example, "Figure 3" or "Table 6") and a description ("Effects of Temperature on the Strength of M312").

Make your titles as brief—and informative—as possible. Use more words if they are needed to give your readers precise information about your graphic. Don't say, "Information on Computer Programs," but say instead, "Comparison of the Speed and Capabilities of Three Database Programs." Be consistent in the placement of your titles. For example, place all titles above your figures or all below your figures.

If readers might seek a specific figure whose location won't be obvious from the regular table of contents, provide a separate list of the figures and the pages where they can be found.

LEARN MORE For more information on using a list of figures, see page 284.

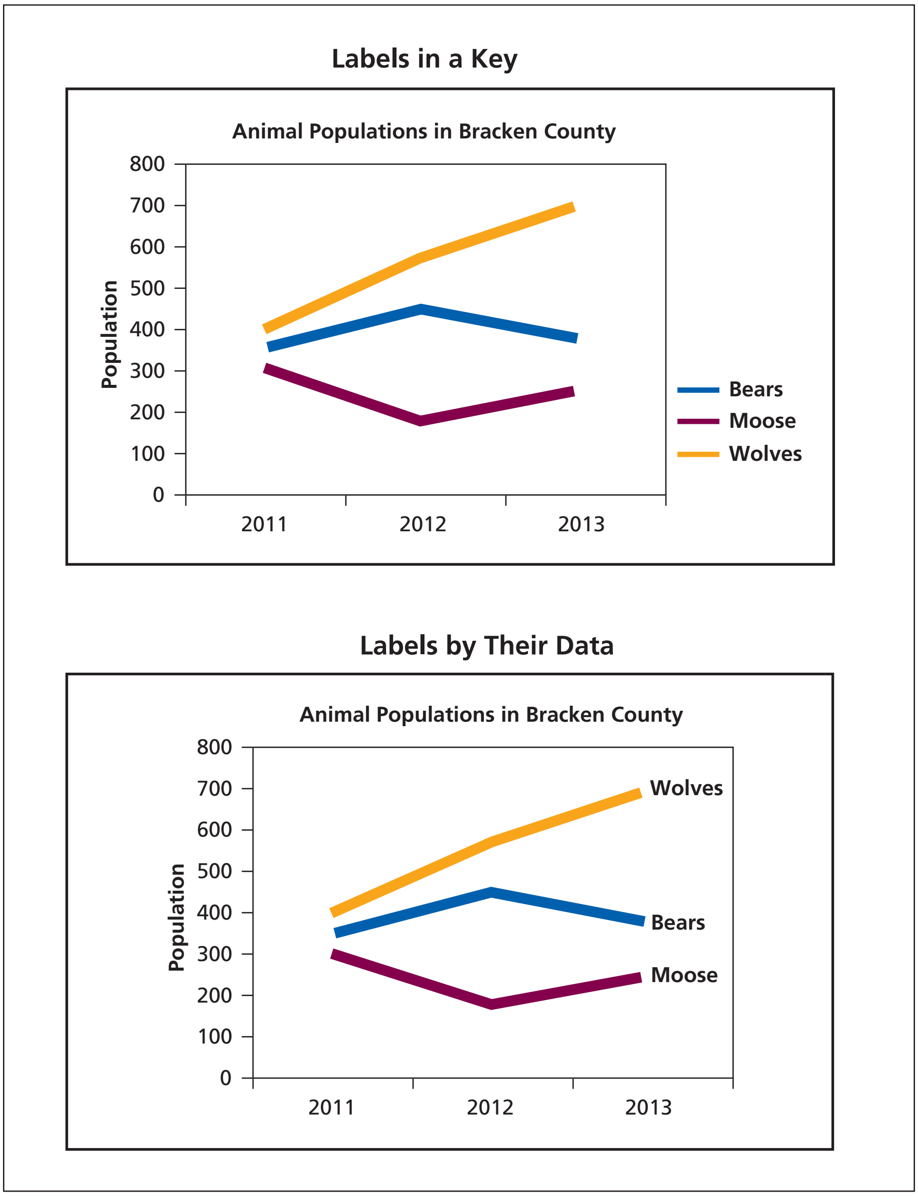


FIGURE 14.8

Labels Placed in a Graphic Versus Use of a Key

Difficult to Use
When labels are placed in a key, readers must repeatedly shift their attention from the graphic to the key in order to interpret the information provided. The same applies to keys for all graphics, including drawings and photos. This extra work is undesirable from the readers' perspective. The more labels, the more difficult keys are to use.

Easy to Use
When labels are placed next to the items they identify, readers can immediately link each part to its label.

HOW TO USE COLOR TO SUPPORT YOUR MESSAGE

In recent years, there's been an explosion of color in workplace communications. Web pages and other on-screen communications are saturated with color. Color enlivens and enhances the many oral presentations made by individuals using computer programs such as PowerPoint. In addition, as color printing and copying have become less expensive, even routine printed documents now incorporate multicolor designs.

The widespread availability of color puts a new and powerful aid to communication at your disposal. With color you can clarify your messages, speed your readers' comprehension, and make your information easy for your readers to use. Among other things, color can help you do the following:

TRY THIS Find a page in a book or magazine where color is used especially well for one of the purposes given in the bulleted list to the right. Can you find a page that uses color well for two of these purposes? Three?

- Highlight a point
- Evoke an emotional response
- Tell the reader where to look first
- Make your communication look more polished and attractive
- Group related items
- Establish hierarchies of importance

Guidelines for Using Color

The impact of color on readers is determined partly by physiology and partly by psychology. Based on what researchers know about these responses, the following suggestions will enable you to use color in a reader-centered way:

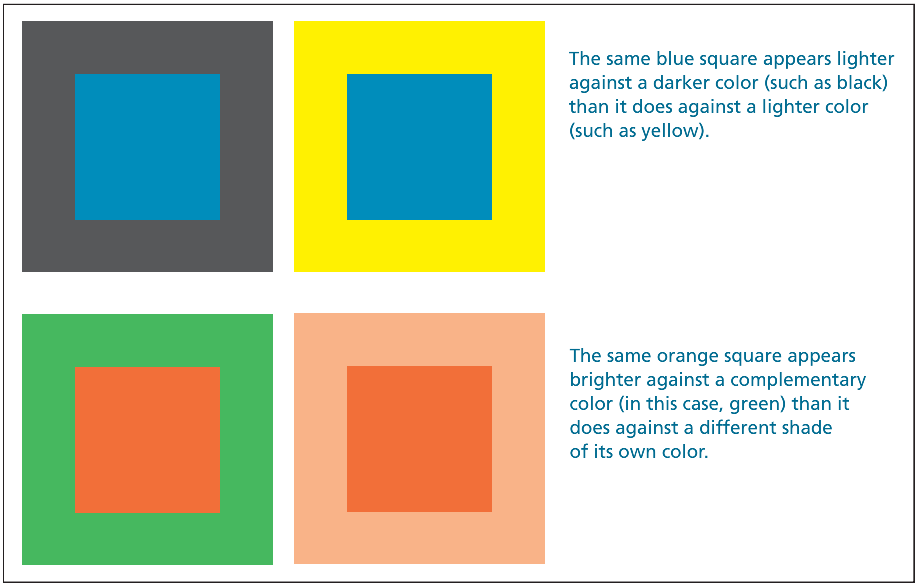
1. **Use color primarily for clarity and emphasis, not decoration.** Color attracts the eye. When you use color merely for decoration, you may be drawing your readers' eyes to ornamentation rather than to your communication's important content, thereby reducing the readers' ability to grasp your message.

   Also, attractive colors can actually make reading more difficult, as communication researcher Colin Wheildon (1995) discovered. To a number of people, he showed two versions of the same page, one printed in black and one in blue. The people said the blue version was more attractive, but those who actually read the blue version scored substantially lower on a comprehension test than those who read the black one.

   Deploy colors in a way that promotes rather than hinders comprehension.
2. **Choose color schemes, not just single colors.** Readers see a color in terms of its surroundings. As a result, a color's appearance can change if surrounding colors are changed. To illustrate this point, design expert Jan V. White (1990) uses blocks of color like those shown in Figure 14.9.

FIGURE 14.9

Some Ways a Color's Appearance Is Affected by the Surrounding Colors



Adapted from *Color for the Electronic Age* by Jan V. White, © 1990 by Jan V. White.

The top pair of blocks shows that the same shade of blue-gray appears lighter viewed against a dark color than against a pale color. As the bottom pair of blocks demonstrates, the same pure color looks much different when it is surrounded by another shade of the same color than when it is surrounded by a complementary color. The following advice builds on the ways color schemes affect readers.

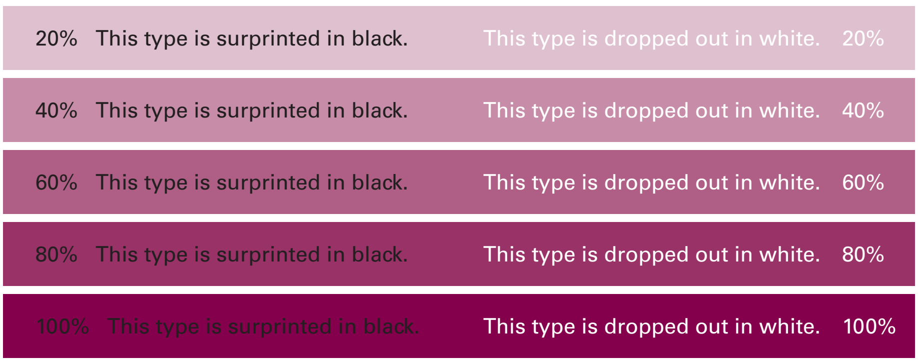
Use bright colors to focus your readers' attention. For example, to focus readers' eyes on a central component of a device for creating silicon-germanium crystals, the writer who created Figure 14.10 used bright yellow for the central part and dull colors for the other parts.

- **Use contrasting colors to create emphasis.** To make something stand out, put it against a much different color rather than a very similar color.

Greater contrast creates more emphasis.

- **Use warm, intense colors to make items "advance" toward the reader.** For example, to make their image of the molecular structure of cytokine "closer" to their readers, the scientists who created Figure 14.11 used warm, intense colors for the molecule and set them against a black background.

3. **To promote easy reading, use a high contrast between text and background.** To comprehend a written message, readers must first pick out the letters from the background on which they are printed. We traditionally use black print on white paper because this color combination creates a very high contrast that makes letter identification easy. However, backgrounds of colors other than white have become common in on-the-job communications. The following chart shows how much more difficult type becomes to read when contrast with the background is reduced.



© Cengage Learning

Reducing contrast reduces readability.

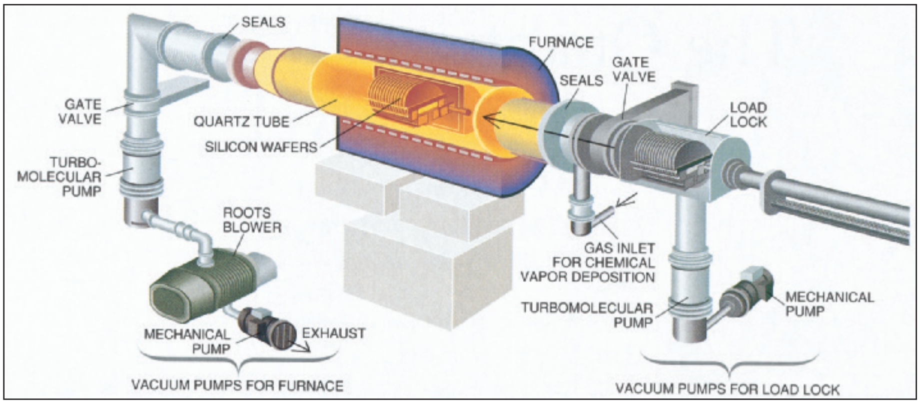
4. **Use the associations that colors already have for your readers.** In many contexts, colors have specific associations and even symbolic meaning. Driving through a city, we associate red with "Stop" and green with "Go." Use such associations when choosing colors for your graphics. Note the importance, however, of being alert to the fact that different colors have different associations in different contexts (White, 1990). In business, blue is associated with stability, but to a doctor it connotes death. In other contexts, blue suggests sky, water, and cold.

LEARN MORE The same colors also have different associations in different cultures. See page 310.

FIGURE 14.10

Bright Color Used to Focus Readers' Attention

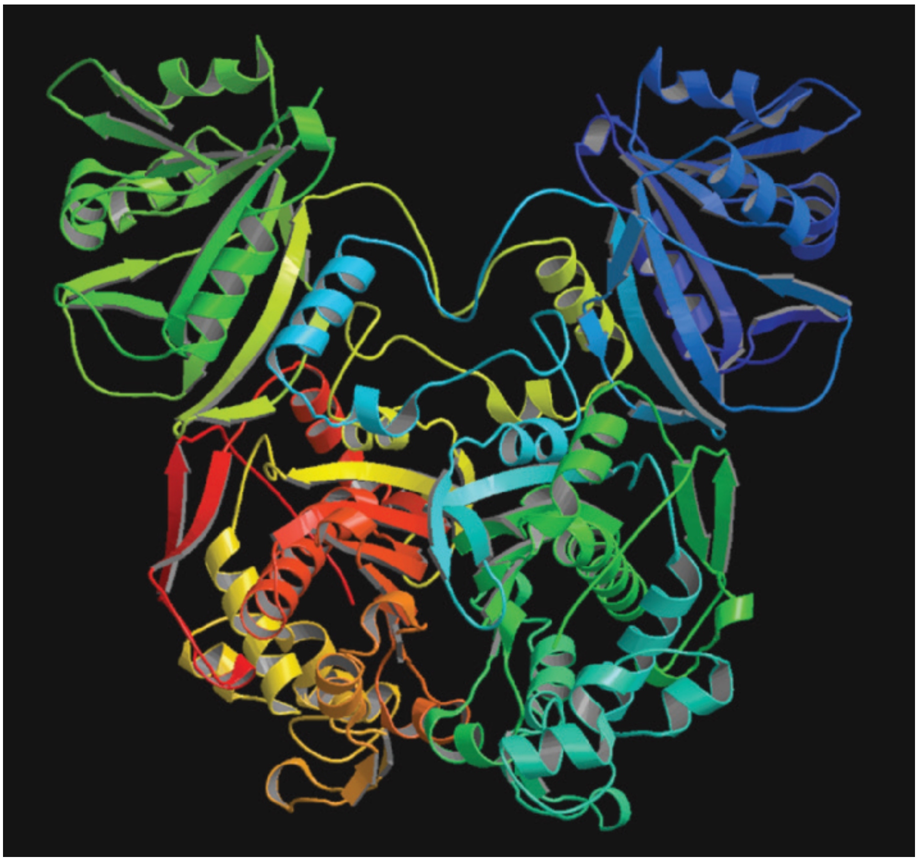
The bright color at the center of this figure draws the readers' attention there.



5. **Use colors consistently to help your readers establish patterns of meaning.** Readers also rely on color patterns to help them understand the information shown in graphics. You can help them out. For example, if you use orange to represent the raw materials and green to represent the products of a manufacturing process, use the same colors for the same purposes in other diagrams in the same communication.
6. **Stick to a few colors.** While the strategic use of color can increase a communication's effectiveness, an overabundance of color can cause

FIGURE 14.11

Warm, Intense Colors Used Against a Dark Background to Make Important Material Advance Toward the Reader



confusion. Colors compete with one another for attention. To help readers see the patterns of meaning you are establishing, limit yourself to as few colors as possible.

HOW TO USE GRAPHICS SOFTWARE AND EXISTING GRAPHICS EFFECTIVELY

Software companies offer a variety of powerful programs that can help you create reader-centered graphics. Even standard desktop publishing programs include many capabilities for creating graphics. For example, Microsoft Word and similar programs enable you to create line graphs, bar charts, organizational charts, and drawings, among other graphics.

As handy as such software features are, they sometimes have default settings or limitations that produce results that are not reader-centered. Look, for example, at the top graph in Figure 14.12, which was created using the default setting in Microsoft Excel. The text is too small to be read easily, there are no labels for the axes, and the use of a legend means that readers must do some work to match the labels with the corresponding lines. These problems are eliminated using the formatting features in Excel, as demonstrated in the revised graph at the bottom of Figure 14.12. Always review graphics you produce with software from your readers' perspective, making sure that it will be as useful and persuasive as possible for them.

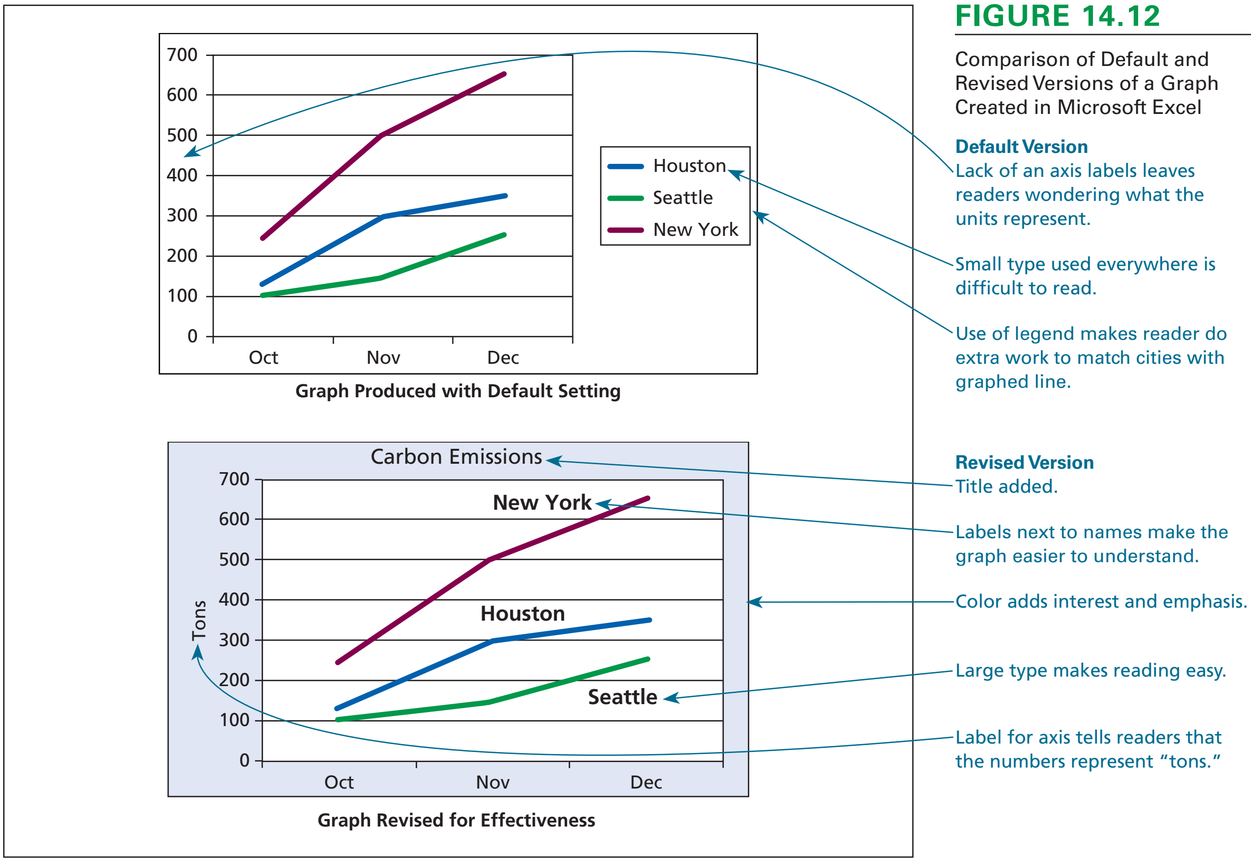


FIGURE 14.12

Comparison of Default and Revised Versions of a Graph Created in Microsoft Excel

The same caution applies when you are incorporating into a communication a graphic previously made by you or by co-workers. A graphic that was extremely well-suited for the audience and purpose for which it was originally created is not necessarily designed in a way that will best address your objectives in a new situation or with different readers.

HOW TO INTEGRATE YOUR GRAPHICS WITH YOUR TEXT

To enable your graphics to achieve their potential for usefulness. and persuasiveness, carefully integrate them with a communication's prose. Here are four strategies you can use to create a single, unified message in which your graphics and prose work harmoniously together.

Guideline 1 | Introduce your graphics in your text

LEARN MORE For advice on integrating graphics into oral presentations and web pages, see Chapters 20 and 22.

When people read, they read one sentence and then the next, one paragraph and then the next, and so on. When you want the next element they read to be a table or a chart rather than a sentence or a paragraph, you need to direct their attention from your prose to the graphic and tell them how the graphic relates to the statements they just read. There are various ways of doing this:

Two sentences

> In a market test, we found that Radex was much more appealing than Talon, especially among rural consumers. See Figure 3.

One sentence with an introductory phrase

> As Figure 3 shows, Radex was much more appealing than Talon, especially among rural consumers.

One sentence with the reference in parentheses

> Our market test showed that Radex was much more appealing than Talon, especially among rural consumers (Figure 3).

Sometimes your reference to a graphic will have to include information your readers need in order to understand or use the graphic. For example, here is the way the writers of an instruction manual explained how to use one of their tables:

Writer tells reader how to use the graphic.

> In order to determine the setpoint for the grinder relay, use Table 1. First, find the grade of steel you will be grinding. Then read down column 2, 3, or 4, depending upon the grinding surface you are using.

Whatever kind of introduction you make, place it at the exact point where you want your readers to focus their attention on the graphic.

Guideline 2 | Place your graphics near your references to them

WEB To see communications whose creators have integrated graphics effectively with their text, go to your English CourseMate at ***www.cengagebrain.com.***

When your readers come to a statement asking them to look at a graphic, they lift their eyes from your prose and search for the graphic. You want to make that search as short and simple as possible. Ideally, you should place the graphic on the same page as your reference to it. If there isn't enough room, put the graphic on the page facing or the page that follows. If you place the figure farther away than that (for instance, in an appendix), give the number of the page on which the figure can be found.

Guideline 3 | State the conclusions you want your readers to draw

One way to integrate your graphics into your text is to state explicitly the conclusions you want your readers to draw from them. Otherwise, readers may draw conclusions that are quite different from the ones you have in mind.

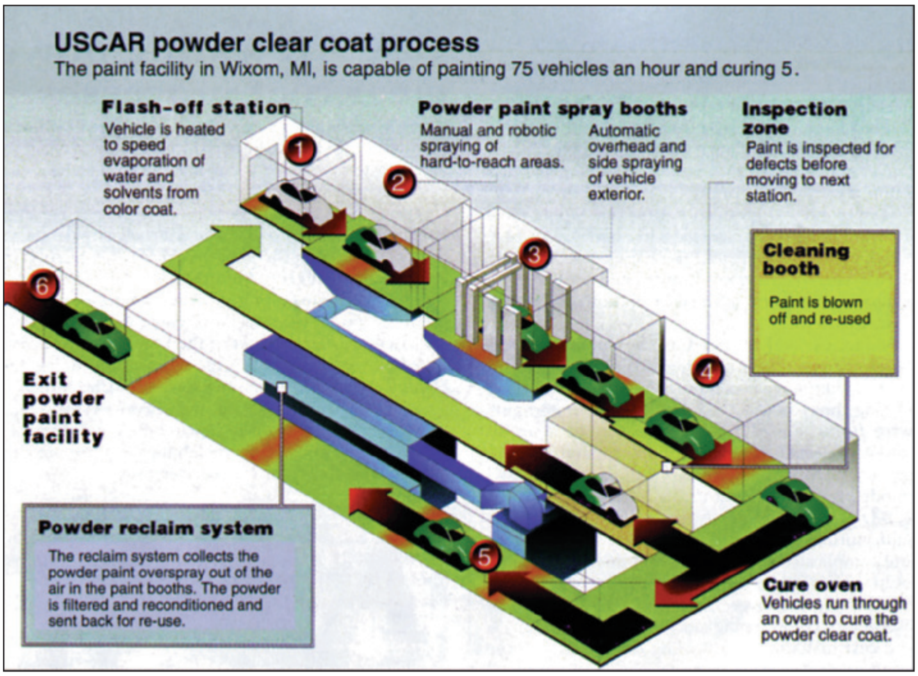
For example, one writer included a graph that showed how many orders she thought her company would receive for its rubber hoses over the next six months. The graph showed that a sharp decline would occur in orders from automobile plants, and the writer feared that her readers might focus on that fact and miss the main point. So she referred to the graph in the following way:

> As Figure 7 indicates, our outlook for the next six months is very good. Although we predict fewer orders from automobile plants, we expect the slack to be taken up by increased demand among auto parts outlets.

Writer tells reader how to use the graphic.

Guideline 4 | When appropriate, include explanations in your figures

Sometimes you can help your readers understand your message by incorporating explanatory statements into your figures. Figure 14.13, which shows how paint powder is applied to cars in an automobile assembly line, provides an example.



© 1997 Society of Automotive Engineers International (SAE), Warrendale, PA.

FIGURE 14.13

Explanatory Text Incorporated in a Figure

The numbered explanations help readers understand the process by describing it step by step.

The boxed explanations help readers identify and understand the function of two important parts of the paint facility.

HOW TO DETERMINE WHETHER YOU NEED TO OBTAIN PERMISSION AND CITE THE SOURCES FOR YOUR GRAPHICS

Copyright law treats graphics in a way that differs significantly from its treatment of text. Under the "fair use" provision of the law, you may quote a small part of a text without permission. However, you must obtain permission for *every* graphic you wish to use, even if you want to use only one out of hundreds in a particular book. The only exceptions are graphics in the public domain because they belong to a government agency or are owned by your employer. Even for graphics in the public domain, cite the source of your graphics.

LEARN MORE For more information on copyright and fair use, turn to pages 147–150.

You must obtain permission and cite sources for graphics obtained at websites as well as those from print documents.

GLOBAL GUIDELINE: ADAPT YOUR GRAPHICS WHEN WRITING TO READERS IN OTHER CULTURES

Visual language, like spoken and written language, differs from nation to nation. For example, Dwight W. Stevenson (1983) reports that while people in Western nations typically read graphics from left to right, the Japanese read them from right to left—the same way they read prose. Moreover, though many technical symbols are used worldwide, others are not.

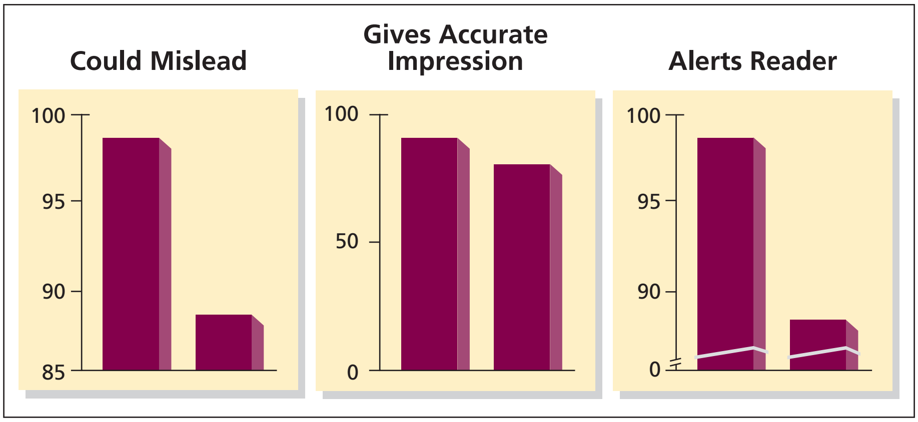
A major U.S. corporation reports that it once encountered a problem with publications intended to market its computer systems abroad because they included photos of telephones used in the United States rather than the much different-looking telephones used in the other countries (Anonymous). The design of many other ordinary objects differs from country to country. If you use a picture of an object that looks odd to people in your target audience, the effect you are striving for may be lost. Customs vary even in such matters as who stands and who sits in various working situations. Certain hand gestures that are quite innocent in the United States are regarded as obscene elsewhere in the world.

Colors too have different connotations in different cultures. While yellow suggests caution or cowardice in the United States, it is associated with prosperity in Egypt, grace in Japan, and femininity in several other parts of the world (Thorell & Smith, 1990).

The point is simple: Whenever you are writing for readers in another country, discuss your plans and review your draft graphics with people familiar with that country's culture. If possible, also test your drafts with these individuals.

ETHICS GUIDELINE: AVOID GRAPHICS THAT MISLEAD

Graphics can mislead as easily as words can. When representing information visually, you have an ethical obligation to avoid leading your readers to wrong conclusions. This means not only that you should refrain from intentional manipulation



© Cengage Learning

FIGURE 14.14

Creating Ethical Bar Graphs

Because its *Y*-axis begins above zero, the graph on the left can mislead.

The two graphs on the right illustrate ways to avoid misleading.

of your readers but also that you should guard against accidentally misleading readers. Here are some positive steps you can take when creating several common types of graphs.

Ethical Bar Graphs and Line Graphs

To design bar graphs and line graphs that convey an accurate visual impression, you may need to include zero points on your axes. In Figure 14.14, the left-hand graph makes the difference between the two bars appear misleadingly large because the *Y*-axis begins at 85 percent instead of at zero. The center graph of Figure 14.14, gives a more accurate impression of the data represented because the *Y*-axis begins at zero.

If you cannot use the entire scale, indicate that fact to your readers by using hash marks to signal a break in the axis and, if you are creating a bar graph, in the bars themselves. The right-hand graph in Figure 14.14 shows an example.

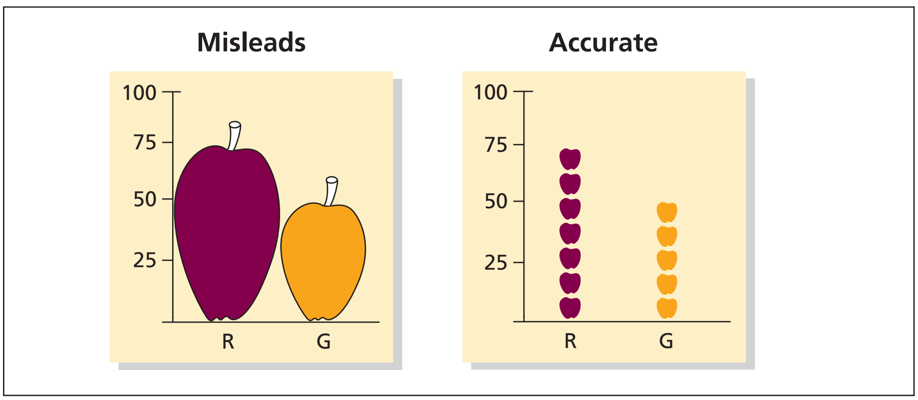
Note, however, that zero points and hash marks are sometimes unnecessary. For example, in some technical and scientific fields, certain kinds of data are customarily represented without zero points, so readers are not misled by their omission.

Ethical Pictographs

Pictographs can also mislead readers. For example, the graphs in Figure 14.15 represent the average percentage of an apple harvest that a grower should expect to

TRY THIS

Using your favorite search engine, search for "misleading graphs." Can you find one that seems to be misleading through carelessness, one that the creator appears to have made to manipulate readers, and one that is called misleading but wouldn't really cause anyone to draw an inaccurate conclusion?



© Cengage Learning

FIGURE 14.15

Creating Ethical Pictographs

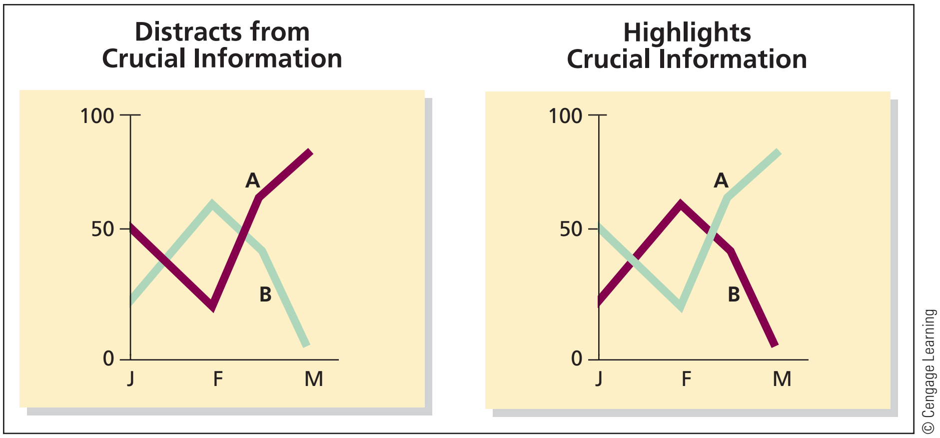
The left-hand pictograph makes the difference between the two amounts larger than it actually is because the red apple is larger in height *and* width, thereby enlarging its area disproportionately.

FIGURE 14.16

Using Color Ethically

The left-hand graph misleads readers if Trend B represents the crucial information.

The right-hand graph shows how to use color to avoid misleading.



be graded Extra Fancy. This left-hand graph makes the percentage of Red Delicious apples seem much larger than the percentage for Golden Delicious, even though the actual difference is only 20 percent. That's because the picture of the Red Delicious apple is larger in height *and* width, so its area is much greater. The right-hand graph shows how to represent the data accurately: by making columns that differ in height alone.

Ethical Use of Color

WEB For additional information about ethical issues involved with graphics, go to your English CourseMate at *www.cengagebrain.com.*

Like any other element of a graph, color can be used unethically. For example, because bright colors attract the eye, they can be used to distract the reader's focus from the most important point. The left-hand graph in Figure 14.16 uses a bright red line for unimportant data in order to draw attention away from the crucial bad news, which it shows with a dull green line. The right-hand graph corrects the problem by using bright red for the most important news.

CONCLUSION

Graphics can greatly increase the clarity and impact of your written communications. To use graphics well, you need to follow the same reader-centered strategy that you use when writing your prose: Think about the tasks your readers will perform while reading and think about the ways you want your communication to shape your readers' attitudes. Doing so will enable you to decide where to use graphics, determine the most effective types of graphics to use, make them easy to understand and use, and integrate them successfully with your prose.

Figure 14.17 provides a guide you can use when designing your graphics. Chapter 15 supplements this chapter's general advice by providing detailed information about how to construct eleven types of graphics that are often used at work.

FIGURE 14.17

Writer's Guide for Creating Graphics

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

WRITER'S GUIDE
CREATING GRAPHICS

Planning

1. Identify places where graphics will increase your communication's usefulness.
2. Identify places where graphics will increase your communication's persuasiveness.

Selecting

1. Select the types of graphics that will best support your readers' tasks.
2. Select the types of graphics that will effectively influence your readers' attitudes.

Designing

1. Design graphics that are easy to understand and use.
2. Design them to support your readers' tasks.
3. Design graphics that your readers will find persuasive.
4. Keep your graphics simple enough for easy use.
5. Label content clearly.
6. Provide your graphics with informative titles.

Using Color

1. Use colors to support your message.
2. Use color for emphasis, not decoration.
3. Choose a color scheme, not just individual colors.
4. Provide high contrast between text and background.
5. Select colors with appropriate associations.
6. Limit the number of colors.
7. Use color to unify the overall communication.

Integrating with the Text

1. Introduce each graphic in the text.
2. Tell your readers the conclusions you want them to draw.
3. Provide all explanations your readers will need in order to understand and use each graphic.
4. Locate each graphic near the references to it.

Addressing an International Audience

1. Check your graphics with persons from the other nations.

Using Graphics Ethically

1. Avoid elements that might mislead your readers.
2. Obtain permission from the copyright owner of each image that is not in the public domain.

USE WHAT YOU'VE LEARNED

EXERCISE YOUR EXPERTISE

1. Create an outline for an assignment in your course. On the finished outline, list each place where a graphic could make your communication more useful and persuasive in your reader's eyes. For each place, identify the type of graphic that will be most effective in helping you achieve your communication objectives.
2. Using a desktop publishing program, make a table that displays the number of hours in a typical week that you spend in each of several major activities, such as attending class, studying, eating, and visiting with friends or family. The total number of hours should equal 168. Be sure to include a brief heading for the columns and rows. Next, use your desktop publishing program to convert your table to a graph or chart. Refine your table so that the graph is as easy to read as possible. For assistance in using these features of your program, use the program's Help feature. Alternatively, do this exercise using a different kind of data.
3. Using a desktop publishing program's drawing feature, create a simple illustration of a piece of equipment used in your major or in one of your hobbies or activities. For assistance in using the drawing feature of your program, use the program's Help feature.

Note: Exercises for developing your expertise in applying this chapter's guidelines when creating specific types of graphics are available at your English CourseMate at www.cengagebrain.com.

EXPLORE ONLINE

Browse the web for the sites of companies that provide products or services related to your major. Find sites for several companies in your country and several in a country located in a very different part of the world. For instance, if you are in Asia, look at sites in the Middle East, Africa, Europe, or North America. Using the guidelines in this chapter, compare the graphics in the two sets of websites. Although you will have looked at too few websites to make any broad generalizations about the use of graphics in the two countries, what hypotheses can you form about their similarities and differences?

COLLABORATE WITH YOUR CLASSMATES

1. Team up with another student. First, each of you is to locate two different types of graphics in journals, textbooks, or other sources in your field (including websites). Working together, evaluate each of the graphics from the perspective of the guidelines in this chapter. What features of the designs are effective? How could each graphic be improved?
2. Working with another student, exchange drafts of a project in which you are both using one or more graphics. Using the guidelines in this chapter, review the graphics in the drafts. What features are most effective in achieving the writer's usefulness and persuasiveness goals? How could the graphics be made more effective from the target readers' perspective?

APPLY YOUR ETHICS

Graphs and various types of charts appear frequently in the newspapers and popular magazines. Occasionally, they are criticized for presenting data in a misleading fashion. Find a graphic that you feel may mislead readers. Explain the reason for your assessment and tell how the graphic could be redesigned. Also, identify persons who might be adversely affected or who might unfairly benefit if some action were taken on the basis of the misinterpretation. Present your results in the way your instructor requests.

15 | Creating Eleven Types of Reader-Centered Graphics

This chapter includes a set of Writer's Tutorials that provide detailed reader-centered advice for creating eleven types of graphics that are widely used on the job. The table below will help you choose the type that is best suited to your purpose.

TO HELP YOUR READERS . . .	BEST GRAPHICS	PAGE
TABLES AND GRAPHS		
• Find and use data, facts, or advice	Table	316
• Understand the relationships among variables	Line graph	318
• Compare quantities	Bar graph, Pictograph	320–322
• See a trend	Line graphs, Bar graph	318, 320
• See the relative sizes of the parts of a whole	Pie chart	323
IMAGES		
• See how something looks	Photograph, Drawing, Screen shot	324, 326–327
• Understand how something is constructed	Photograph, Drawing	326–327
• Understand a process	Flowchart	330
• Understand how to do something	Photograph, Drawing, Screen shot	326, 329
MANAGEMENT GRAPHICS		
• Understand the structure of an organization	Organizational chart	332
• Understand the schedule for completing a project	Schedule chart	333

TABLES

How to Create Formal Tables

Table number

Title
Be precise and specific.

Units of measure
Include the units if they won't be obvious to your readers.

Row headings
Use precise words your readers will understand.

Order headings in a way that will be most useful to your readers.

Footnotes
Place them below the table. Use letters, not numbers, so your readers don't confuse a footnote with data.

TABLE 9

Annual Expenses for Major Divisions Millions of Dollars		
	Northeast	**South**
Production		
Materials	57.0	248.0
Labor	904.0	329.0
Maintenance	112.0	56.0
Construction	27.0[A]	9.0
Depreciation	16.0	3.0

[A] Final stage of new power plant

SOURCE: Corporate Budget Office

Column headings
Use precise words your readers will understand.

Order column headings in a way that will be most useful to your readers.

Data
Align on right or on the decimal point.

Source
Identify the source of your data unless the source will be obvious to your readers.

How to Create Informal Tables

Informal tables flow right into the text. They are useful when the preceding sentence tells what the table is about and when the interpretation of the data is obvious.

Sales figures show steady growth in market share during the last quarter by two divisions and remarkable growth for the third.

Minsk Machine Tools	5%
PTI Technical Services	5%
Strausland Microchips	9%

No Column Headings
You can omit column headings in informal tables when the nature of the content will be obvious to your readers.

WEB
To see more sample tables, go to your English CourseMate at www.cengagebrain.com. The website also includes tips on creating tables in Microsoft Word.

How to Create Tables That Contain Only Text

Compared with paragraphs, tables can present many kinds of textual information in a manner that is much easier for readers to understand and use. The title is usually centered or aligned left over the entire table. Headings and other content are also usually centered or aligned left in their columns.

Lawn Mower Troubleshooting		
Problem	**Cause**	**Action**
Engine fails to start	A Blade control handle disengaged.	A Engage blade control handle.
Hard starting or loss of power	A Spark plug wire loose. B Carburetor improperly adjusted.	A Connect and tighten spark plug wire. B Adjust carburetor.

In this table, the title and column headings are centered.

The table's content is aligned to the left.

Comparisons of Foods		
Food	**Calories**	**Fat**
Apple	101	0
Apple Pop Tart	191	2.9 g

In this table, the title, column headings, and content are all centered.

TIPS FOR CREATING READER-CENTERED TABLES

- Use extra space or draw horizontal lines to guide your readers' eyes across rows or groups of rows.
- Make key information stand out with bold, color, and highlighting.
- Sort row and column headings to help readers find the information they want.

UNSORTED	**SORTED**
Fruits	Nutritious Foods
Sweets	Fruits
Legumes	Grains
Grains	Legumes
Fried products	Nonnutritious foods
	Fried products
	Sweets

Group related items under a common heading.

Arrange headings and subheadings in an order that will help the readers find what they want. In this example, alphabetizing is used for subheadings. The heading "Nutritious Foods" is placed before "Nonnutritious Foods" for emphasis.

- Avoid tables that are too large for readers to use easily.
  - Include only what your readers need.
  - If the table is still large, divide it into two or more separate tables.

LINE GRAPHS

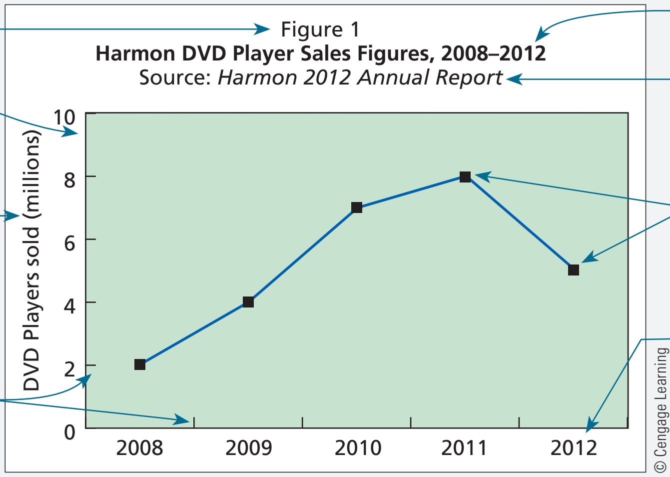
How to Create Line Graphs

Figure number

Axis length
Make the *Y*-axis slightly longer than highest value on the graphed line.

Labels for Y-axis
Make them brief and precise. Avoid abbreviations your readers won't understand.

Tick marks
Use tick marks to indicate units without cluttering the graph.



Title
Be concise and precise.

Source
Provide a source if the source will not be obvious to your readers.

Data points
You can include them or not, depending on what your readers prefer.

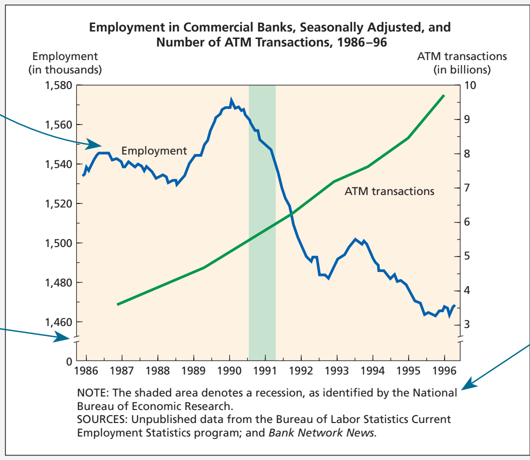
Labels for *X*-axis
Arrange them vertically if they won't be readable when placed horizontally.

How to Create Line Graphs Comparing Trends

By using two or more lines to represent a quantity over time, you enable your readers to compare trends.

Lines
Use your readers' needs and preferences to decide whether to plot through every data point (as in this graph) or whether to smooth graphed lines (as in the top graph on the facing page).

Hash marks
The hash marks on the *Y*-axis alert readers that the axis doesn't begin at zero.



Negative values
To report negative values, such as losses or degrees below zero, place them on the same axis as the positive values and indicate the zero point plainly.

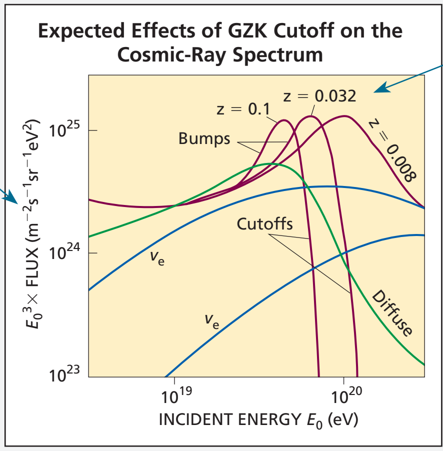
Notes and sources
Notes are usually placed below the graph. Sources are often placed there, too.

WEB
To see more sample tables, go to your English CourseMate at www.cengagebrain.com. The website also includes tips on creating line graphs in Microsoft Excel.

How to Create Line Graphs Showing Interactions among Variables

In technical and scientific communications, your readers may want to see the interactions of several variables.

Labels for axes
Make the labels precise. In this graph, the writers used highly technical labels appropriate for the scientists who are their readers.



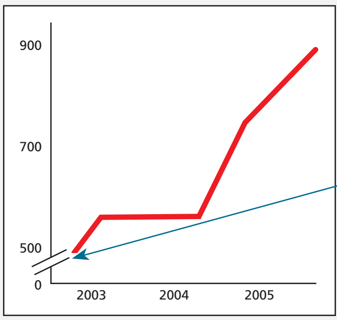
Adapted from *The Highest-Energy Cosmic Rays* by Thomas O'Halloran, Pierre Sokolsky, and Shigeru Yoshida. ©1998 American Institute of Physics.

Placement of labels
By carefully placing the labels, you help your readers identify the lines in a complex graph.

Color of lines
Use colors that contrast enough with the background to be seen easily.

TIPS FOR CREATING READER-CENTERED LINE GRAPHS

- Use different colors to enable readers to distinguish readily among the lines. If you can't use color, use different styles for the lines—dashes for one, dots for another, and so on.
- If possible, begin lines at zero to avoid misleading readers.
- If it isn't practical to start the lines at zero, use hash marks to signal this fact to your readers.



© Cengage Learning

Hash Mark

BAR GRAPHS

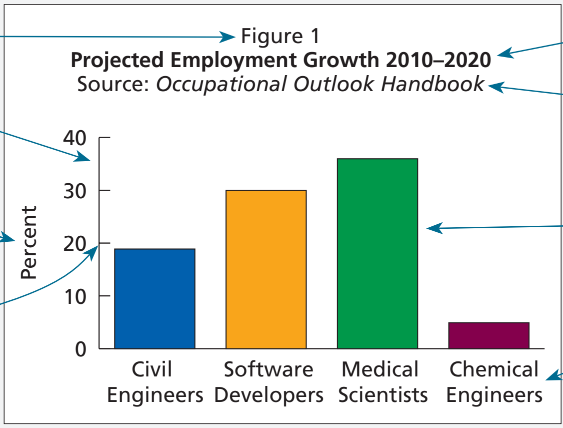
How to Create Bar Graphs

Figure number

Axis length
Make the *Y*-axis slightly longer than the longest bar.

Labels for *Y*-axis
Make them brief and precise. Avoid abbreviations your readers won't understand.

Tick marks
Use tick marks to indicate units without cluttering the graph.



Title
Be concise and precise.

Source
Provide a source if the source will not be obvious to your readers.

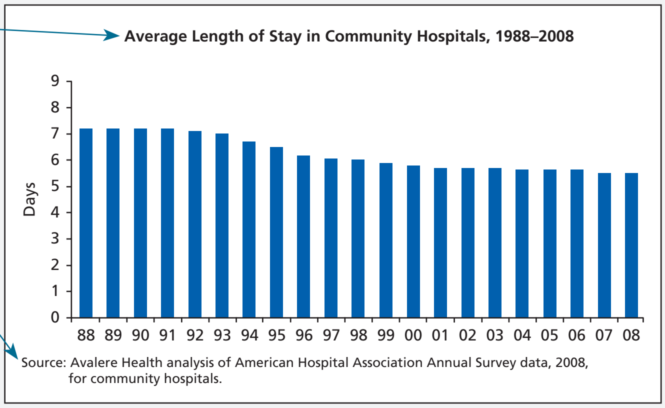
Color
Use color to highlight or help your readers locate a particular bar.

Labels for bars
Arrange them vertically if they won't be readable when placed horizontally.

How to Create Bar Graphs Showing Trends

By using a series of bars to represent a quantity over time, you enable your readers to see an overall trend.

Figure number, title, and source
Some employers and scientific fields tell writers to place a figure number, title, and source below a bar graph. Others say these three elements should be placed above it. Still others place some above and some below, as in this example. Learn the expectations of your employer and readers.



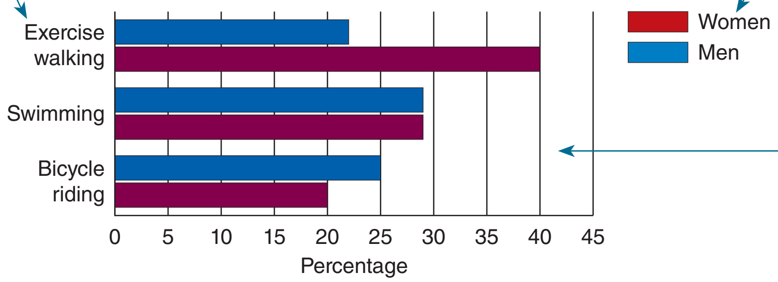
WEB
To see more sample line graphs, go to your English CourseMate at www.cengagebrain.com. The website also includes tips on creating line graphs in Microsoft Excel.

How to Create Multibar Graphs Showing Several Comparisons

With a multibar graph, you help your readers compare the same groups on many topics (e.g., male and female participants in each of several sports activities).

Labels for bars
When you are using horizontal bars, you can line up their labels using the last letter of each word rather than the first letter.

Figure 2
Participation in Three Selected Sports Activities, by Sex
Source: *Statistical Abstract of the United States, 2004–2005*, p. 774

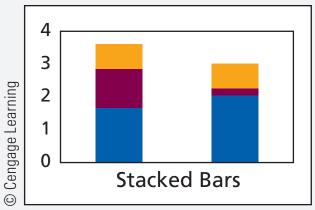


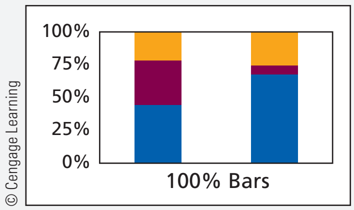
Key to bars
When the bars are repeated, use a key to label them. Otherwise, place labels next to the bars, as in the top graph on the opposite page.

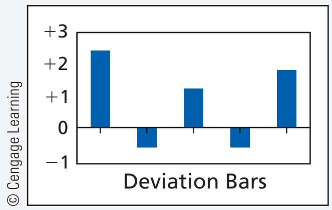
Grid lines
Use grid lines when tick marks aren't enough to enable readers to readily gauge each bar's length.

More Types of Bar Graphs

Bar graphs come in many other varieties.

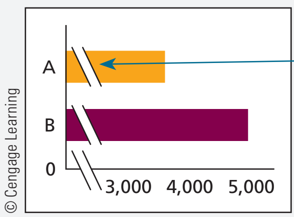






TIPS FOR CREATING READER-CENTERED BAR GRAPHS

- Arrange bars in the order that your readers will find most helpful. Alternatives include arranging them alphabetically, chronologically, or from longest to shortest.
- If possible, begin bars at zero to avoid misleading your readers.
- If it isn't practical to start the bars at zero, use hash marks to signal this fact to your readers.



Hash Mark

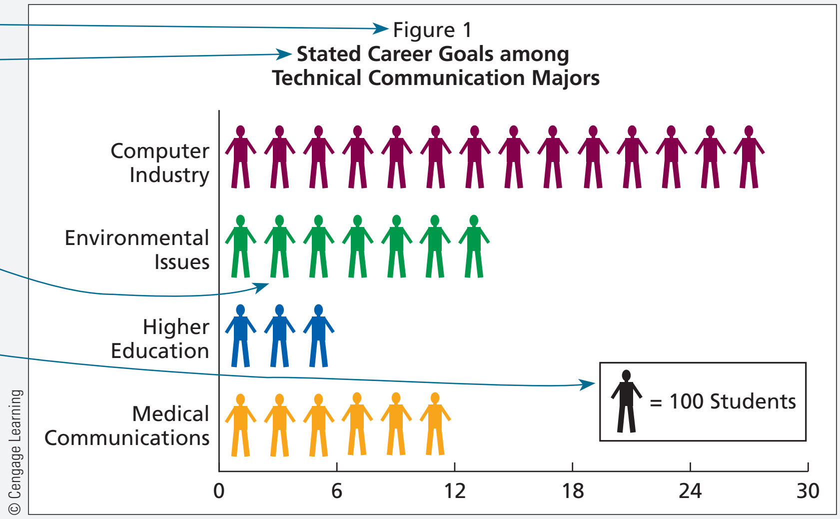
PICTOGRAPHS

How to Create Pictographs

Figure number

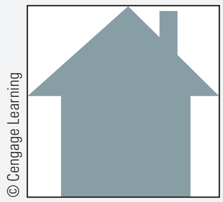
Title
Be concise and precise.

Process
1. Create a bar graph (see page 320).
2. Replace bars with symbols.
3. Use tick marks instead of grid lines.
4. Include a key explaining the value of each symbol.

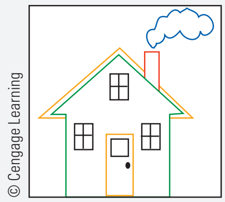


TIPS FOR CREATING READER-CENTERED PICTOGRAPHS

- Emphasize the practical impact of the data you represent. For example, use silhouettes of people to represent the workers who will be hired at a new factory.
- Keep the symbols simple. Unneeded details distract readers and clutter the pictograph.



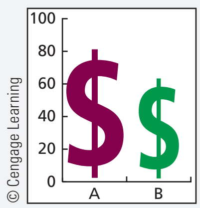
Correct



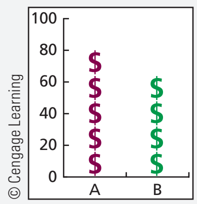
Too much detail

- To avoid distortion, repeat a symbol several times rather than using a larger one.

Misleading size
When symbols are enlarged, they increase in both height and width (left-hand example), giving them a disproportionately large area.



Misleads



Accurate

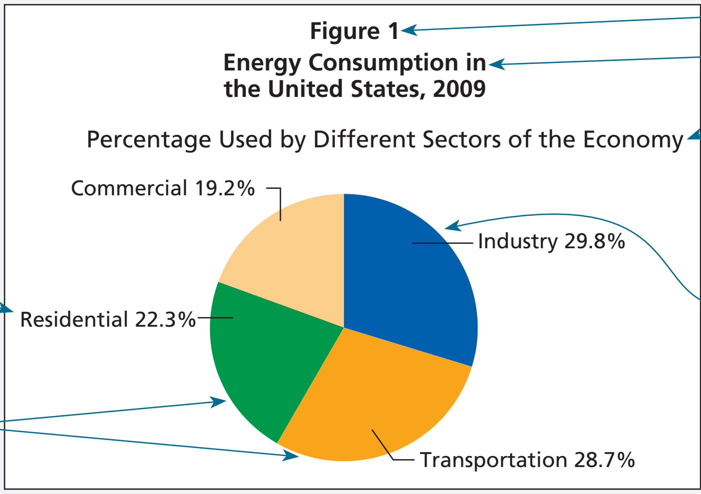
WEB
You can obtain symbols free from clipart sites. Go to your English CourseMate at www.cengagebrain.com.

PIE CHARTS

How to Create Pie Charts

Process

1. Draw a circle.
2. Divide the circle into wedges proportional to each item's percentage of the whole.
3. Label each wedge; include the percentage in each label.
4. Use a different color or shading for each wedge.



Source: U.S. Energy Information Administration.

Figure number

Figure title
Be concise and precise.

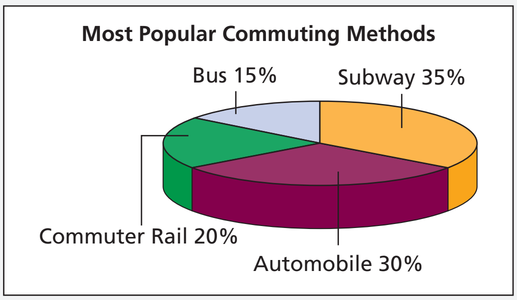
Explanation
If your readers won't understand how you calculated the percentages, provide an explanation.

Wedges
Begin the largest wedge at "noon."

Arrange the remaining wedges clockwise in descending order of size unless you have a reader-centered reason for arranging them differently.

How to Avoid Distortion in Pie Charts

Stick with two-dimensional pie charts. Three-dimensional ones can create a visual distortion.



© Cengage Learning

Visual distortion
The 30% wedge looks largest because the reader sees both the top and the side of the slice. However, the 35% slice represents a larger portion of the chart.

WEB
To learn how to create pie charts quickly using Microsoft Excel, go to your English CourseMate at www.cengagebrain.com.

WRITER'S TUTORIAL

PHOTOGRAPHS

How to Create Photographs That Are Useful to Your Readers

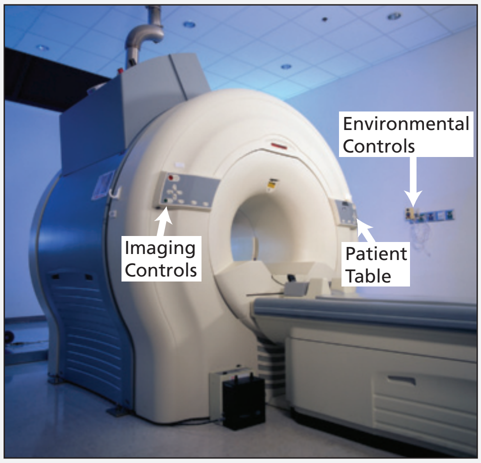
Helping Your Readers Do Something

© Orkhan Aslanov/Shutterstock.com

Take your readers' point of view
When photographing for instructions, include all the details your readers will find helpful—and crop away the rest. Take photos from the same angle of view that your readers will have.

Helping Your Readers Locate Something

© Pete Saloutos/Corbis



Provide context and pointers
In addition to the item your readers want to find, show enough of the surrounding area so they know the general place in which to search. Arrows and labels are very helpful to readers.

Helping Your Readers See How Something Looks

Display condition
Photographs often surpass words in showing readers the condition of an object.

Show identifying marks
Photographs help readers identify animals, plants, and other objects.

Focus on what matters most
Fill your image with the details most useful or persuasive to your readers.

© Sascha Burkard/Shutterstock.com

Red-Eyed Leaf Frog

© tkachuk/Shutterstock.com

Condition of *Eastern Pegasus*

WEB
To learn how to use desktop publishing software to crop, label, and sharpen photos, go to your English CourseMate at www.cengagebrain.com.

How to Use Software to Create Reader-Centered Photographs

Using ordinary desktop publishing software, you can increase the effectiveness of the photographs you have scanned or taken with a digital camera. The following examples use features available in Microsoft Word.

Cropping

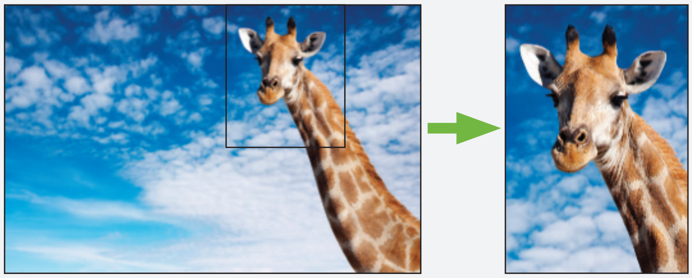
By cropping (or trimming) a photograph, you eliminate unnecessary detail and enlarge the items you want your readers to see.

The Crop Tool 

1. Click on the photograph.
2. Click on a handle that appears at the edges of the photo.
3. Drag the handle to the desired position.

Note: If you cannot find the Crop Tool, click on Help and type "Crop" into the Search window.

© Pichugin Dmitry/Shutterstock.com



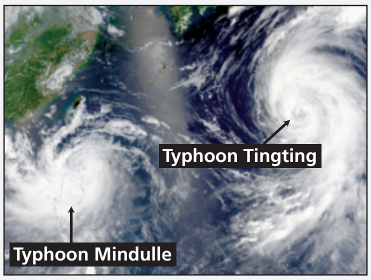
Labeling

Label the items that are significant to your readers.

The Text Box tool 

To create a label, use the **Text Box** and **Line** tools. They are under the **Insert** tab in Word 2007 and on the **Drawing** toolbar in Word 2008 for Mac.

Image courtesy Jeff Schmaltz, MODIS Land Rapid Response Team at NASA GSFC



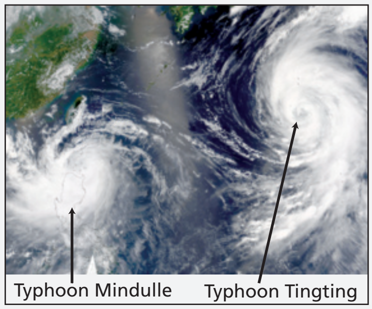
Typhoons Mindulle and Tingting spin side-by-side off the coast of China

Label placement

Labels can be placed inside (left-hand photo) or outside (right-hand photo) a photograph.

Position them so they do not cover important parts of the image.

Image courtesy Jeff Schmaltz, MODIS Land Rapid Response Team at NASA GSFC



Typhoons Mindulle and Tingting spin side-by-side off the coast of China

TIPS FOR CREATING READER-CENTERED PHOTOGRAPHS

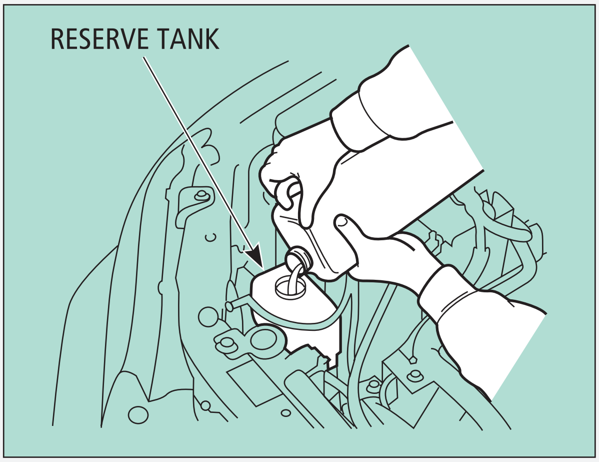
- Plan your photographs carefully in advance, considering the angle of view and removing items that would clutter the picture.
- Include a person or familiar object in a photo if this will help your readers understand the size of the object you are photographing.

DRAWINGS

How to Create Drawings

Process

1. Identify the features that are most important for your readers to see.
2. Choose the angle of view that will help your readers most.
3. Focus your readers' attention on the key features by using color, heavier lines, and labels.
4. Eliminate unnecessary and distracting details.



From 1998 *Honda Accord Owner's Manual*, Honda p. 217. Courtesy of Honda Motor Company of America.

About this drawing

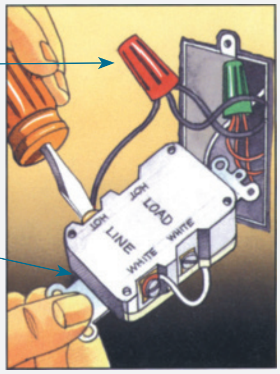
This drawing helps car owners locate the reserve tank for radiator fluid.

- A label identifies the tank.
- The tank, container, and arms are highlighted by the use of heavy lines. Lighter lines are used for everything else.
- The shading of everything else also highlights the tank, container, and arms.
- The angle of view is close to the one that owners would have when filling the tank.

How to Create Drawings That Show How to Do Something

Instructional drawings
This drawing shows how the wires will look when a reader has pigtailed them.

It shows the reader exactly how to hold the switch, using the same angle of vision that the reader would have when performing this step.



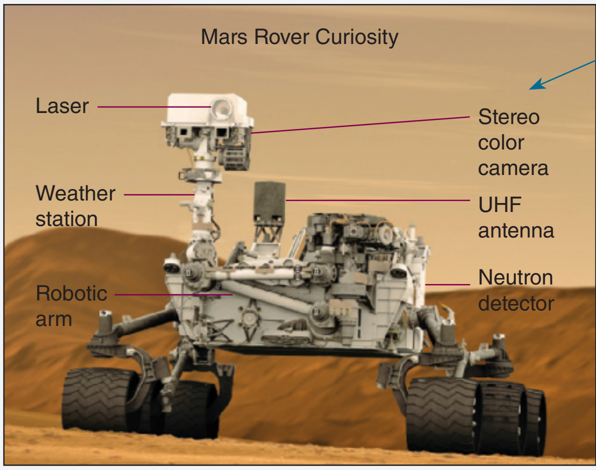
Source: *Home Improvement 123: Expert Advice from The Home Depot* (Des Moines: Meredith, 1995): 169.

TIPS FOR CREATING READER-CENTERED DRAWINGS

- Show three sides of an object (e.g., front, top, side) unless you have a reader-centered reason for using another view. A three-sided perspective usually gives readers the most information about the item.
- Labels can be placed in a drawing or next to it.

WEB
To see more sample drawings, go to your English CourseMate at www.cengagebrain.com.
The website also includes tips on creating drawings in Microsoft Word.

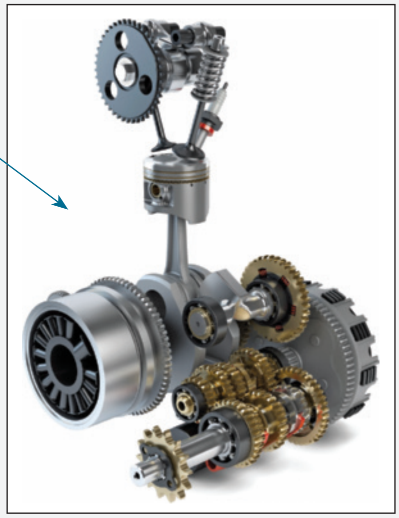
How to Create Drawings Showing Appearance and Structure



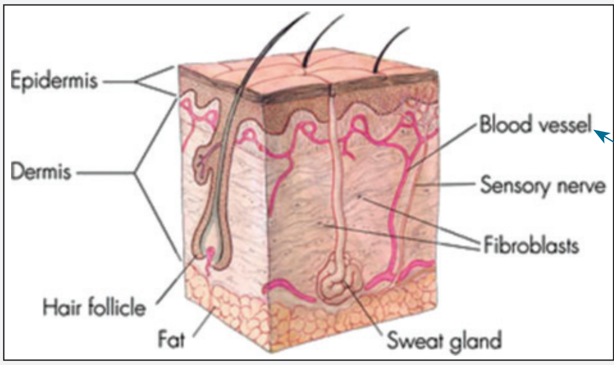
NASA/JPL-Caltech

Show appearance
Drawings of the external views of complex objects enable significant details to stand out more distinctly than in photographs.

Show structure
Cutaway views show structural relationships that photographs cannot. In this example, the automobile parts include a piston, cam shaft, fly wheel, transmission, and drive shaft.



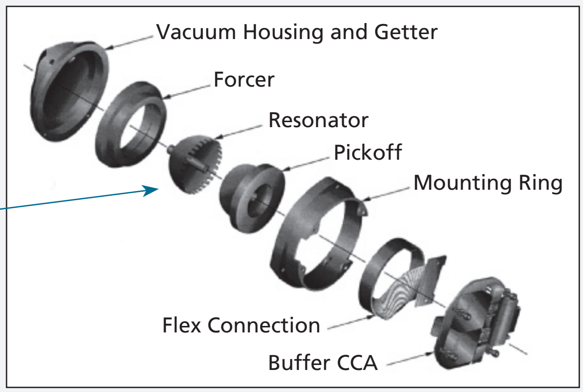
Milos Stojiljkovic/Shutterstock.com



© 2007 Tim Peters and Company, Inc. All rights reserved. www.timpetersandcompany.com.

Cross section
Cross-section views show parts as they would appear if the object were sliced open. This drawing shows a cross-section of human skin.

Exploded drawing
Exploded views show each part separately while also enabling readers to see how the parts fit together.



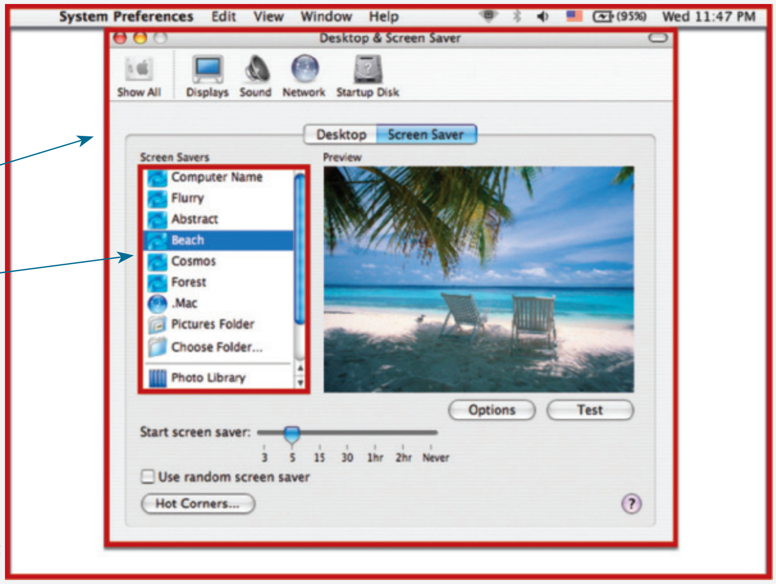
Exploded view of the 30-mm HRG Mechanical Components from NASA, Research and Technology report, and Goddard Space Flight Center, 1996.

SCREEN SHOTS

How to Create Screen Shots

Using programs included on most operating systems, you can easily make the following types of screen shots:

1. Full screen (largest red rectangle)
2. A window (medium-sized red rectangle)
3. Part of a window or screen (smallest red rectangle)



© Apple, Inc.

Creating a Screen Shot in Windows:

1. To take a full-screen shot, press **Print Screen**.
2. To capture a window's image, press **Print Screen** and **Alt** simultaneously.
3. Paste the image into your document.
4. Click on the image.
5. Click on the **Format** tab.
6. Click on **Crop**.
7. Drag the black lines from the corners.

Creating a Screen Shot in Mac OS:

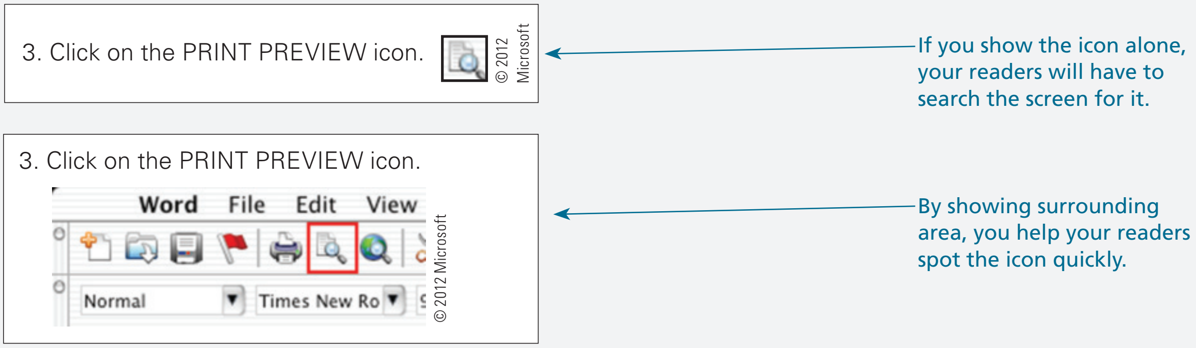
1. To take a full-screen shot, press these keys simultaneously: **Command**, **Shift**, and **3**.
2. To take a cropped screen shot
   - Press these keys simultaneously: **Command**, **Shift**, and **4**.
   - Drag the cursor around the **desired area**.
3. Place the image in your document by pulling down the **Insert** Menu and choosing **Picture>From File**.

TIPS FOR CREATING READER-CENTERED SCREEN SHOTS

- Make your screen shots large enough to enable readers to read the words and recognize the icons—unless reading these items is not important for their purpose.
- Use arrows, colored borders, or other visual cues to help readers locate items.
- If your readers are supposed to fill in fields in a window, fill in the fields in your screen shot (instead of leaving the fields blank).
- To present directions compactly, you can sometimes overlap screen shots.
- See page 310 for guidelines concerning copyright and screen shots.

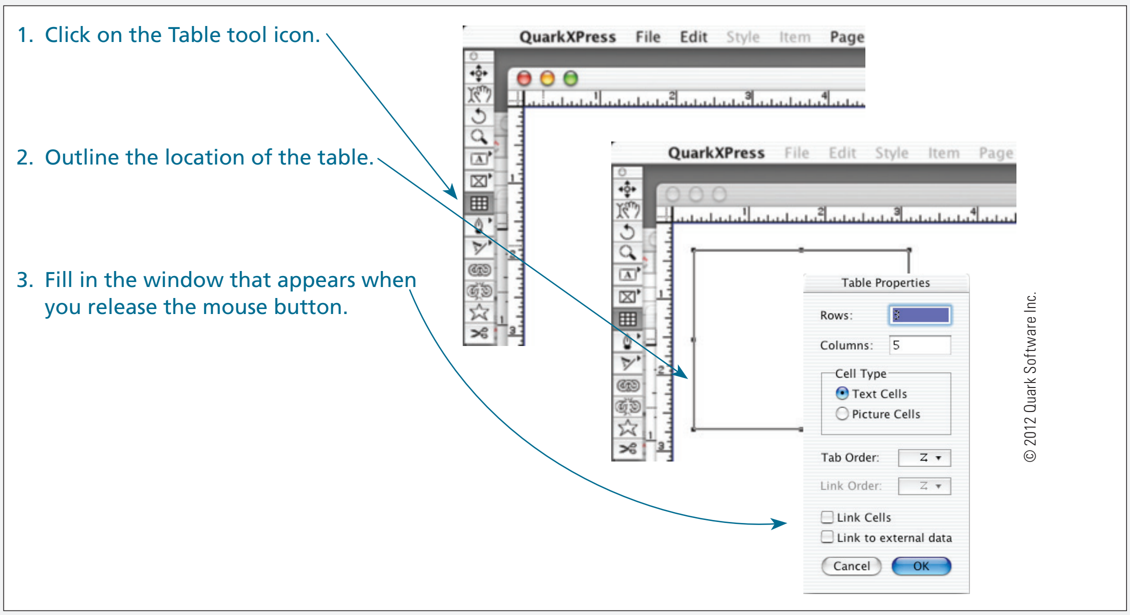
Helping Readers Locate an On-screen Item

Show a sufficient area of a screen or window to let the reader know where to look for the item.



Guiding Your Readers Through a Sequence of Steps

In some cases, you can overlap screen shots to guide your readers through a series of steps, as this example shows.



WEB
To learn more about taking screen shots, go to your English CourseMate at www.cengagebrain.com.

FLOWCHARTS

How to Create Flowcharts

Process

1. List the steps in the process.
2. Create a symbol or drawing for each type of step.
3. Label each step.
4. Arrange symbols from left to right, top to bottom, or in a circle.

Symbols
The symbols in the left-hand chart carry a specific meaning to readers in many fields:

▭ = process or activity

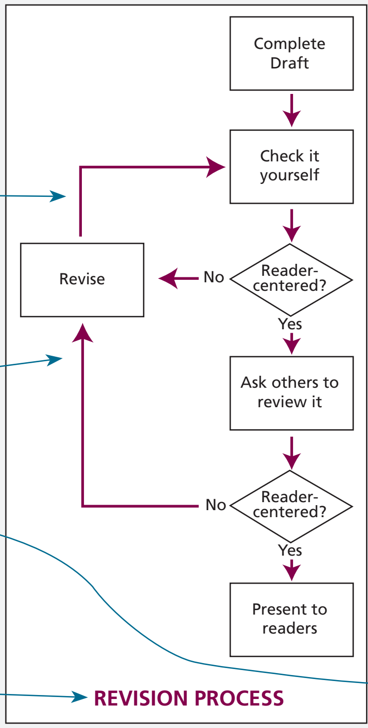
◇ = decision

Arrows
Arrows show the direction of activity.

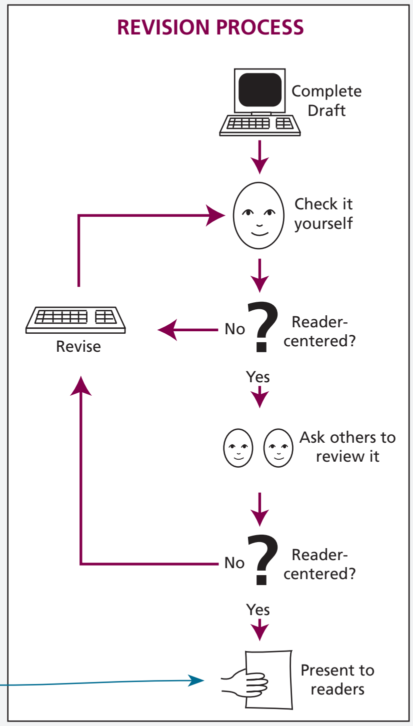
Drawings
In the right-hand chart, each drawing is an image readers will associate with the activity represented.

Title
The title may be at the bottom or top.

Flowchart with Symbols



Flowchart with Drawings



TIPS FOR CREATING READER-CENTERED FLOWCHARTS

- Choose between symbols and drawings by considering the knowledge and expectations of your readers.
- Make symbols and labels large enough for your readers to see plainly.
- When writing to readers who work in a field that uses specialized flowchart symbols, use the symbols in your flowchart.

WEB
To learn how to make flowcharts in Microsoft Word, go to your English CourseMate at www.cengagebrain.com.

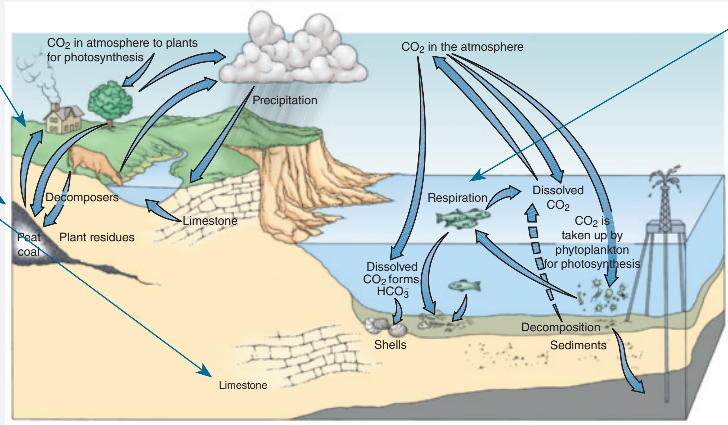
How to Create Flowcharts with Drawings

In this example, the flowchart and caption work together to help readers understand the carbon cycle.

Arrows
The writers used arrows to indicate the flow from one element in the carbon cycle to another.

Labels
They used captions to label processes and states in the carbon cycle. Some labels include explanations, such as the one for photosynthesis.

Caption
They used a caption to summarize the process represented in the drawing.



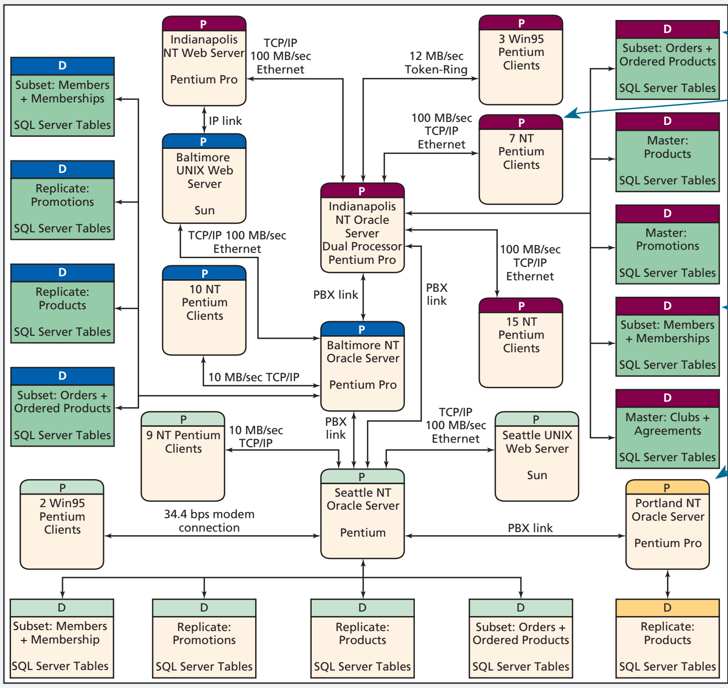
KARLESKINT/TURNER/SMALL, *Introduction to Marine Biology*, 4E. © Cengage Learning

Over time, carbon cycles from the atmosphere into plants and animals and then returns to the atmosphere through various channels.

Images
The writers used a variety of images to symbolize processes of the carbon cycle, such fish to symbolize respiration.

How to Create Flowcharts with Specialized Symbols

Using this flowchart, a computer consulting company described the general structure of a computer system it proposed to create for a buying club. Members pay a fee to join and then order products online or by phone.



Adapted from *Systems Analysis and Design Methods* (4th edition), by J.L. Whitten, L.D. Bentley, & K.C. Dittman, 1998, p. 384. Copyright ©1998 McGraw-Hill, Inc.

Symbol shapes
The writers used different shapes for different types of elements in the system: rectangles for servers and squares with rounded corners for other elements.

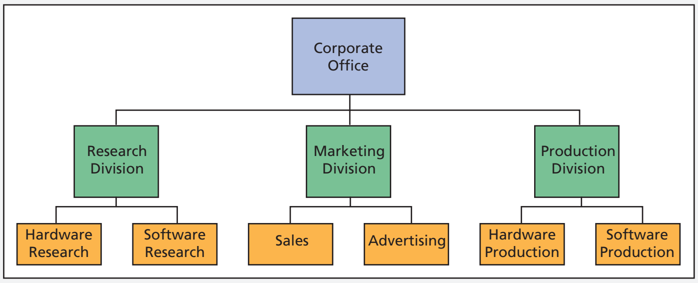
Colors
The writers used different colors to group related elements visually.

ORGANIZATIONAL CHARTS

How to Create Organizational Charts

Purpose
This chart's purpose is to help readers understand the structure of the units in this organization. The chart at the bottom of this page has a different purpose.

Arrangement of boxes
All boxes at the same level have the same size, shape, and color.

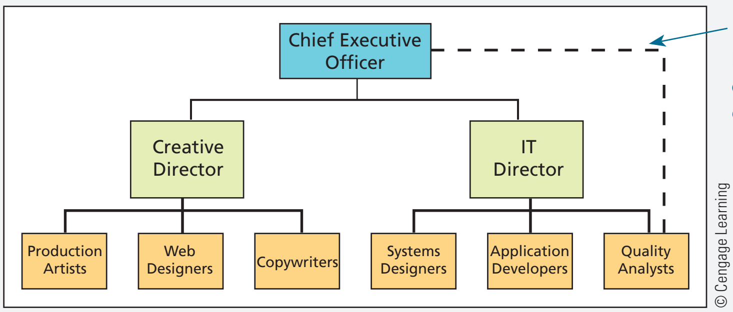


© Cengage Learning

Additional Information
Depending on how readers will use the chart, the boxes may include additional information, such as the name of the person in charge of each unit, the number of employees in the unit, or the unit's central phone number.

How to Create Organizational Charts That Show Reporting Lines

Purpose
This chart's purpose is to help readers understand the lines of authority and responsibility in the organization. The chart at the top of this page has a different purpose.



© Cengage Learning

Dotted lines
Dotted lines indicate consulting relationships or secondary reporting lines.

WEB
To learn how to make an organizational chart quickly in Microsoft Word, go to your English CourseMate at www.cengagebrain.com.

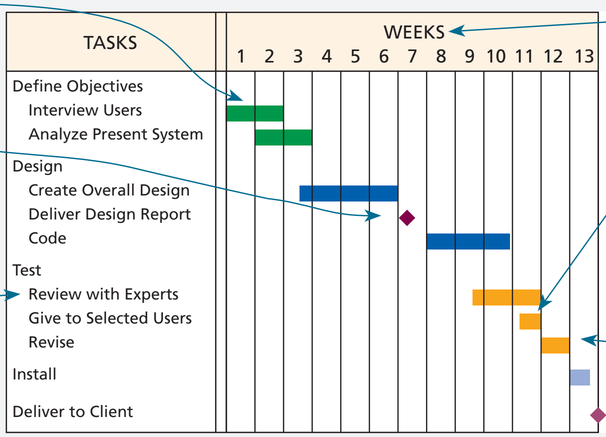
SCHEDULE CHARTS

How to Create Schedule Charts

Bars
Bars indicate when steps will be performed.

Diamonds
Diamonds identify major events, such as a kickoff meeting or progress report.

Subtasks
Subtasks are grouped under headings to help readers see the major stages of the project.



© Cengage Learning

Intervals
The intervals on the calendar are usually days, weeks, or months.

Simultaneous activities
When two or more bars occupy a week, the activities will be performed simultaneously.

Groups of activities
Use the same color for all activities in the same group.

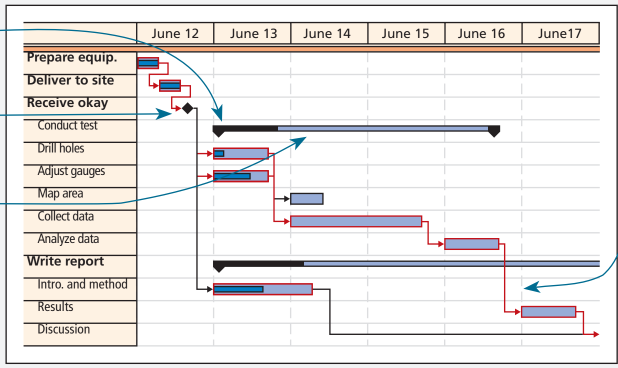
How to Create Gantt Charts

Gantt charts are detailed schedule charts used to plan and monitor progress on complex projects. Usually created using special computer programs, they may involve hundreds or thousands of tasks. However, you can adopt some of their conventions in simpler schedule charts. Gantt charts are named for Henry Gantt, the early twentieth-century engineer who invented them.

Triangles mark the beginning and end of each major step.

Diamonds mark major events, such as delivery of a progress report.

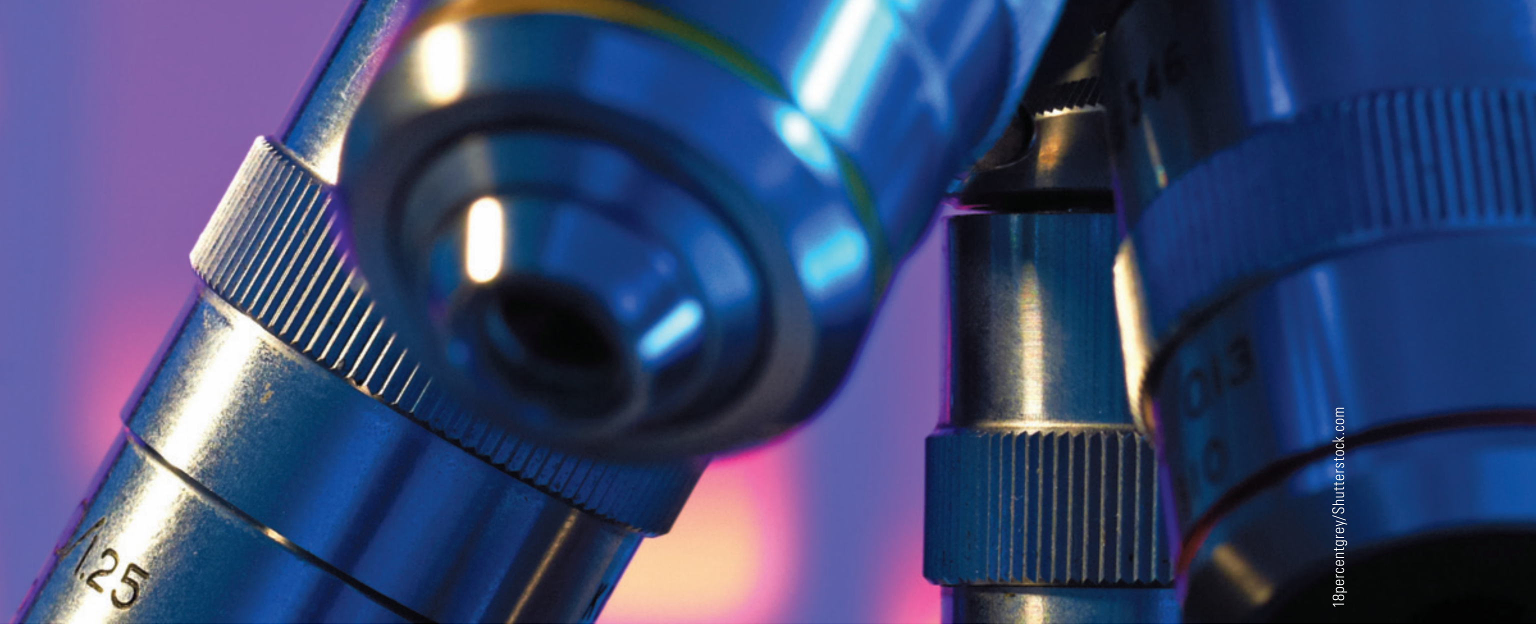
The color of a bar can be gradually changed to indicate how much of a task has been completed.



© Cengage Learning

Bars linked by red lines indicate the "critical path" in a project, which is the sequence of steps that must be completed in the time specified for the entire project to be finished by its deadline.

WEB
To learn how to make a schedule chart quickly in Microsoft Word, go to your English CourseMate at www.cengagebrain.com.



18percentgrey/Shutterstock.com

16 | Designing Reader-Centered Pages and Documents

You build your communications out of *visual* elements: the dark marks of your words, sentences, and paragraphs against the light background of the page, as well as your drawings and graphs and tables. Your readers *see* the visual design of these elements before they read and understand your message. And what they see has a powerful effect on the success of your communications, on its usefulness and persuasiveness.

Here, for example, are some of the ways good design can enhance your communication's usefulness.

Good design increases usefulness.

- **Good design helps readers understand your information.** For example, you can use visual design to signal the hierarchy of ideas and information in a report. This helps your readers understand what you are saying and what its significance is to them. Similarly, when you write instructions, you can place a direction and a figure next to each other to indicate that the two work together to explain a step.
- **Good page design helps readers locate information.** At work, readers often want to find part of a communication without reading all of it. With headings and other design elements, you can help them do that quickly.
- **Good design helps readers notice highly important content.** With a good design, you can emphasize for readers the content that is especially important to them, such as a warning in a set of instructions or a list of actions to take in a recommendation report.

WEB To read additional information, see more examples, and access links related to this chapter's advice, go to your English CourseMate at *www.cengagebrain.com.*

Here are some of the ways a good design can affect readers' attitudes, thereby increasing your communication's persuasiveness.

- **Good design encourages readers to feel good about the communication itself.** You've surely seen pages—perhaps in a textbook, set of instructions, or website—that struck you as uninviting, even ugly. As a result, you may have been reluctant to read them. And undoubtedly you've seen other printed or online pages that you found attractive, so that you approached them eagerly and receptively. Good design has the same impact on readers of work-related communications. It increases readers' willingness to read reports, proposals, and similar documents carefully, and it extends their willingness to read instructions and websites at all.
- **Good design encourages readers to feel good about the communication's subject matter.** The impact of design on readers' attitudes toward subject matter was dramatically demonstrated by researcher Karen Schriver (1997), who asked people to comment on two sets of instructions for a microwave oven. The sets differed only in their page design. When people commented on the design they preferred, they also said that the oven—which they had never seen—was easy to use. No matter what you are writing about, your page design can influence—for better or worse—your readers' attitudes toward your subject.

Good design increases persuasiveness.

A READER-CENTERED APPROACH TO DESIGN

Because page design can have such a significant impact on your communication's usefulness and persuasiveness, you should approach design in the same reader-centered manner that you use when drafting text and graphics: Think continuously about your readers, including who they are, what they want from your communication, and the context in which they will be reading it.

DESIGN ELEMENTS OF A COMMUNICATION

As you take this reader-centered approach, it will be helpful to think about the building blocks of a page design in the way that professional graphic designers do. When they look at a page, they see six basic elements.

- **Text.** Paragraphs and sentences.
- **Graphics.** Drawings, tables, photographs, and so on—including their captions.
- **Headings and titles.** Labels for sections of your communication.
- **White space.** Blank areas.
- **Headers and footers.** The items, such as page numbers, that occur at the top or bottom of each page in a multipage document.
- **Physical features.** These include paper, which may take many shapes and sizes, and bindings, which come in many forms.

The six design elements of a page

The Writer's Tutorial on pages 338 and 339 displays a small sample of the numerous ways you can arrange these six elements as you create designs that will help you achieve your communication objectives.

This chapter's advice for working with the six visual elements of page design is just as valid for pages on the web as for pages on paper. Chapter 22 explains their application to online communications and provides additional advice about designing web pages and websites.

LEARN MORE For advice about applying this chapter's advice to the design of web pages and websites, see Chapter 22.

While reading the chapter, discussing it with your instructor, and applying it to projects in your class, focus on developing your ability to create reader-centered page designs by doing the following:

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Create a page design that helps your reader see how your communication is organized.
2. Use page design to unify a long communication visually.
3. Select a font that's easy for your readers to read.
4. Choose the physical characteristics that support your communication's goals.

HOW TO HELP YOUR READER SEE HOW YOUR COMMUNICATION IS ORGANIZED

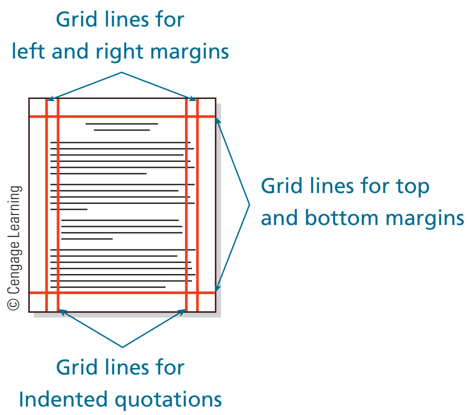
The first goal of page design is to enable your readers to see—just by glancing at the page—how its content is organized and how the parts fit together. As explained above, this knowledge will help your readers readily and fully understand the ideas and information you have prepared for them, and it helps them locate particular facts or thoughts. The following guidelines describe how to create simple, attractive, and meaningful visual relationships that signal your communication's organization.

Guideline 1 | Create a grid to serve as the visual framework for your page

To begin, you need to decide where on your page to place each of the first five visual elements (text, graphics, headings and titles, white space, and headers and footers). For this purpose, graphic designers draw a grid of vertical and horizontal lines that provides the framework for their pages.

The simplest grid is one you know well: the grid used for most college papers, as illustrated here.

The simplest grid design



Using grid patterns creatively, you can build an unlimited array of functional and persuasive designs. See Figure 16.1 for some samples. Look also at the page designs in the Writer's Tutorial on pages 338 and 339.

With such variety being possible, how can you explore and assess grids you might use for a particular communication? Graphic designers accomplish these tasks by sketching various possibilities for the same page. These sketches are called *thumbnails*, because they are miniature versions of possible end results. Take a look at Figure 16.1 again. The nine sketches shown there are thumbnails used by a graphic artist to try out and evaluate possible designs for the *same* communication. Notice that the different designs place different levels of emphasis on the figure, title, text, and headings. Using them, the designer was able to select the design most likely to achieve her communication objectives.

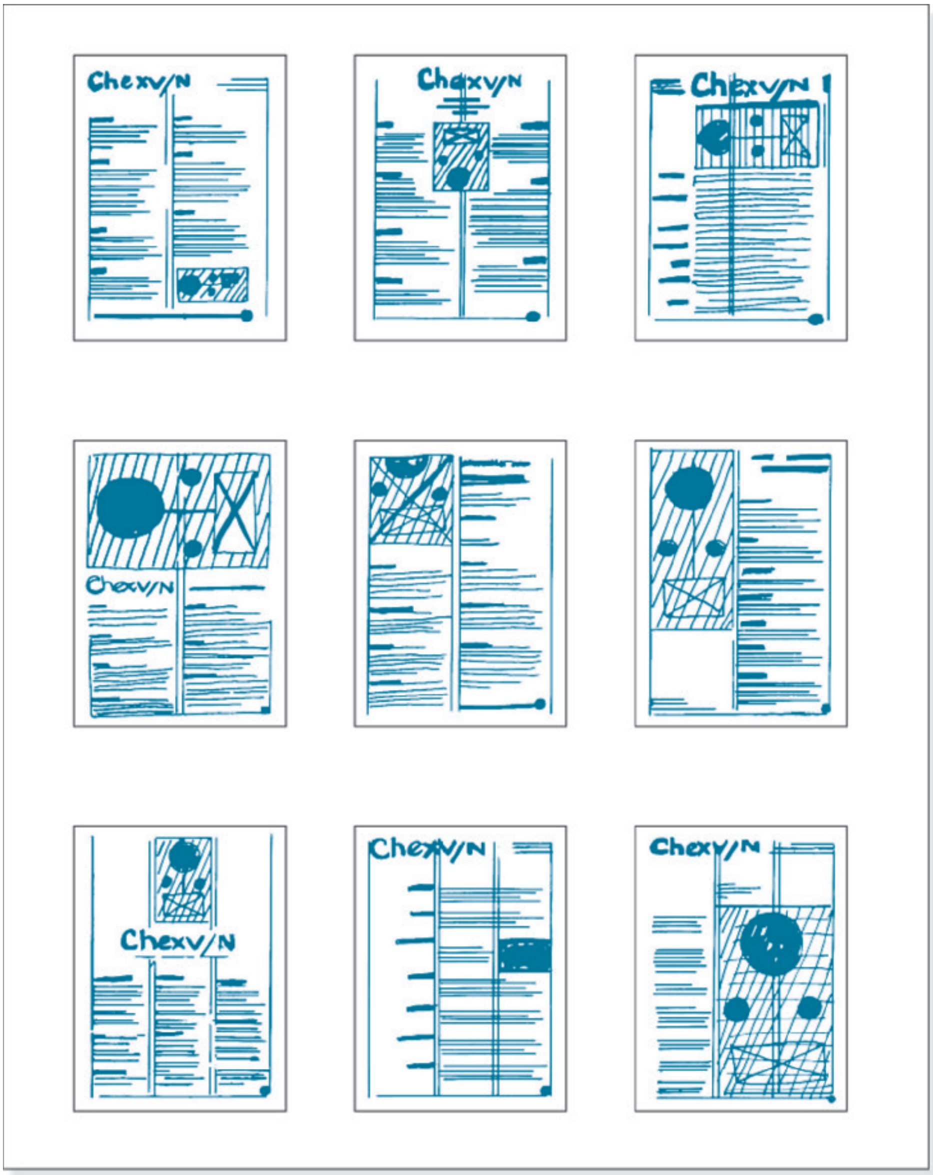


FIGURE 16.1

Nine Thumbnail Page Designs for the Same Material

Each of these nine thumbnails describes a different way to present the same content.

Notice how different designs give different levels of emphasis to the title, text, figure, and headings. The choice among these designs would depend on the readers and purpose of this communication.

DESIGNING GRID PATTERNS FOR PRINT

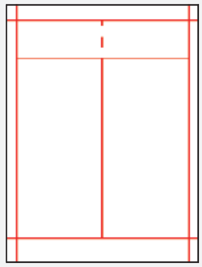
BASIC DESIGNS

RESEARCH JOURNAL

This page from *Water Environmental Research* uses a basic two-column design. Both columns have the same width.

- The title and author are centered in an area that goes from the left-hand margin of the left column to the right-hand margin of the right column.
- In the footer, the page number is flush with the left margin. Other information is flush against the right margin.

Page Layout from Water Environment Research, Vol. 77, No. 4, July-August 2005, p. 372. Reprinted from *Water Environment Research*, Vol. 77, No. 4, July-August 2005, p. 372. Copyright © 2005 Water Environment Federation: Alexandria, VA



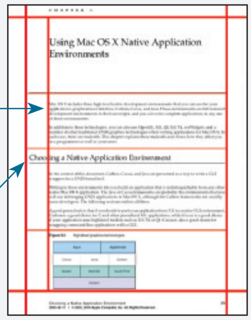
© Cengage Learning

COMPUTER MANUAL

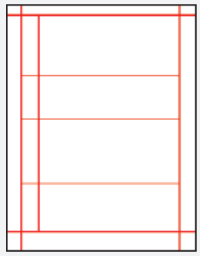
Apple Computer uses a two-column design for this manual.

- The wide column is for the text and figures. The chapter title and most of the information in the footer align with the left-hand margin of this column.
- The narrow column is used only for the major headings. By extending headings into this column, the writers made them easy for readers to spot.

The page number aligns with the wide column's right margin.



© Apple, Inc



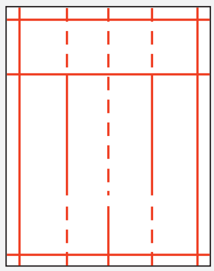
© Cengage Learning

CHAPTER FROM A BOOK

This page uses a four-column grid.

- The chapter number, title, and writers' names are centered across all columns.
- The graphic and its caption occupy the two center columns.
- Below the caption for the graphic, the text spans the two left column and the two right columns.

From "The Process of Change in the Brumidi Corridors", by Christiana Cunningham-Adams and George W. Adams. *Constantino Brumidi - Artist of the Capitol*, published in Featured Senate Publications, Y 1.1/3:103-27, July 11, 2000.



© Cengage Learning

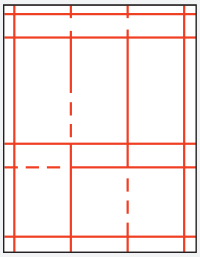
Learn More at the Website

To learn more, go to your English CourseMate at www.cengagebrain.com.

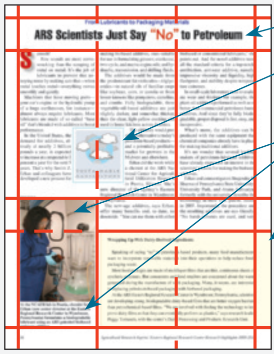
VARIATIONS ON BASIC DESIGNS

Science Journal

To create a dynamic design, this page creates some asymmetries within a three-column grid



© Cengage Learning

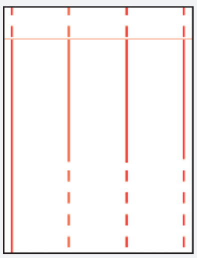


With Biobased Additives, ARS Scientists "Just Say No!" to Petroleum, by Marcia Wood, September 3, 2009. USDA/Agricultural Research Service. Photo by the ARS National Center for Agricultural Utilization Research.

- The chapter title spans all three columns.
- A graphic is centered between the left and center columns, intruding the same amount into each.
- A photo and its caption are placed in the left column.
- A text box is spans the center and right columns.
- The tops of the photo and text box are aligned with different horizontal grid lines.

Research Laboratory Annual Report

In this page from one of its annual reports, the Lawrence Livermore National Laboratory uses a three-column grid.



© Cengage Learning

Diagram Organized by Segmentation, from Lawrence Livermore Lab, *Science & Technology Review*, June 2004, http://www.llnl.gov/str/Jun05/Aufderheide.html.

To create a dynamic design, the laboratory extended some visual elements across the outside margins so that they reach the edges of the page:

- The banner at the top of the page goes to both edges.
- The color behind the left side of the title also goes to the edge.
- The photo at the bottom reaches the right edge of the page.

The title, text, and footer remain strictly within the grid columns.

As you create thumbnails and choose among them, keep three aspects of your communication in mind.

Aspects of your communication to consider as you explore and assess thumbnails

- **Usefulness.** Will your readers want to read straight through your report from start to finish? The best design may be the one used for college reports: lots of paragraphs grouped under headings and subheadings. Are you preparing instructions for a process that requires readers to read one step, look away to perform the step, and then look back at the directions to find the next step? In this case, a page design that relied on paragraphs would make reading difficult. Readers will be able to read a step, do a step, and locate the next step more easily if your page design separates the steps visually and numbers the steps prominently.
- **Persuasiveness.** The ways you want to affect your readers' attitudes should also influence your page design. Is it likely that your readers will be indifferent to the topic of your report unless you attract their attention? You may need to create a design that features appealing or intriguing photos or illustrations. Many technical magazines do this. Do you need to persuade your readers that the process described in your instructions is easy? Then you may need to use larger photos and more white space than you otherwise would.
- **Content.** Finally, you should also consider the amount and kinds of content you have. If you are writing instructions for which there is one graphic for every step, you may want to use a two-column design that places all the steps in the left-hand column and the corresponding figures in the right-hand column. However, if you have a graphic for every eight or ten steps, devoting one column to graphics would create an unattractive and not especially useful design.

The rest of this chapter provides advice that will help you construct thumbnails and also build your communication's actual pages.

Introduction to Guidelines 2 Through 4

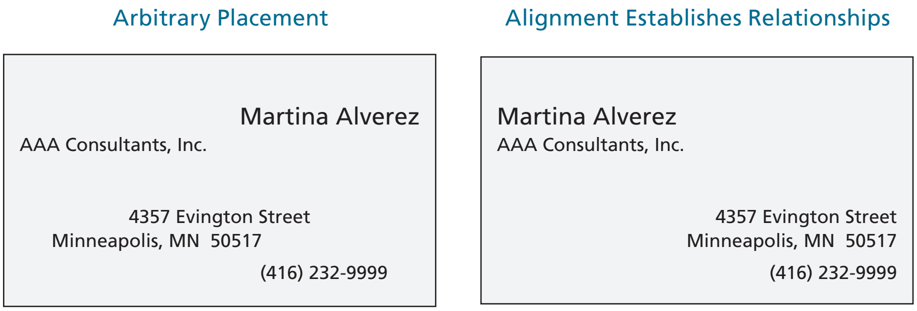
Whether you are making thumbnails or creating a draft of your communication, you need to place your communication's contents into the grid with which you are working. For thumbnails, you use sketchy lines like those in Figure 16.1 to show where you will position your text, headings and titles, graphics, white space, and headers and footers. For your drafts, you place the contents in your desktop publishing pages. Based on the following design principles described by Robin Williams (2008), the following parts of this chapter provide advice about how to do that.

DESIGN PRINCIPLES

WILLIAMS'S PRINCIPLES	PARTS OF THIS CHAPTER
Alignment	Guideline 2, page 341
Grouping	Guideline 3, page 343
Contrast	Guideline 4, page 344
Repetition	How to Unify with Page Design, page 348.

Guideline 2 | Align related elements with one another

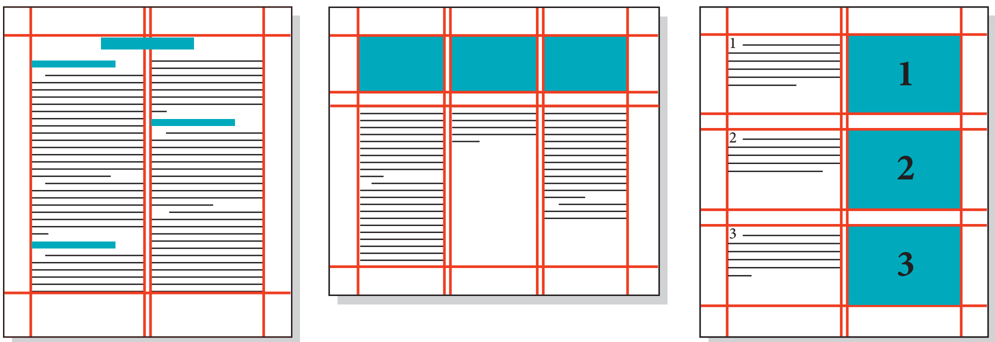
One goal of visual design is to help your readers see how your information is organized. The first principle of visual design—*alignment*—helps you do this. By comparing the following two designs, you can see how readily alignment establishes connections among related items.



© Cengage Learning

In the right-hand design, the writer has used alignment to establish relationships that are not apparent in the left-hand design.

In this demonstration, the right-hand design connects related items with one another by aligning them along the invisible grid lines at the right and left margins. To coordinate the more complex array of visual elements included in many on-the-job communications, writers add more vertical and horizontal lines, all arranged with the readers' needs and attitudes in mind.



© Cengage Learning

Sample multicolumn grid designs

In the left-hand example, a pair of vertical grid lines is used to create a simple, two-column page. The white space between the columns is called a *gutter*.

The center example represents a page in which the writer presents three figures, each accompanied by an associated block of text. To connect each figure to its text, the writer aligns each text-and-figure pair vertically in a column of its own, leaving varying amounts of white space at the bottoms of the columns.

The right-hand example represents a set of instructions in which the writer places all the directions in the left-hand column and all the illustrations in the right-hand column. To link each direction visually with its corresponding illustration, the writer aligns their tops along the same horizontal grid line. Horizontal gutters separate the direction-and-figure pairs from one another.

Figure 16.2 shows sample grid designs for several types of communication.

Ways to Align Visual Elements with Grid Lines

All visual elements can be arranged in one of three ways with respect to the vertical grid lines: flush left, flush right, or centered.

Ways visual elements can align with vertical grid lines

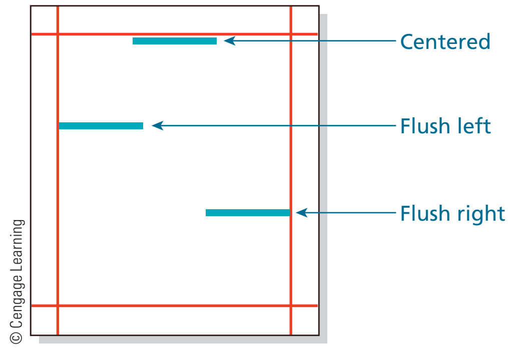


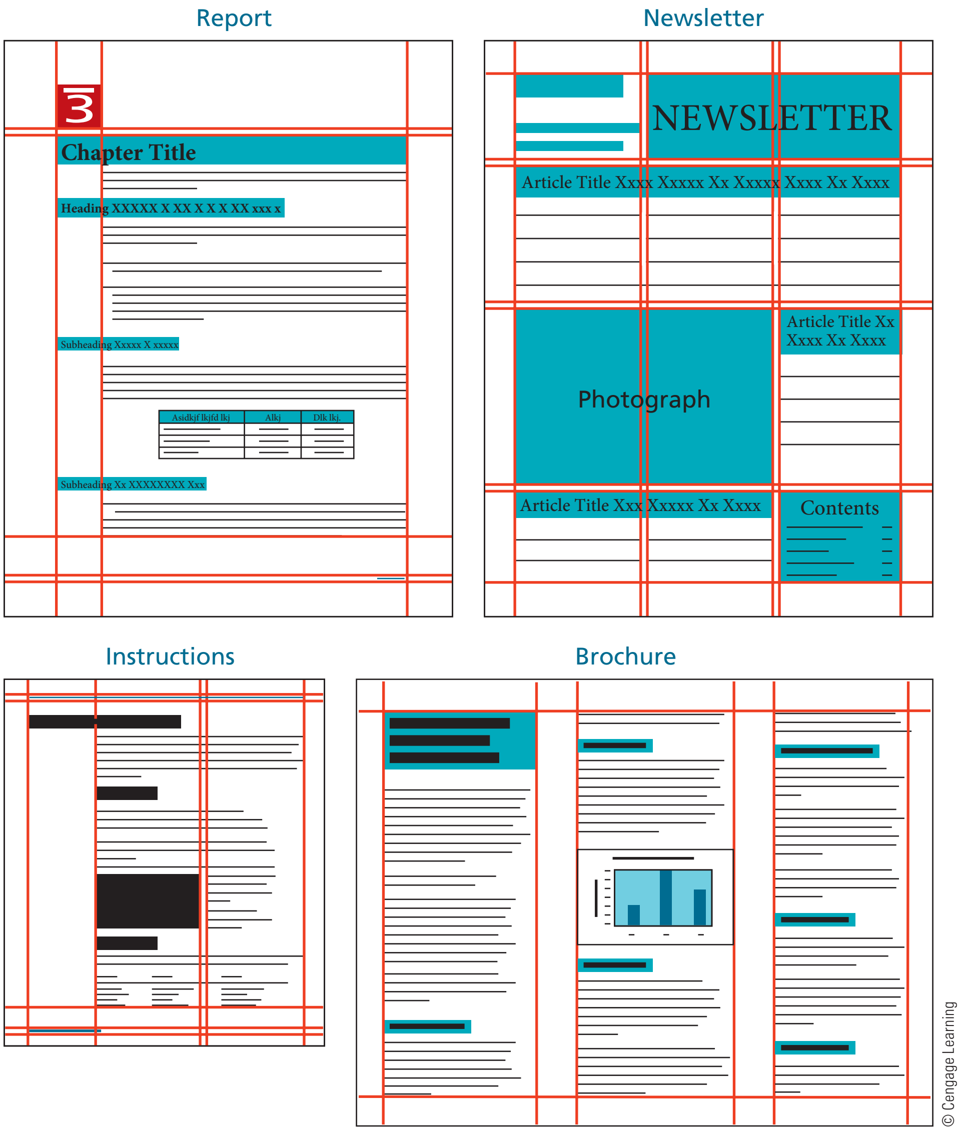
FIGURE 16.2

Sample Grids for Several Types of Communication

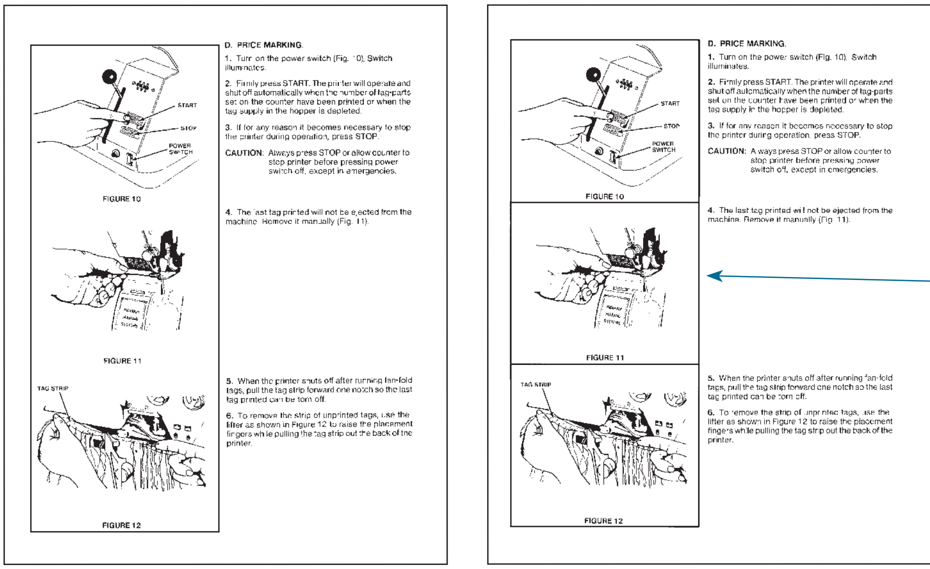
Grid lines create the visual structure of a page.

- Visual elements are aligned with one another by being placed against the same grid line.
- When visual elements extend across vertical grid lines, they usually extend to the far sides of the adjacent areas.

Sometimes writers break out of the basic grid pattern to emphasize one particular graphic element.



TRY THIS Can you find a grid pattern significantly different from the ones at the right in the books, magazines, or other printed documents near you while you are reading this chapter? Can you find two? Do the grid patterns make the communications more useful for the target readers? More persuasive?



From Monarch Marking, *Operating Instructions for 100 Dail-A-Pricer Printer*. Reprinted by permission of Monarch Marketing Systems, Inc., now, by change of name, Paxar Americas, Inc.

FIGURE 16.3

Comparison of Irregularly Shaped Figures without and with Rectangular Enclosures

Because the three illustrations in the left-hand page have an irregular shape, readers can't see how they fit into the page's grid.

The problem is solved in the right-hand page by putting rectangular borders around the illustrations.

A page's visual elements can be aligned with horizontal grid lines in much the same way: top, bottom, or centered.

Headers and footers usually align flush right or left. A heading, figure, or other item can span two or more columns as long as it aligns within the grid system. Extending items across columns is one way of emphasizing them.

To place a drawing or other item with irregular outlines within a grid, try enclosing it in a rectangle whose sides, top, and bottom run along grid lines. Figure 16.3 shows how such rectangles can anchor the figures in the framework of the page.

Guideline 3 | Group related items visually

The second design principle is *grouping* (sometimes called *chunking*). It emphasizes that readers judge the relationship between adjacent items by interpreting the distance, or amount of white space, between them. Less distance (less white space) means that two items are closely related to one another; more distance signals that they are not closely related.

Not Grouped	Proximity Establishes Groupings
Martina Alverez AAA Consultants, Inc. 4357 Evington Street Minneapolis, MN 50517 (416) 232-9999	Martina Alverez AAA Consultants, Inc. 4357 Evington Street Minneapolis, MN 50517 (416) 232-9999

In the right-hand design, the writer has used grouping (adjustment of the white space) to establish relationships that are not apparent in the left-hand design.

Here are some ways in which you can use white space to group elements in your page designs.

Ways to use grouping

- Use less white space below headings than above to place the heading in closer proximity to the text it labels than to the preceding section.

- Use less white space between titles and the figures they label than you use to separate the title and figure from adjacent items.
- In lists that have subgroups, use less white space between items within a subgroup than between one subgroup and another subgroup.

In Figure 16.4, notice how grouping helps to convey the organization of the page.

Guideline 4 | Use contrast to establish hierarchy and focus

Usually, you will want some items to stand out more than others. For instance, you may want to indicate that some items are at a higher level than others within your organizational hierarchy. Or you may want to focus attention on certain items, such

FIGURE 16.4

Grouping Used to Show the Organization of the Information on a Page

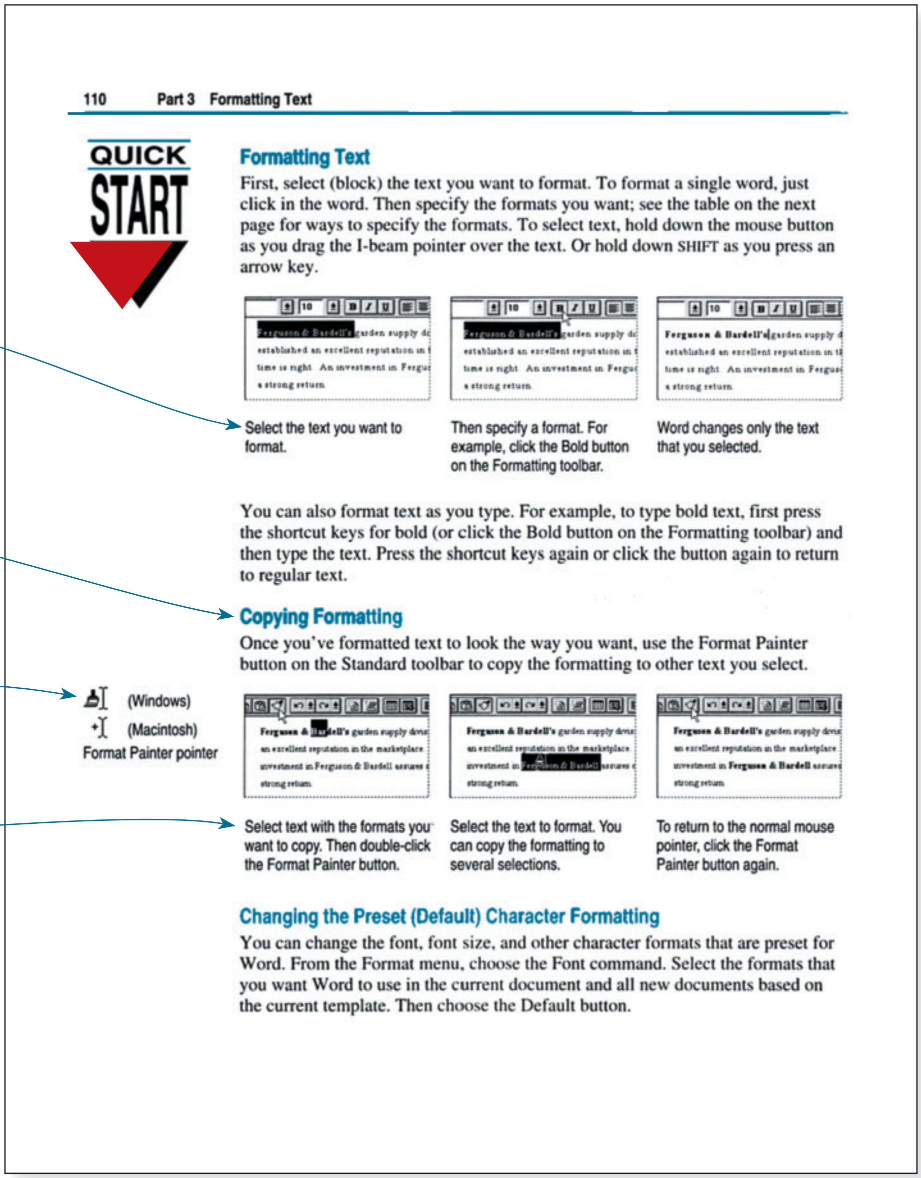
This page illustrates some ways that writers use proximity to help readers see how the information on a page is organized.

The writers used less space above these captions than below; this helps readers see that the captions are associated with the screens.

To create a visual link between this heading and the paragraph below, the writers put only one-half as much space below the heading as they put above it.

By placing these marginal notes close to the screens, the writers enabled readers to see that the captions supply information about the screens.

Here, too, the writers placed the captions closer to the screens than to the material that follows.


110 Part 3 Formatting Text

QUICK START

Formatting Text

First, select (block) the text you want to format. To format a single word, just click in the word. Then specify the formats you want; see the table on the next page for ways to specify the formats. To select text, hold down the mouse button as you drag the I-beam pointer over the text. Or hold down SHIFT as you press an arrow key.

Select the text you want to format.

Then specify a format. For example, click the Bold button on the Formatting toolbar.

Word changes only the text that you selected.

You can also format text as you type. For example, to type bold text, first press the shortcut keys for bold (or click the Bold button on the Formatting toolbar) and then type the text. Press the shortcut keys again or click the button again to return to regular text.

Copying Formatting

Once you've formatted text to look the way you want, use the Format Painter button on the Standard toolbar to copy the formatting to other text you select.

(Windows)

(Macintosh)

Format Painter pointer

Select text with the formats you want to copy. Then double-click the Format Painter button.

Select the text to format. You can copy the formatting to several selections.

To return to the normal mouse pointer, click the Format Painter button again.

Changing the Preset (Default) Character Formatting

You can change the font, font size, and other character formats that are preset for Word. From the Format menu, choose the Font command. Select the formats that you want Word to use in the current document and all new documents based on the current template. Then choose the Default button.

From Microsoft, (1994) *Microsoft User's Guide*, p. 110. Reprinted with permission from Microsoft Corporation.

as a warning in a set of instructions. However, nothing will stand out if everything on the page looks the same. To make some things stand out, you must use *contrast*, the third of Williams's design principles.

No Contrast	Contrast Establishes Emphasis
Martina Alverez AAA Consultants, Inc. 4357 Evington Street Minneapolis, MN 50517 (416) 232-9999	**Martina Alverez** **AAA Consultants, Inc.** 4357 Evington Street Minneapolis, MN 50517 (416) 232-9999

Color, type size, and bold are used in the right-hand design to establish a focus and a visual hierarchy.

When deciding how to establish the visual hierarchy of your page, pay special attention to text items: paragraphs, headings, figure titles, and headers and footers. To create distinctions among these items, you can control four variables.

- **Size.** Making an element larger increases its visual prominence. Using this principle, most books (including this one) use larger type for major headings than for smaller ones.

  When working with headings, remember that type size is measured in points, which refers to the distance between the top of *ascenders* of the tallest letters (e.g., *b* and *l*) and the bottom of *descenders* (e.g., *g* and *y*). There are 72 points to an inch.

A variety of type sizes, measured in points

  When designing a page, avoid making some elements so large that they look out of proportion or pull your readers' eyes away from the rest of the page. As a rule of thumb, keep a larger type to no more than one and one-half times the size of the next smaller size.

- **Type treatment.** Use plain type (called *Roman*) for most type. Create contrast for items that you want to stand out by printing them in **bold** or *italics*.
- **Color.** Choose a different color for words or other elements you want to emphasize.
- **Font.** To help readers distinguish one kind of element on your page from another, you can use different fonts for each. At work, this is often done to help headings stand out from paragraphs.

Of course, using different fonts to distinguish different kinds of content will work only if there is enough contrast between the two fonts. Consider the following six examples.

Times Roman	Helvetica
Baskerville	**Arial**
Palatino	**Folio**

As you can see, the fonts in the left-hand column look very similar to one another. Those on the right also closely resemble each other. Choosing two

TRY THIS Some advertisements ignore some or all of the suggestions made in Guidelines 1 through 4. Find an example and identify the suggestions it follows and the ones it doesn't.
How does ignoring the suggestions improve the ad's effectiveness?
How would ignoring the same suggestions affect a communication you are preparing for your technical communication course?

fonts from the left-hand column would not provide enough contrast for most readers to notice immediately. The same is true for choosing two from the right-hand column.

However, readers can perceive immediately the difference between any font on the left and any on the right. Here's why. The fonts on the left all have lines, called *serifs,* across the ends of their strokes. They are called *serif* fonts. In contrast, the fonts on the right have no serifs. They are called *sans serif* fonts (in French, *sans* means "without"). To make their headings stand out, many writers use a sans serif type for their headings and a serif type for their paragraphs.

To create even greater contrast among the visual elements on the page, you can use the variables of size, type treatment, font, and color to reinforce one another. By coordinating these variables with one another, you can create distinctive appearances for all of the visual elements on a page. The following table illustrates this principle. Figure 16.5 shows a page created using this table.

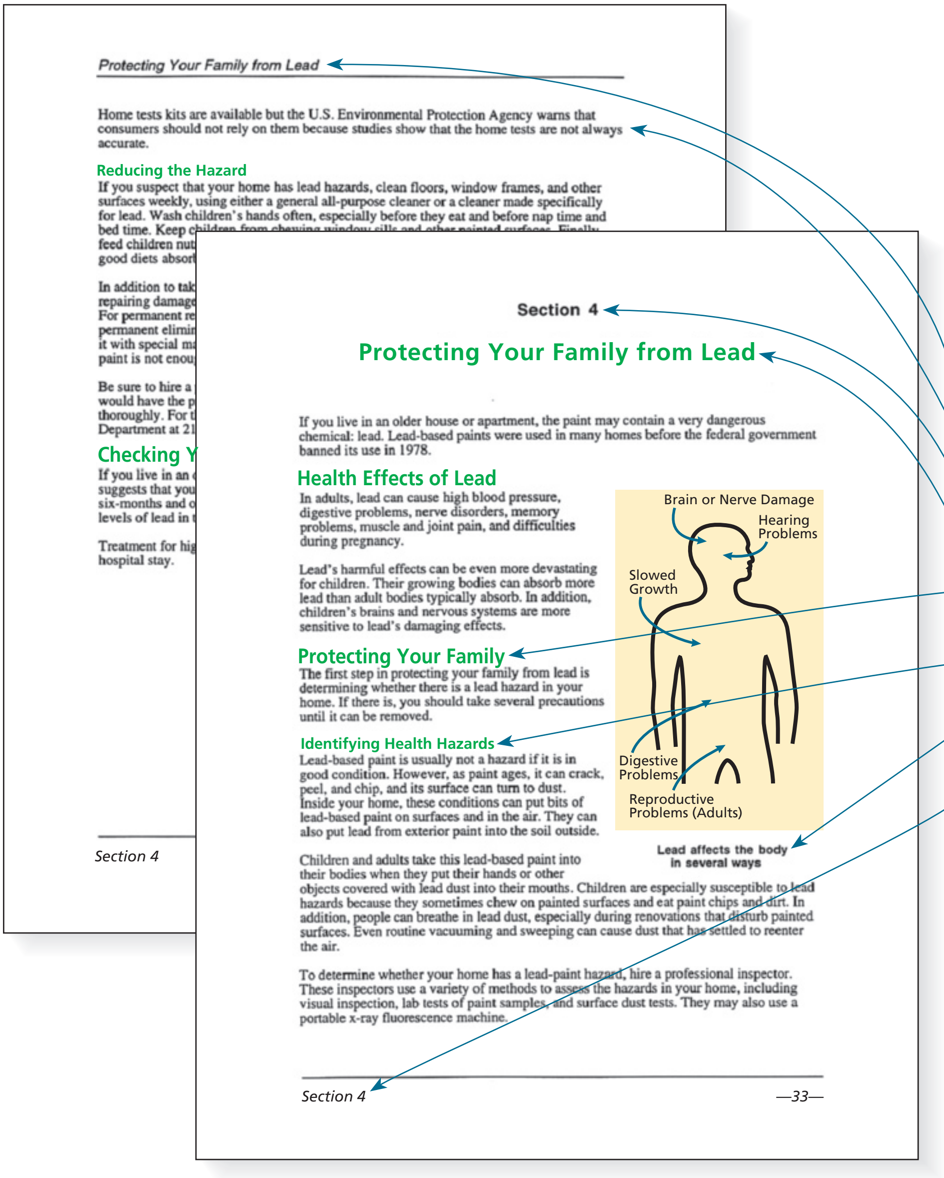
Element	Font Category	Size	Treatment	Color
Paragraph	serif (e.g., Times)	12 point	Roman	black
Headings				
First level	sans serif (e.g., Arial)	16 point	bold Roman	green
Second level	sans serif	14 point	bold Roman	green
Figure caption	sans serif	10 point	bold Roman	black
Footers	sans serif	10 point	italic	black

You can use the principle of contrast to distinguish other elements as well. For example, in a set of instructions, you can set off warnings in a box that might have a colored background. In a report, you might set off your tables from your paragraphs by using the same font for your tables that you use for your headings.

When working with page design variables, remember that your reason for creating visually contrasting elements is to simplify the page for your readers so they can readily see the role played by each element on the page. Don't create so many distinctions that the page seems chaotic to readers. In most cases, for example, stick to only two colors and two fonts for the text.

Other tools you can use to help readers see the organization of a page include *rules,* which are lines that mark the boundaries between parts, and *icons,* which highlight information for readers or help them locate a certain kind of content. See Figure 16.6.

WEB For additional information on using Microsoft Word to design pages, go to your English CourseMate at *www.cengagebrain.com.*



Protecting Your Family from Lead

Home tests kits are available but the U.S. Environmental Protection Agency warns that consumers should not rely on them because studies show that the home tests are not always accurate.

Reducing the Hazard

If you suspect that your home has lead hazards, clean floors, window frames, and other surfaces weekly, using either a general all-purpose cleaner or a cleaner made specifically for lead. Wash children's hands often, especially before they eat and before nap time and bed time. Keep c
feed children nut
good diets absor

In addition to tak
repairing damage
For permanent re
permanent elimin
it with special ma
paint is not enou

Be sure to hire a
would have the p
thoroughly. For t
Department at 21

Checking Y

If you live in an
suggests that you
six-months and o
levels of lead in t

Treatment for hig
hospital stay.

Section 4

Section 4

Protecting Your Family from Lead

If you live in an older house or apartment, the paint may contain a very dangerous chemical: lead. Lead-based paints were used in many homes before the federal government banned its use in 1978.

Health Effects of Lead

In adults, lead can cause high blood pressure, digestive problems, nerve disorders, memory problems, muscle and joint pain, and difficulties during pregnancy.

Lead's harmful effects can be even more devastating for children. Their growing bodies can absorb more lead than adult bodies typically absorb. In addition, children's brains and nervous systems are more sensitive to lead's damaging effects.

Lead affects the body in several ways

Protecting Your Family

The first step in protecting your family from lead is determining whether there is a lead hazard in your home. If there is, you should take several precautions until it can be removed.

Identifying Health Hazards

Lead-based paint is usually not a hazard if it is in good condition. However, as paint ages, it can crack, peel, and chip, and its surface can turn to dust. Inside your home, these conditions can put bits of lead-based paint on surfaces and in the air. They can also put lead from exterior paint into the soil outside.

Children and adults take this lead-based paint into their bodies when they put their hands or other objects covered with lead dust into their mouths. Children are especially susceptible to lead hazards because they sometimes chew on painted surfaces and eat paint chips and dirt. In addition, people can breathe in lead dust, especially during renovations that disturb painted surfaces. Even routine vacuuming and sweeping can cause dust that has settled to reenter the air.

To determine whether your home has a lead-paint hazard, hire a professional inspector. These inspectors use a variety of methods to assess the hazards in your home, including visual inspection, lab tests of paint samples, and surface dust tests. They may also use a portable x-ray fluorescence machine.

Section 4 —33—

Based on United States Consumer Product Safety Commission, *Protect Your Family from Lead in Your Home.* Washington, D.C.: United States Environmental Protection Agency, 1995: 33-34.

FIGURE 16.5

Coordination of Size, Font, Type Treatment, and Color to Reinforce One Another

These pages illustrate how font, size, style, and color can be coordinated to indicate a communication's organization.

They follow the styles described in the table on page 343.

Header in 14-point Arial italic

Paragraph text in 12-point Times

Section number in 14-point Arial

Section title in 20-point Arial bold

First-level headings in 16-point Arial bold

Second-level headings in 14-point Arial bold

Figure caption in 10-point Arial bold

Footer in 10-point Arial italic

FIGURE 16.6

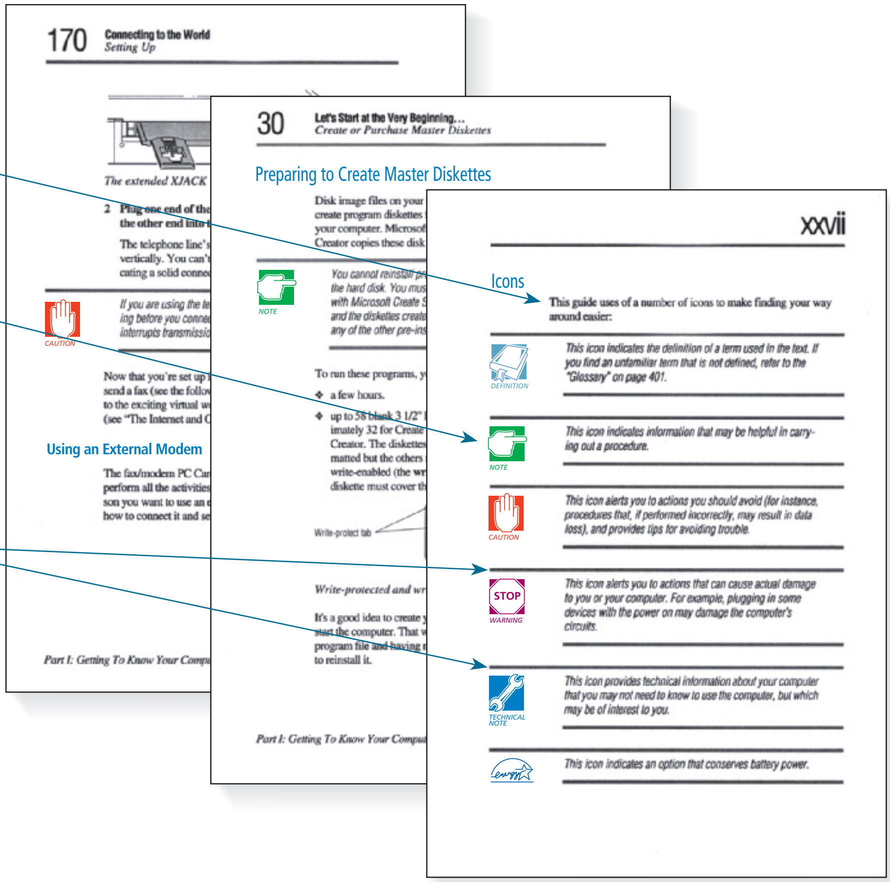
Rules and Icons Used to Signal Organization

The first sentence on page xxvii explains that the icons' purpose is to make "finding your way around" the guide easier.

The icons help readers distinguish special kinds of information from the rest of a page's contents:

- "Warnings" and "Cautions" that require attention.
- "Notes" that might be helpful, but could be skipped.

Note how the rules (horizontal lines) also help to organize the information visually.



From Toshiba (1996) Satellite Pro 400CS/500 User's Guide, pp. xxxvii, 124, and 210. Reprinted by permission of Toshiba America, Inc., New York.

USING WORD PROCESSORS TO CREATE PAGE DESIGNS

A Writer's Tutorial available at your English CourseMate at www.cengagebrain.com shows how to use a word-processing program to create page designs that employ Guidelines 1 through 4.

HOW TO USE PAGE DESIGN TO UNIFY A LONG COMMUNICATION VISUALLY

In communications that are more than a page long, you should think not only about creating well-designed single pages but also about creating a well-designed *set* of pages.

When you are creating a set of pages, the chief goal is to make the pages harmonize visually in a way that both supports your readers' use of them and creates an aesthetically pleasing design. To achieve this goal, use the fifth of Williams's design principles: *repetition*.

For instance, use the same grid pattern throughout. Similarly, use the same type treatment (font, size, color, etc.) for all major headings, for all second-level headings, all headers and footers, and so on. Such repetition enables your readers to "learn" the structure of your pages so that they immediately understand the organization of each new page as they turn to it. Repetition also creates visual harmony that is more pleasing to the eye than a set of inconsistent designs.

Of course, it's not possible to have exactly the same design for every page in some communications. In long reports, for instance, each chapter may begin with a page that looks different from every other page in the chapter. Instruction manuals often have troubleshooting sections that present different kinds of information than the manuals' other pages do. For such communications, follow these two strategies:

- **Use the same design for all pages that present the same kind of information.** For instance, use one design for all pages that begin new chapters and another for all pages that don't.
- **Even for pages that have different overall designs, use the same treatment for all elements they share.** For example, use the same style for headings wherever they appear. On all pages, stick with the same fonts and the same style for headers and footers.

Figure 16.7 shows pages from a communication that uses these strategies.

Using Word-Processing Programs to Achieve Consistency

The *styles* feature included with word-processing programs enables you to create consistent pages very efficiently. For example, you can name your first-level headings "Heading 1" and then use a series of menus and checkboxes to define the font, size, color, margins, indentations, and other features for these headings. To apply all the details of this style to each first-level heading in your communication, you simply highlight the item and select the corresponding style from a menu. This process is much more efficient than formatting each heading individually.

The styles feature is also helpful to writing teams. They can define a single set of styles for all team members to use when drafting, thereby saving the time it would take to achieve consistency by reformatting everyone's draft.

The styles feature has the added advantage of letting you adjust styles easily. For example, to change the size and color of *all* of the first-level headings, you just redefine the style itself.

HOW TO SELECT TYPE THAT IS EASY FOR YOUR READERS TO READ

We recognize letters by seeing their main lines. These lines are more obvious with some fonts than with others, as you can see by comparing the two fonts on the left with the one on the right (top of page 351):

FIGURE 16.7

Page Design Used to Create Visual Unity in a Communication

By consistently using various design elements, this car owner's manual achieves overall visual unity.

All pages have the same design at the top.

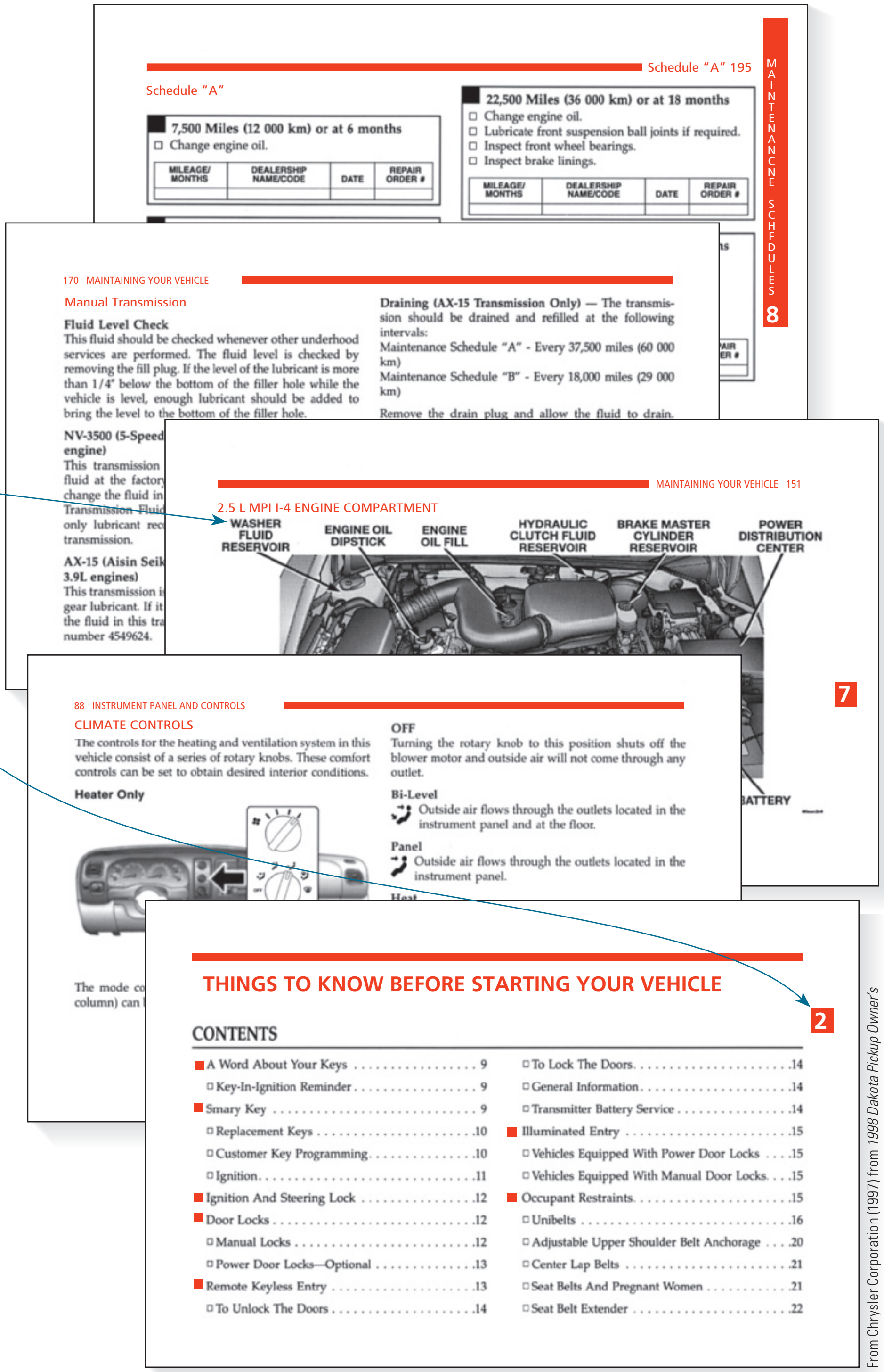
All pages use the same two-column grid, regardless of the type of content.

Wide illustrations exactly fill both columns, thereby keeping the same outside margins.

The same styles are used throughout for the headings.

Color is applied according to the same pattern throughout.

All right-hand pages have blocks of color that give the section number.



From Chrysler Corporation (1997) from *1998 Dakota Pickup Owner's Manual*, pp. 7, 99, 151, 170. Copyright © Chrysler Corporation.

Comparison of three fonts

Times Roman	Ultra	Script
All major lines of all the letters are clearly defined.	The very clean, unadorned lines of all major strokes make these letters easy to recognize.	The shape of the *s* is hidden by the ornate lines, and the circle of the *p* is not closed.

When we are reading only a few words, as when looking at a magazine ad, these differences are inconsequential. However, when we are reading an entire page, a full paragraph, or even a few sentences, type with the more distinct main lines is easier to read. When choosing fonts for your text, apply the following principles.

PRINCIPLES OF TYPE SELECTION

- **Use a font with strong, distinct main lines.**
- **Avoid using italics for more than a sentence at a time.** Although they are great for emphasis, italics are difficult to read in long passages because they represent a "distorted" or "ornate" version of the alphabet that obscures the main lines.
- **Avoid using all capital letters for more than a few words at a time.** Research has shown that capital letters are difficult to read in long stretches (Tinker, 1969). Why? Many capital letters have very similar shapes. For instance, capitals "D" and "P" are the same height and face the same direction. In contrast, lowercase "d" and "p" have different heights and face in different directions. Such differences make lowercase letters easier to identify and promote more rapid reading.

After studying the extensive literature on the readability of different fonts for printed communications, Karen Schriver (1997) concludes that in extended text serif type may be somewhat easier to read than sans serif, although the two categories can be read equally quickly in small amounts. Schriver notes, however, that several factors may come into play, including cultural preferences and familiarity with the font. In the United States, serif type is most common in published books, but in Europe publishers often use sans serif type. She concludes that if you choose a font with strong, distinct lines, your text will be readable whether you select a serif or sans serif font.

LEARN MORE To review the difference between serif and sans serif type, go to page 346.

Of course, no type will be legible unless it is large enough. Research has found that people find it easiest to read passages printed in type between 8 and 12 points high (Tinker, 1969). At work, writers usually avoid type smaller than 10 points and reserve type larger than 12 points for headings, titles, and the like. They sometimes use type as small as 9 points in headers, footers, and captions for figures.

HOW TO CHOOSE THE PHYSICAL CHARACTERISTICS THAT SUPPORT YOUR COMMUNICATION'S GOALS

For some communications, you will need to think about how to design not only the elements on the page, but also the overall product that you will provide to your readers. Here, too, consider your communication from your readers' perspective.

- **Size.** Choose a size that your readers will find convenient in the situations in which they will use your communication. For example, if you are creating instructions that readers will use at a desk already crowded by a computer and a keyboard, imitate software manufacturers who print manuals that are smaller than 8½ by 11 inches.
- **Shape.** Choose a shape that will make it convenient for your readers to carry and store. If appropriate, for example, make it a shape that will fit into a shirt pocket or into a special case (such as the case for a notepad computer or a blood glucose monitor).
- **Binding.** Some bindings stay open more easily than others. If your readers will want your communication to lie flat because they need to use both hands for something else, consider a spiral binding or three-ring binder.
- **Paper.** If you are creating a shop manual that might be spilled on or a document that might be used outdoors, consider a coated paper that resists liquids and soil.

CONCLUSION

Every page has some sort of page design. This chapter has explained how you can look at your pages in the way that graphic designers do, thinking about each graphic element in terms of the way it affects your readers. By following this chapter's advice, you will be able to design pages and communications that help your readers read efficiently, emphasize the important contents of your communication, and create a favorable impression.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Figure 16.8 shows four package inserts for a prescription medication. All contain the same information, but each was prepared by a different graphic designer. Describe the page designs used in each. What purpose do you think each designer had in mind? Which design do you think works best? Worst? Why?
2. Find three different page designs. (Choose no more than one from a popular magazine; look at instructions, insurance policies, leases, company brochures, technical reports, and the like.) If your instructor asks, find all the samples in documents related to your major. Photocopy one page illustrating each design. Then, for each page, describe what you think the purpose of the document is and discuss the specific features of the page design that help or hinder the document from achieving that purpose.
3. Do the Informational Page project in Appendix B.
4. Experiment with the page design of a draft or finished communication of yours that has headings and at least one list. Using your desktop publishing program's styles feature, define styles for the communication's design elements. Instead of using the program's default styles, create your own. After you have applied your styles throughout your communication, change the size, color, and fonts for the headings. Also try different designs for the other elements. (To learn how to use the program's styles feature, use its Help feature.)

EXPLORE ONLINE

Search for "Page Design" with your web browser. Find two suggestions that you consider to be good supplements to the ones given in this chapter. Would each of them be an additional subpoint under one of the chapter's guidelines or would one or both of them be new guidelines? Provide a reader-centered reason for following each of them.

COLLABORATE WITH YOUR CLASSMATES

Work with another student on this exercise, which will provide you with practice at evaluating and improving a page design.

1. List the ways in which the design of the page shown in Figure 16.9 (page 358) could be improved.
2. Redesign the page using the strategies described in the Writer's Tutorial for Creating a Multicolumn Page Design available at your English CourseMate at www.cengagebrain.com. Specifically, do the following:
   a. Create three thumbnail sketches for the page.
   b. Create a full-size mockup of the best design.
3. Display your mockup on the wall of your classroom along with the mockups prepared by the other students in your class. Decide which mockups work best. Discuss the reasons.

APPLY YOUR ETHICS

This exercise invites you to consider the role that page and screen design can play in your ability to communicate effectively on issues that are important to you for ethical reasons. Visit three or more websites whose creators are advocating a position on an ethical basis. Sites maintained by groups taking various positions on environmental policy or education policy are examples. Evaluate the ways that the screen design of each site promotes or hinders the group's ability to achieve the usefulness and persuasive goals it has for the site.

FIGURE 16.8

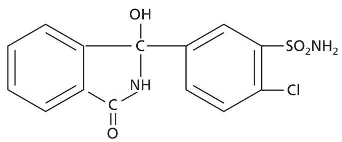
Package Inserts for a Prescription Medication

HYGROTON®
chlorthalidone usp

50 mg. Tablets, 100 mg. Tablets

Oral Antihypertensive-Diuretic

DESCRIPTION
HYGROTON (chlorthalidone) is a monosulfamyl diuretic which differs chemically from thiazide diuretics in that a double-ring system is incorporated in its structure. It is 2-Chlor-5-(1-hydroxy-3-oxo-1-isoindolinyl) benzenesulfonamide, with the following structural formula:



ACTIONS
HYGROTON is an oral diuretic with prolonged action (48-72 hours) and low toxicity. The diuretic effect of the drug occurs within two hours of an oral dose and continues for up to 72 hours.
INDICATIONS
Diuretics such as HYGROTON are indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effect of other antihypertensive drugs in the more severe forms of hypertension and in the control of hypertension of pregnancy.
CONTRAINDICATIONS
Anuria. Hypertensitivity to chlorthalidone. The routine use of diuretics in an otherwise healthy pregnant woman with or without mild edema is contraindicated and possibly hazardous.
WARNINGS
Should be used with caution in severe renal disease. In patients with renal disease, chlorathalidone or related drugs may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

USAGE IN PREGNANCY: Reproduction studies in various animal species at multiples of the human dose showed no significant level of teratogenicity; no fetal or congenital abnormalities were observed.
NURSING MOTHERS: Thiazides cross the placental barrier and appear in cord blood and breast milk.
PRECAUTIONS
Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.
Chlorthalidone and related drugs may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS
Gastrointestinal System Reactions:
anorexia constipation
gastric irratation jaundice
nausea (intrahepatic
vomiting cholestatic
cramping jaundice)
diarrhea pancreatitis
Central Nervous System Reactions:
dizziness headache
vertigo xanthopsia
paresthesias
Hematologic Reactions:
leukopenia thrombocytopenia
agranulocytosis aplastic anemia
Other Adverse Reactions:
hyperglycemia muscle spasm
glycosuria weakness
hyperuricemia restlessness
impotence

Whenever adverse reactions are moderate or severe, chlorthalidone dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION
Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.
Initiation: Preferably, therapy should be initiated with 50 mg. or 100 mg. daily. Due to the long action of the drug, therapy may also be initiated in most cases with a dose of 100 mg. on alternate days or three times weekly (Monday, Wednesday, Friday). Some patients may require 150 or 200 mg. at these intervals.
Maintenance: Maintenance doses may often be lower than initial doses and should be adjusted according to the individual patient. Effectiveness is well sustained during continued use.
OVERDOSAGE
Symptoms of overdosage include nausea, weakness, dizziness and disturbances of electrolyte balance.
HOW SUPPLIED
HYGROTON (chlorthalidone). White, single-scored tablets of 100 mg. and aqua tablets of 50 mg. in bottles of 100 and 1000; single-dose blister packs, boxes of 500; Paks of 28 tablets, boxes of 6.
CAUTION: Federal law prohibits dispensing without prescription.
ANIMAL PHARMACOLOGY
Biochemical studies in animals have suggested reasons for the prolonged effect of chlorthalidone. Absorption from the gastrointestinal tract is slow, due to its low solubility. After passage to the liver, some of the drug enters the general circulation, while some is excreted in the bile, to be reabsorbed later.

USV PHARMACEUTICAL MFG. CORP.
Manati, P.R. 00701

USV Pharmaceutical Manufacturing Corporation

A

FIGURE 16.8

(continued)

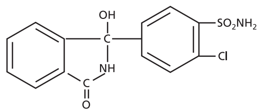
USV Pharmaceutical Manufacturing Corporation

hygroton* chlorthalidone usp

50 mg. tablets
100 mg. tablets

oral antihypertensive-diuretic

Description: *HYGROTON* (chlorthalidone) is a monosulfamyl diuretic which differs chemically from thiazide diuretics in that a double-ring system is incorporated in its structure. It is 2-Chlor-5-(1-hydroxy-3-oxo-1-isoindolinyl) benzenesulfonamide, with the following structural formula:



Actions: *HYGROTON* is an oral diuretic with prolonged action (48-72 hours) and low toxicity. The diuretic effect of the drug occurs within two hours of an oral dose and continues for up to 72 hours.

Indications: Diuretics such as HYGROTON are indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effect of other antihypertensive drugs in the more severe forms of hypertension and in the control of hypertension of pregnancy.

Contraindications: Anuria. Hypersensitivity to chlorthalidone.

The routine use of diuretics in an otherwise healthy pregnant woman with or without mild edema is contraindicated and possibly hazardous.

Warnings: Should be used with caution in severe renal disease. In patients with renal disease, chlorathalidone or related drugs may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.

Usage in pregnancy: Reproduction studies in various animal species at multiples of the human dose showed no significant level of teratogenicity; no fetal or congenital abnormalities were observed.

Nursing mothers: Thiazides cross the placental barrier and appear in cord blood and breast milk.

Precautions: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

Chlorthalidone and related drugs may decrease serum PBI levels without signs of thyroid disturbance.

Adverse reactions:

Gastrointestinal System Reactions:

anorexia	constipation
gastric iratation	jaundice
nausea	(intrahepatic
vomiting	cholestatic
cramping	jaundice)
diarrhea	
pancreatitis	

Central Nervous System Reactions:

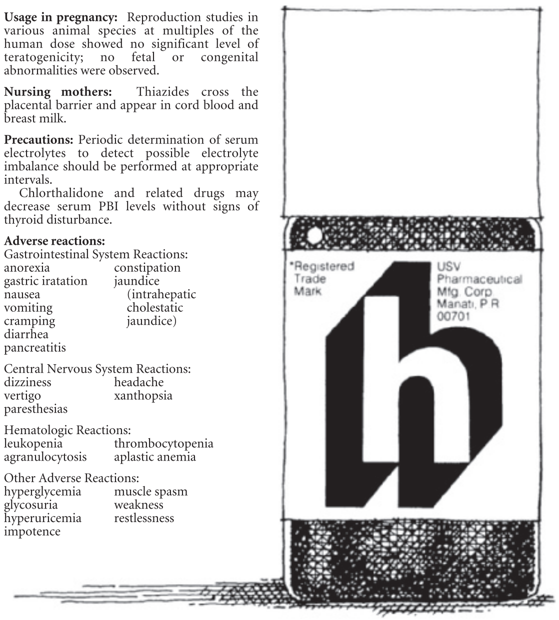
dizziness	headache
vertigo	xanthopsia
paresthesias	

Hematologic Reactions:

leukopenia	thrombocytopenia
agranulocytosis	aplastic anemia

Other Adverse Reactions:

hyperglycemia	muscle spasm
glycosuria	weakness
hyperuricemia	restlessness
impotence	



Whenever adverse reaction are moderate or severe, chlorthalidone dosage should be reduced or therapy withdrawn.

Dosage and administration: Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.

Initiation: Preferably, therapy should be initiated with 50 mg. or 100 mg. daily. Due to the long action of the drug, therapy may also be initiated in most cases with a dose of 100 mg. on alternate days or three times weekly (Monday, Wednesday, Friday). Some patients may require 150 or 200 mg. at these intervals.

Maintenance: Maintenance doses may often be lower than initial doses and should be adjusted according to the individual patient. Effectiveness is well sustained during continued use.

Overdosage: Symptoms of overdosage include nausea, weakness, dizziness and disturbances of electrolyte balance.

How supplied: HYGROTON (chlorthalidone). White, single-scored tablets of 100 mg. and aqua tablets of 50 mg. in bottles of 100 and 1000; single-dose blister packs, boxes of 500; Paks of 28 tablets, boxes of 6.

Caution: Federal law prohibits dispensing without prescription.

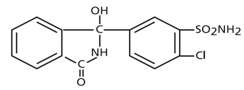
Animal pharmacology: *Biochemical studies* in animals have suggested reasons for the prolonged effect of chlorthalidone. Absorption from the gastrointestinal tract is slow, due to its low solubility. After passage to the liver, some of the drug enters the general circulation, while some is excreted in the bile, to be reabsorbed later.

B

FIGURE 16.8

(continued)

Hygroton®
chlorthalidone USP

50 mg. Tablets **100 mg. Tablets**	**Oral** **Antihypertensive-Diuretic**	
Description	**Hygroton** (chlorthalidone) is a monosulfamyl diuretic which differs chemically from thiazide diuretics in that a double-ring system is incorporated in its structure. It is 2-Chlor-5-(1-hydroxy-3-oxo-1-isoindolinyl) benzenesulfonamide, with the following structural formula	
Actions	**Hygroton** is an oral diuretic with prolonged action (48-72 hours) and low toxicity. The diuretic effect of the drug occurs within two hours of an oral dose and continues for up to 72 hours	
Indications	Diuretics such as **Hygroton** are indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effect of other	antihypertensive drugs in the more severe forms of hypertension and in the control of hypertension of pregnancy
Contraindications	Anuria. Hypertensitivity to chlorthalidone	The routine use of diuretics in an otherwise healthy pregnant woman with or without mild edema is contraindicated and possibly hazardous
Warnings	Should be used with caution in severe renal disease. In patients with renal disease, chlorathalidone or related drugs may precipitate azotemia	Cumulative effects of the drug may develop in patients with impaired renal function
Usage in Pregnancy:	Reproduction studies in various animal species at multiples of the human dose showed no significant level of teratogenicity; no fetal or congential abnormalities were observed	
Nursing Mothers:	Thiazides cross the placental barrier and appear in cord blood and breast milk	
Precautions	Periodic determination of serum selectrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals	Chlorthalidone and related drugs may decrease serum PBI levels without signs of thyroid disturbance
Adverse reactions: Gastrointestinal System Reactions:	anorexia gastric irritation nausea vomiting cramping diarrhea	constipation jaundice (intrahepatic cholestatic jaundice) pancreatitis
Central Nervous System Reactions:	dizziness vertigo paresthesias headache xanthopsia	
Hematologic Reactions:	leukopenia agranulocytosis thrombocytopenia aplastic anemia	
Other Adverse Reactions:	hyperglycemia glycosuria hyperuricemia muscle spasm weakness restlessness impotence	Whenever adverse reaction are moderate or severe, chlorthalidone dosage should be reduced or therapy withdrawn
Dosage and Administration	Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as	the minimal dose possible to maintain that therapeutic response
Initiation:	Preferably, therapy should be initiated with 50 mg. or 100 mg. daily. Due to the long action of the drug, therapy may also be initiated in most cases with a dose of 100 mg. on alternate days or	three times weekly (Monday, Wednesday, Friday). Some patients may require 150 or 200 mg. at these intervals
Maintenance:	Maintenance doses may often be lower than initial doses and should be adjusted according to	the individual patient. Effectiveness is well sustained during continued use
Overdosage	Symptoms of overdosage include nausea, weakness, dizziness and disturbances of electrolyte balance	
How Supplied	**Hygroton** (chlorthalidone). White, single-scored tablets of 100 mg. and aqua tablets of 50 mg in	bottles of 100 and 1000; single-dose blister packs, boxes of 500; Paks of 28 tablets, boxes of 6
Caution:	Federal law prohibits dispensing without prescription	

USV Pharmaceutical Manufacturing Corporation

C

FIGURE 16.8

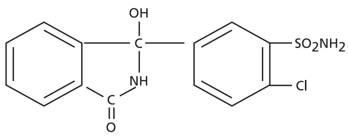
(continued)

Hygroton®

Chlorthalidone USP

50 mg. Tablets
100 mg. Tablets
Oral Antihypertensive-Diuretic

DESCRIPTION
HYGROTON (chlorthalidone) is a monosulfamyl diuretic which differs chemically from thiazide diuretics in that a double-ring system is incorporated in its structure. It is 2-Chlor-5-(1-hydroxy-3-oxo-1-isoindolinyl) benzenesulfonamide, with the following structural formula:



ACTIONS
HYGROTON is an oral diuretic with prolonged action (48-72 hours) and low toxicity. The diuretic effect of the drug occurs within two hours of an oral dose and continues for up to 72 hours.

INDICATIONS
Diuretics such as HYGROTON are indicated in the management of hypertension either as the sole therapeutic agent or to enhance the effect of other antihypertensive drugs in the more severe forms of hypertension and in the control of hypertension of pregnancy.

CONTRAINDICATIONS
Anuria.
Hypertensitivity to chlorthalidone. The routine use of diuretics in an otherwise healthy pregnant woman with or without mild edema is contraindicated and possibly hazardous.

WARNINGS
Should be used with caution in severe renal disease. In patients with renal disease, chlorathalidone or related drugs may precipitate azotemia. Cumulative effects of the drug may develop in patients with impaired renal function.
Usage in Pregnancy: Reproduction studies in various animal species at multiples of the human dose showed no dignificant level of teratogenicity; no fetal or congenital abnormalities were observed.
Nursing Mothers: Thiazides cross the placental barrier and appear in cord blood and breast milk.

PRECAUTIONS
Periodic determination of serum selectrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals. Chlorthalidone and related drugs may decrease serum PBI levels without signs of thyroid disturbance.

ADVERSE REACTIONS
Gastrointestinal Systems Reactions:
- anorexia
- gastric irritation
- nausea
- vomiting
- cramping
- diarrhea
- constipation
- jaundice (intrahepatic cholestatic jaundice)
- pancreatitis

Central Nervous System Reactions:
- dizziness
- vertigo
- paresthesias
- headache
- xanthopsiaHematologic Reactions:
- leukopenia
- agranulocytosis
- thrombocytopenia
- aplastic anemia

Other Adverse Reactions:
- hyperglycemia
- glycosuria
- hyperuricemia
- impotence
- muscle spasm
- weakness

restlessness
Whenever adverse reaction are moderate or severe, chlorthalidone dosage should be reduced or therapy withdrawn.

DOSAGE AND ADMINISTRATION
Therapy should be individualized according to patient response. This therapy should be titrated to gain maximal therapeutic response as well as the minimal dose possible to maintain that therapeutic response.
Initiation: Preferabley, therapy should be initiated with 50 mg. or 100 mg. daily. Due to the long action of the drug, therapy may also be initiated in most cases with a dose of 100 mg. on alternate days or three times weekly (Monday, Wednesday, Friday). Some patients may require 150 or 200 mg. at these intervals.

Maintenance: Maintenance doses may often be lower than initial doses and should be adjusted according to the individual patient. Effectiveness is well sustained during continued use.

OVERDOSAGE
Symptoms of overdosage include nausea, weakness, dizziness and disturbances of electrolyte balance.

HOW SUPPLIED
HYGROTON (chlorthalidone). White, single-scored tablets of 100 mg. and aqua tablets of 50 mg. in bottles of 100 and 1000; single-dose blister packs, boxes of 500; Paks of 28 tablets, boxes of 6.

CAUTION: Federal law prohibits dispensing without prescription.

ANIMAL PHARMACOLOGY
Biochemical studies in animals have suggested reasons for the prolonged effect of chlorthalidone. Absorption from the gastrointestinal tract is slow, due to its low solubility. After passage to the liver, some of the drug enters the general circulation, while some is excreted in the bile, to be reabsorbed later.

USV PHARMACEUTICAL
MFG. CORP.
Manati, P.R. 00701

USV Pharmaceutical Manufacturing Corporation

D

FIGURE 16.9

Sample Page for Use with Collaboration Exercise

4) Flatten the clay by pounding it into the table. Remember, work the clay thoroughly!!

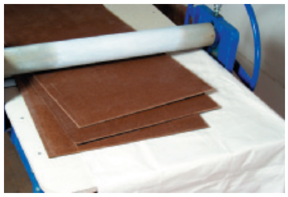
4)

Slab Roller

The slab roller is a simple but very efficient mechanical device. A uniform thickness of clay is guaranteed. The ease of its operation saves countless hours of labor over hand rolling techniques.

1) The thickness of the clay is determined by the number of masonite® boards used. There are three 1/4" boards and one 1/8" board. They can be used in any combination to reduce or increase the thickness of the clay. If no boards are used, the clay will be 1" thick. If all the boards are used, the clay will be 1/8" thick. So, for a 1/2" thickness of clay, use two 1/4" boards.

1)



2) The canvas cloths must be arranged correctly. They should form a sort of envelope around the wet clay. This prevents any clay from getting on the rollers and masonite® boards.

2)

3) Place the clay flat on the canvas near the rollers. It may be necessary to trim some of the clay since it will spread out as it passes through the rollers.

3)

4.

Courtesy of Steve Oberjon

PART VII

REVISING

Kotomiti Okuma/Shutterstock.com

17 | Revising Your Drafts

Even the most skilled writers don't always get it right the first time. In fact, the more effective the writer, the more likely he or she does the same thing your instructors have probably advised you repeatedly to do: Take time to make another draft.

On the job, revising is serious work. It usually goes far beyond the important task of proofreading. The goal is to deepen thinking, fill out ideas, refine recommendations, and clarify expression. These improvements are so important in the workplace that many employers *require* writers to revise their more critical documents, often by mandating that the writers give their drafts to managers or other co-workers for review.

THE THREE ACTIVITIES OF REVISING

Revising involves three separate activities. Although they are often performed almost simultaneously, understanding that each requires a separate mental activity can greatly increase your revising expertise.

1. **Identifying possible improvements.** In this activity, you evaluate your draft from the perspective of its intended readers. Will they find it to be helpful? Persuasive? This chapter will explain two methods of identifying possible improvements—checking your draft yourself and asking a co-worker to review it for you. Because you will often be asked to review other people's drafts, the chapter also explains ways to make your advice to other writers as helpful as possible. The next chapter describes a third method of identifying possible improvements: testing.
2. **Deciding which improvements to make.** At work, you will rarely have time to make all possible improvements. Deadlines will loom. Other responsibilities

will demand your attention. This chapter will suggest ways you can determine which of the revisions you *might* make to produce the greatest improvement in the time available.

3. **Making the selected improvements.** For good reason, this chapter offers no advice about this activity. The principles of good communication are the same whether you are creating a first draft or revising a nearly final draft. If you determine that you need to polish your writing style, go to Chapter 10, "Developing an Effective Style," for advice. Similarly, if you discover that you need to reorganize, redesign your graphics, or make any other sort of change, consult the appropriate chapters in this book.

As you read this chapter, discuss it in class, and apply its advice to your writing projects, focus on developing your ability to do the following.

WEB To read additional information, see more examples, and access links related to checking your drafts, go to your English CourseMate at *www.cengagebrain.com.*

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Identify on your own the possible ways to improve your draft.
2. Obtain truly helpful advice from people who review your draft.
3. Give truly helpful advice when you are reviewing someone else's draft.
4. Produce the maximum improvement in a limited time.

HOW TO IDENTIFY THE POSSIBLE WAYS TO IMPROVE YOUR DRAFT

The first thing to know about checking over your own drafts is this: It is extremely difficult to recognize problems in your own writing. Several obstacles hamper your ability to do so. The following guidelines identify these obstacles and suggest ways of overcoming them.

Guideline 1 | Check from your readers' point of view

Writers sometimes create the first obstacle by defining the focus of their checking too narrowly. They concentrate on spelling, punctuation, and grammar, forgetting to consider their communication from the perspective of readers. Consequently, you should always begin your checking by reminding yourself of your communication's objectives. If you wrote them down, pull out your notes. If you recorded them mentally, review them now. What tasks do you want your communication to help your readers perform? How do you want it to alter their attitudes?

Then, with your communication's objectives fresh in mind, read your draft while imagining your readers' moment-by-moment responses. As they proceed, how usable will they find each section, paragraph, and sentence to be? How persuasive will they find each of the writing strategies by which you hope to shape their attitudes? Look especially for places where the readers may not respond in the way you desire. That's where you need to revise.

Guideline 2 | Check from your employer's point of view

In many working situations, you must consider your communication not only from your readers' perspective but also from your employer's. Here are three questions you should ask:

Things to consider when evaluating from your employer's perspective

- **How will my communication impact others in the organization?** By anticipating conflicts and objections that your communication might stir up, you may be able to reduce their severity or avoid them altogether.
- **Does my communication promise something on my employer's behalf?** For example, does it make a commitment to a client or customer? If so, ask yourself whether you have the authority to make the commitment, whether the commitment is in your employer's best interest, and whether it is one your employer wishes to make.
- **Does my communication comply with my employer's policies?** First, check your draft against your employer's policies on writing style and format. Second, determine whether it complies with the employer's regulations concerning what you can say. For example, for legal reasons, your employer may want to restrict when and how you reveal information about a certain aspect of your work. This might happen, for instance, if you are working on a patentable project or a project regulated by a government body, such as a state or federal Environmental Protection Agency.

Guideline 3 | Distance yourself from your draft

Another obstacle to effective checking is being too "close" to what we write. Because we know what we meant to say, when we check for errors we often see what we intended to write rather than what is actually there. A word is misspelled, but we see it spelled correctly. A paragraph is cloudy, but we see clearly the meaning we wanted to convey.

To distance yourself from your draft, try the following measures:

Ways to distance yourself from your draft

- **Let time pass.** As time passes, your memory of your intentions fades. You become more able to see what you actually wrote. Set your draft aside, if for only a few minutes, before checking it.
- **Read your draft aloud, even if there is no one to listen.** Where you stumble when saying your words, your readers are likely to trip as well. Where the "voice" you've created in your draft sounds a little off to you, it will probably sound wrong to your readers, too (see Chapter 10).
- **Let your computer read your paper aloud to you.** Mac and some PC computers come with free programs that read your writing aloud through your computer's speakers. This simple way of distancing yourself from your draft can help you detect problems. For instructions on using the programs, go to your English CourseMate at www.cengagebrain.com.

TRY THIS Why not proofread by letting your computer read your writing aloud to you? For instructions, go to your English CourseMate at *www.cengagebrain.com.*

Guideline 4 | Read your draft more than once, changing your focus each time

Yet another obstacle to effective checking is summed up in the adage, "You can't do two things at once." To "do" something, according to researchers who study the way humans think, requires "attention." Some activities (such as walking) require much less attention than others (such as solving calculus problems). We can attend to several more or less automatic activities at once. However, when we are engaged in any activity that requires us to concentrate, we have difficulty doing anything else well at the same time (J. R. Anderson, 1995).

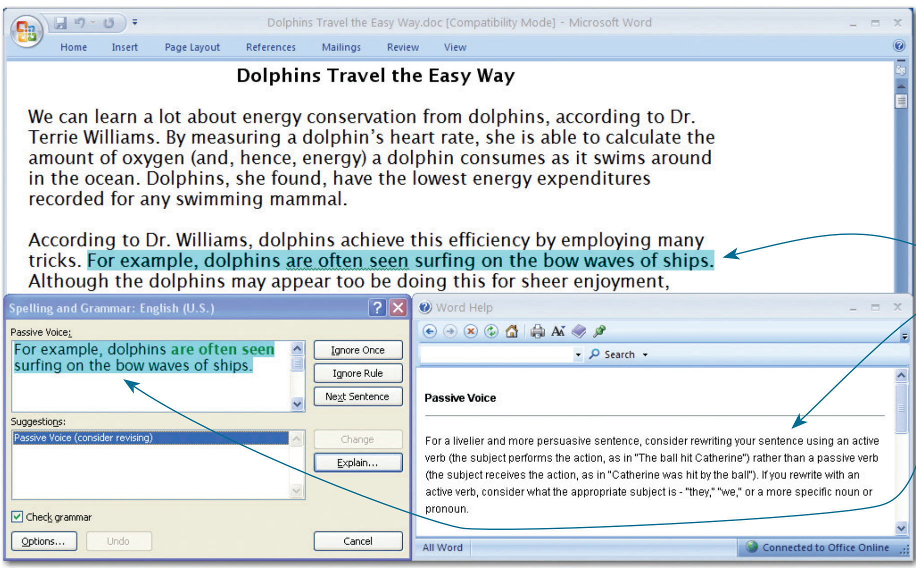
This limitation has important consequences. When you concentrate on one aspect of your draft, such as the spelling or consistency of your headings, you diminish your ability to concentrate on the others, such as the clarity of your prose.

To overcome this limitation on attention, check your draft at least twice, once for *substantive* matters (such as clarity and persuasive impact) and once for *mechanical* ones (such as correct punctuation and grammar). If you have time, you might read through it more than twice, sharpening the focus of each reading.

Guideline 5 | Use computer aids to find (but not to cure) possible problems

Desktop publishing programs offer a variety of aids that can help you check your drafts:

- **Spell checkers.** Spell checkers identify possible misspellings by looking for words in your draft that aren't in their dictionaries.
- **Grammar checkers.** Grammar checkers identify sentences that may have any of a wide variety of problems with grammar or punctuation. See Figure 17.1.
- **Style checkers.** Some computer programs analyze various aspects of your writing that are related to style, such as average paragraph, sentence, and word length. Using special formulas, they also compute scores that attempt to reflect the "readability" of a draft. See Figure 17.2.



Artwork © 2012 Microsoft; Text © Cengage Learning

FIGURE 17.1

Grammar Checker

A grammar checker looks for sentences that seem to violate a set of rules it has been given.

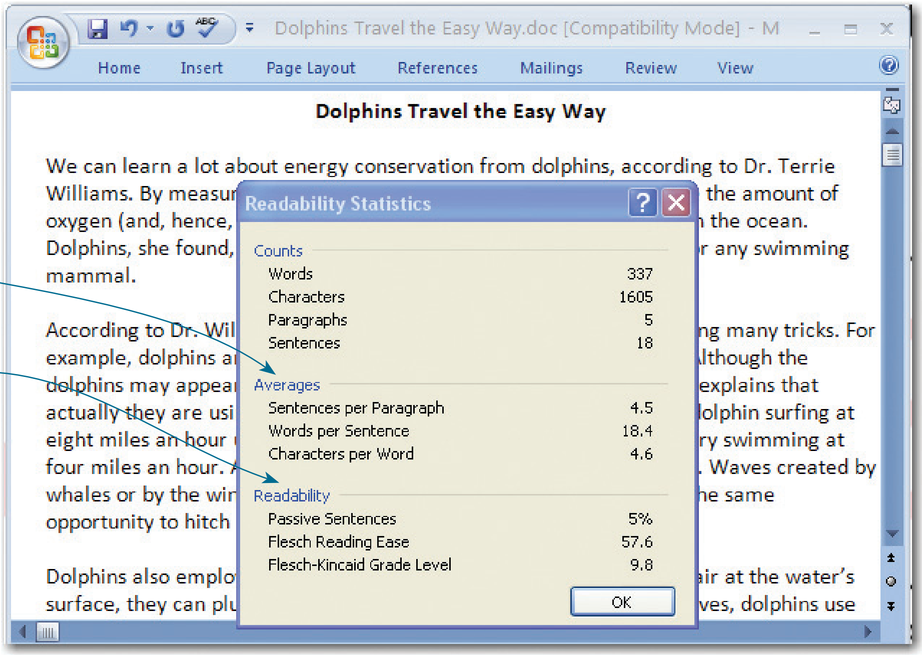
If it finds one, it does the following:

- HIghlights the sentence.
- Provides a brief explanation of the problem it may have found.
- Indicates the part of the sentence that may have the problem.

Usually, grammar checkers look for misspellings also; note that it missed the use of the wrong "too" in the third line of the second paragraph (see the discussion of spell checkers on the next page).

FIGURE 17.2

Style Checker



Style checkers provide statistics that are intended to help writers determine how difficult their prose is to read.

Typically, they calculate the average lengths of the paragraphs, sentences, and words.

They also employ these statistics to estimate the "readability" of the passage.

All three types of aids can be helpful. But use them with caution. They all have serious shortcomings. For example, spell checkers ignore words that are misspelled but look like other words, such as *forward* for *foreword* or *fake* for *rake*. Grammar checkers can't tell a good use of the passive voice from a poor one. And style checkers can't tell a clearly written long sentence from a murky short one. Sometimes, these aids suggest revisions that would make your writing worse. Because of these and similar limitations, review their suggestions carefully. And always read over your drafts yourself.

LEARN MORE To learn how to distinguish effective from ineffective uses of the passive voice, turn to page 239.

Guideline 6 | Ethics Guideline: Consider the stakeholders' perspective

If you followed the ethics guidelines provided earlier in this book, you will already have considered your communication from the stakeholders' point of view at least twice. Early in your work on your draft, you identified its stakeholders and learned about the impact your message might have on them. Then, while drafting, you will have kept your stakeholders constantly in mind.

However, there are so many things to think about when drafting that there's a chance you may have overlooked your stakeholders' concerns in some way. Therefore, when checking a draft, review your communication one last time from their perspective.

LEARN MORE To learn more about treating your communication's stakeholders ethically, turn to pages 78 and 370.

Checklist for Checking

Figure 17.3 is a checklist you can use to ensure that you are checking your drafts in a reader-centered way.

FIGURE 17.3

Writer's Guide for Checking Your Own Drafts

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
CHECKING YOUR OWN DRAFTS

1. Gain enough distance from your draft to read it from other people's perspectives.
2. Read your draft from your readers' perspective.
   Look for ways you can make it more useful for your readers.
   Look for ways you can make it more persuasive to your readers.
3. Read your draft from your employer's perspective.
   How will your draft affect others in your organization?
   Does your draft make promises your employer won't want you to make?
   Does your draft comply with your employer's policies?
4. Read your draft from the perspective of its stakeholders.
   Does it create undesirable consequences for the stakeholders?
   If so, how can these consequences be reduced or eliminated?
5. Read your draft more than once, focusing on different issues each time.
6. Check for errors missed by the computer program you used.

© Cengage Learning

HOW TO OBTAIN TRULY HELPFUL ADVICE FROM PEOPLE WHO REVIEW YOUR DRAFTS—AND HOW TO GIVE GOOD ADVICE WHEN YOU ARE REVIEWING SOMEONE ELSE'S DRAFT

In *reviewing*, writers give their drafts to someone else to look over. You may be familiar with this process through the peer reviewing often done in classes. At work, writers are often required to have their drafts reviewed to ensure that their communications are well written, conform to the employer's policies, and say things that serve the organization's interests. For routine communications, reviews are usually conducted by the writer's manager. For sensitive communications, the reviewers may also include company executives, lawyers, public relations specialists, and many others. Commonly, the persons performing required reviews have the authority to demand changes.

WEB To read additional information, see more examples, and access links related to reviewing drafts, go to your English CourseMate at *www.cengagebrain.com.*

Even when a review is not required, employees often ask co-workers or managers to look over their drafts. Through these voluntary reviews, employees learn additional ways to make their communications more useful and persuasive.

You can influence the quality of the reviews of your drafts. The helpfulness of the suggestions you receive will depend largely on the way you manage your interactions


StockLite/Shutterstock.com


© Yuri Arcurs/Shutterstock.com

At work, drafts are sometimes reviewed in person with a supervisor or a group of co-workers.

with your reviewers. The following six guidelines will help you develop expertise at eliciting supportive and helpful reviews of your drafts.

Several of these guidelines also include suggestions for reviewing other people's drafts effectively. If you are promoted to a supervisory or managerial position, the ability to review other people's drafts will be essential. Even if you are not a manager, you will almost surely be asked to look over someone else's draft, perhaps as early as your first months at work. Moreover, you will be evaluated on the value of the advice you offer.

Note: The guidelines are as useful for peer reviewing done in class as for reviewing conducted in the workplace.

Guideline 1 | Discuss the objectives of the communication and the review

Reviewing needs to be as reader-centered as any other writing activity. Don't just hand your draft to reviewers with a request that they "please look it over." Share the detailed information you developed while defining your communication's objectives. Describe the tasks you want to help your readers perform, the ways you want to influence your readers' attitudes, and the facts you have about your readers and their situation that will affect the way they respond. Only if they have this information can reviewers suggest effective strategies for increasing your communication's usefulness and persuasiveness.

Also discuss the scope and focus of the review. As the writer, you may have a good sense of areas that most need attention—whether organization, selection of material, accuracy, tone, page design, or something else. Without discouraging your reviewers from noting other kinds of improvement, guide them to examining what you think is most critical.

Similarly, if you are the reviewer and your writers don't tell you their communications' objectives or their desires for the reviews, ask for this information. You need it in order to be able to give the best possible assistance.

Guideline 2 | Build a positive interpersonal relationship with your reviewers or writer

The relationship between writers and their reviewers is not only intellectual but also interpersonal and emotional. The quality of this human relationship can greatly affect the outcome of the review process. When writers feel criticized and judged rather than helped and supported, they become defensive and closed to suggestions. When reviewers feel their early suggestions have been rebuffed rather than welcomed, they cease giving the advice the writer needs. The following strategies will help you build positive, productive relationships with your reviewers and writers.

When You Are the Writer

As a writer, interact with your reviewers in ways that encourage them to be thoughtful, supportive, and generous. Reviewers are more helpful if they believe you welcome their comments. Throughout your discussions with them, project a positive attitude, treating your reviewers as people who are on your side, not as obstacles to the completion of your work. Begin meetings by thanking them for their efforts. Paraphrase their comments to show that you are listening attentively, and express gratitude for their suggestions.

Ways to encourage your reviewers to help as much as they can

When your reviewers offer comments, stifle any temptation to react defensively, for instance by explaining why your original is superior to a suggested revision. Even if a particular suggestion is wrongheaded, listen to it without argument. On the other hand, don't avoid dialogue with your reviewers. When they misunderstand what you are trying to accomplish, explain your aims while also indicating that you are still open to suggestions. If your reviewers misunderstood what you were attempting, it's probably a sign that you aren't being clear and would benefit from their advice.

When You Are a Reviewer

When you are the reviewer, use these strategies to build a good relationship with the writer:

Ways to encourage openness to your suggestions

- **Begin with praise**. By doing so, you show the writer that you recognize the good things he or she has done, and you indicate your sensitivity to the writer's feelings. In addition, some writers don't know their own strengths any better than they know their weaknesses. By praising what they have done well, you encourage them to continue doing it and you reduce the chances they will weaken strong parts of their communication by revising them.
- **Focus your suggestions on goals, not shortcomings.** For example, instead of saying, "I think you have a problem in the third paragraph," say, "I have a suggestion about how you can make your third paragraph more understandable or persuasive to your readers."
- **Use positive examples from the writer's own draft to explain suggestions.** For example, if the writer includes a topic sentence in one paragraph but omits the topic sentence in another, cite the first paragraph as an example of a way to improve the second. By doing this, you indicate that you know the writer understands the principle, but has slipped this one time in applying it.
- **Project a positive attitude toward the writer.** Even if you have the authority to demand changes, think of the writer as a person you want to help, not judge. If the writer feels you are judgmental, he or she will almost surely resent and resist the revisions you suggest.

Guideline 3 | Rank suggested revisions—and distinguish matters of substance from matters of taste

When you review a writer's draft, one of the most helpful things you can do is rank or prioritize your suggestions. By doing so, you help the writer decide which revisions will bring the greatest improvement in the least amount of time. Also, many writers can face only a limited number of suggestions before feeling overwhelmed and defeated. As a reviewer, look over your suggestions to determine which will make the greatest difference. Convey those to the writer. Keep the rest to yourself, or make it clear that they are less important. Ranking also helps *you* work productively. Often, you will not have time to review an entire draft in detail. Begin by scanning the draft to identify the issues that most need attention, then focus your effort on them.

When ranking suggestions, distinguish those based on substantial principles of writing from those based on your personal taste. If you suggest changes that would merely replace the writer's preferred way of saying something with your preferred way, you will have done nothing to improve the writing—and you will almost certainly spark the writer's resentment. Unfortunately, it can be difficult to determine whether we like a certain way of saying something because it is good in itself or because it matches our own style. When you are faced with this uncertainty, try to formulate a reason for the change. If all you can say is, "My way sounds better," you are probably dealing with a matter of taste. If you can offer a more objective reason—for instance, one based on a guideline in this book—you are dealing with a matter of substance.

One caution, however. Sometimes your sense that something doesn't sound right is a clue that a problem exists. For example, you may stumble over a sentence that doesn't sound right and discover, after closer examination, that it contains a grammatical error. If something sounds wrong, see whether you can find an objective reason for your dissatisfaction. If so, tell the writer. If not, let the matter drop.

So far, the discussion of this guideline has focused on the reviewers' perspective. When you are the writer, you can be helped greatly by your reviewers' rankings of their suggestions. If your reviewers don't volunteer a ranking, request one.

Guideline 4 | Explore fully the reasons for all suggestions

The more fully writers and reviewers explore the reasons for the reviewers' suggestions, the more helpful the review will be. Understanding these reasons can help you recognize and avoid similar problems in the future. Even when a suggestion seems useless, knowing the reviewers' reasons for making it can help you identify a problem you previously overlooked so you can devise your own way of solving it.

When you are acting as a reviewer, it's also in your interest to provide a full explanation of your suggestions. If you don't, the writer may think that you are simply expressing a personal preference and dismiss your suggestions, leaving the draft weaker than it might otherwise have been.

LEARN MORE To learn about the use of echo words to smooth the flow of thought through a communication, turn to pages 194 and 195.

Full explanations also help the writer learn to write better. For example, imagine that you suggest rephrasing a sentence so that an echo word is at the beginning rather than the end. The writer may agree that your version is better but may not know the reason why unless you explain the *principle* that you applied.

Some reviewers withhold such explanations because they think the reasons are obvious. However, reasons that are obvious to the reviewer are not necessarily obvious to the writer. Otherwise, the writer would have avoided the problem in the first place.

Whenever possible, phrase your suggestions from the perspective of the intended readers. Instead of saying, "I think you should say it like this," say, "I think your intended readers will be able to understand your point more clearly if you phrase it like this." Such a strategy will help the writer take a reader-centered approach to revising the draft. It will also help you present yourself not as a judge of the writer's writing, but as a person who wants to help the writer achieve his or her communication objectives.

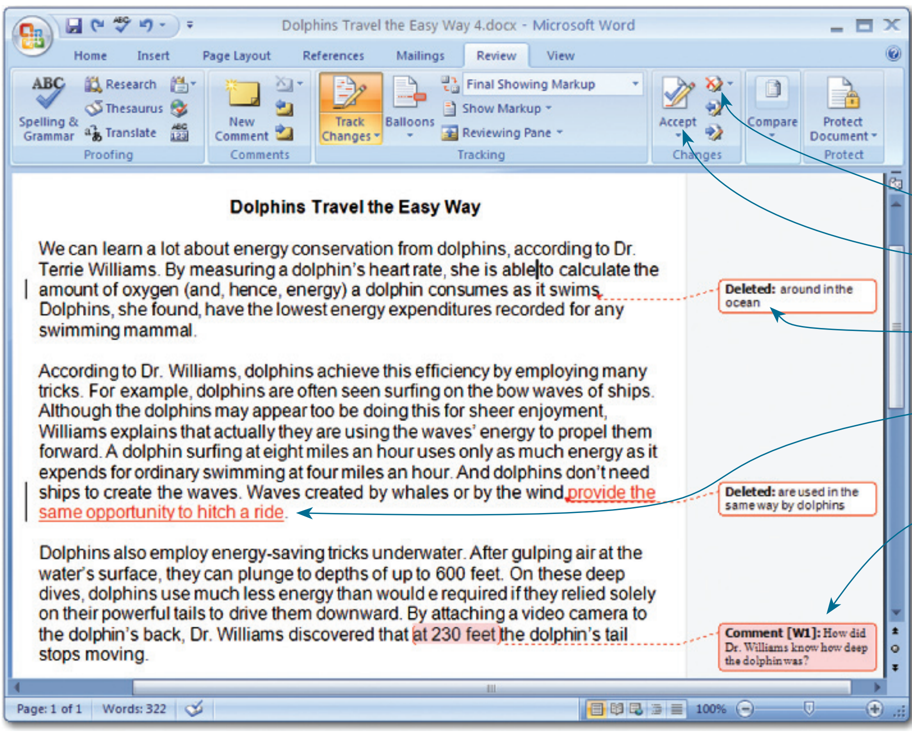
Guideline 5 | Present your suggestions in the way that will be most helpful to the writer

Whenever possible, discuss suggestions in person with your writer or reviewer. Conversation enables the writer to ask for clarification and the reviewer to provide full explanations. If you can't meet face to face, talk on the phone or through a free program such as Skype (www.Skype.com) or iChat (if you both have Mac computers). Or use e-mail.

Whether you are the reviewer or writer, talk with your partner about the best way to convey written suggestions. In particular, think about the method that will make it easiest for the writer to incorporate suggested revisions into the draft being reviewed. If you are the writer, consider providing your reviewer with a digital copy of your draft. Your reviewer can then insert suggestions and return the draft to you. You will then be able to use the desktop publishing program to accept or decline one by one, thereby eliminating the need to retype suggested text that you want to incorporate into your communication (see Figure 17.4).

If more than one person will review your draft, however, it can be inefficient to have each reviewer use a desktop publishing program to enter suggestions into your draft. Each reviewer will return his or her comments to you in a separate file. You will need to read back and forth among drafts to see if different reviewers make different suggestions about the same issue. You will also need to go repeatedly to the different files to extract suggestions you want to accept so you can create a single new draft that incorporates them all. To avoid this work, use a program like GoogleDocs (http://docs.google.com) or Acrobat.com (www.Acrobat.com) that enables you to upload your draft to a central location on the Internet. All reviewers

LEARN MORE Programs like Google Docs and Adobe Acrobat also help teams write collaboratively. See pages 406–408 for more information.



Artwork © 2012 Microsoft; Text © Cengage Learning

Reject button

Accept button

This note indicates a deletion suggested by the reviewer.

The reviewer suggested using the red words in the text instead of the words in the balloon.

The reviewer asked this question to suggest additional information that the writer might include.

The writer can accept or reject each suggested deletion and insertion by highlighting it and clicking on the appropriate button at the top of the window.

FIGURE 17.4

Reviewer's Suggestions Inserted into the Writer's Draft Using a Desktop Publishing Program

FIGURE 17.5

Comments That Two Reviewers Made on a Single Draft They Accessed at Google Docs Using Their Browsers

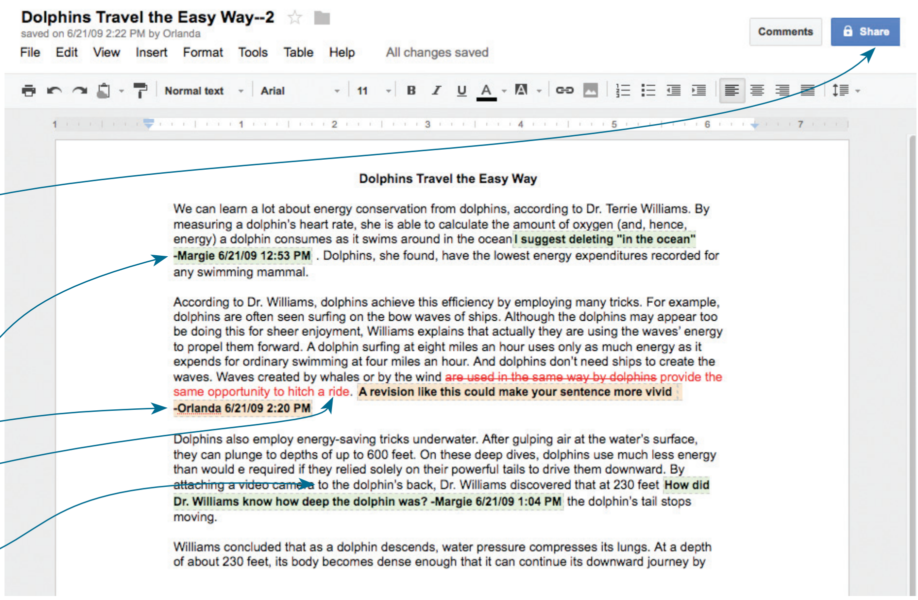
The writer clicks here to share uploaded documents with reviewers.

All reviewers add comments and suggest changes to this one copy of the writer's draft.

- The green comment is by Margie.
- This orange comment is by Orlando.

Reviewers can also suggest additions, deletions, and other changes.

The writer can see all suggestions from all reviewers at one time.



Artwork © 2012 Google; Text © Cengage Learning

TRY THIS Use Google Docs or Adobe Acrobat to invite a friend or family member to comment on something you've written for a course or on your own.

can use their browsers to access and insert comments into this single copy, greatly simplifying your work. As a bonus, because the reviewers can read each other's comments they can supplement rather than repeat one another's advice. Figure 17.5 shows an example.

Guideline 6 | Ethics Guideline: Review from the stakeholders' perspective

Reviewers can be as helpful in evaluating stakeholder impacts as in identifying ways to increase a communication's effectiveness for its target readers. Be sure to ask your reviewers to assist you in this way. Tell them whom you've identified as stakeholders and how you think these individuals might be affected by your communication. Ask them to help you discover other stakeholders or impacts that you might have missed.

Similarly, when you review a draft written by someone else, ask about his or her assessment of its stakeholder impacts. Then, as you read, make your own judgments. Who will be affected? How? Should the stakeholders be consulted directly about the decisions and actions discussed in this communication? Can potential negative impacts on the stakeholders be reduced or eliminated? Is it ethical to take the proposed action at all?

Ethical problems can be difficult for writers and reviewers to discuss. None of us likes to be accused of acting unethically, so a writer may quickly become defensive. Furthermore, the writer and reviewer may hold quite different ethical principles. Consequently, whether you are the writer or the reviewer, you may find it helpful to refer to the ethical code of your employer or profession, rather than insist on your own ethical views. But remember that despite the difficulties of doing so, you have an obligation to raise ethical questions even if you have not been asked.

FIGURE 17.6

Writer's Guide for Reviewing Drafts

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide

REVIEWING DRAFTS

1. When preparing for the review, do the following:
   - ☐ Discuss the objectives of the review.
   - ☐ Discuss the objectives of the communications.
   - ☐ Build a positive relationship with the writer or reviewer.
2. When discussing comments and suggestions, do the following:
   - ☐ Identify the revisions that are most important.
   - ☐ Distinguish matters of substance from matters of taste.
   - ☐ Explore the reasons for all suggestions.
3. Present your suggestions in the way that will be most helpful to the writer.
4. Review the draft from the perspective of its stakeholders.

Writer's Guide for Reviewing

Figure 17.6 is a Writer's Guide you can use to ensure that you are checking your drafts in a reader-centered way.

HOW TO PRODUCE THE MAXIMUM IMPROVEMENT IN LIMITED TIME

The two preceding sets of guidelines focused on ways you can identify improvements you could make in a draft—by checking the draft yourself and by having someone else look over your draft. The following guidelines take you one step farther in the revision process: choosing which of the possible improvements you should actually make.

In some cases, of course, you won't need to make any choices. You may find that your draft (probably not your first one) is already good enough to influence your readers in the way you intend. Or you will have adequate time to make all the changes that have been identified.

Often, however, writers at work face daunting decisions about which changes to make and which to forgo. The need for these decisions can arise for any of the following reasons:

- When there isn't enough time to make all the revisions that checking, reviewing, or testing suggest.
- When two or more reviewers give contradictory advice.
- When a reviewer, such as a boss, suggests changes that the writer believes will actually diminish the communication's effectiveness.

WEB To read additional information and see more examples related to revising, go to your English CourseMate at *www.cengagebrain.com.*

The guidelines that follow will help you develop expertise at dealing effectively with these more complex revising situations.

Guideline 1 | Adjust your effort to the situation

This guideline suggests that you approach revising as if you were an investor. As you begin revising any communication, let your first concern be the amount of time and energy you might need to invest in it rather than in your other duties.

Some students think it is peculiar to ask how good a communication needs to be. "After all," they observe, "shouldn't we try to make everything we write as good as it can be?" On the job, the answer is "No."

Of course, all your communications should present their central points clearly and achieve an appropriate tone. At work, however, different communications need different levels of additional polish. For example, in many organizations, printed messages are expected to be error-free, but e-mail messages sent internally may contain spelling errors and grammatical mistakes as long as their meaning is clear and their tone inoffensive. Even among printed communications, different levels of polish are expected. In a survey of workers in a diverse mix of professions, researchers Barbara Couture and Jone Rymer (1993) found that the proportion of employees who "often" or "very often" make major revisions in communications they consider to be "special" is three times larger than the proportion who "often" or "very often" revise communications they consider to be "routine."

To determine how "good" your communication needs to be, do the following:

Ways to determine how good a communication has to be

- **Think about your communication's usefulness and persuasiveness objectives.** How carefully does your communication need to be crafted to help your readers perform their tasks? To affect your readers' attitudes in the way you want?
- **Consider general expectations about quality.** At work you usually need to polish your communications most thoroughly when addressing people at a higher level than you in the organizational hierarchy, when addressing people outside your organization rather than inside, and when trying to gain something rather than give something (for example, when writing proposals rather than reports). These general expectations can be translated into a list that ranks some typical communications according to the level of polish they usually need. Figure 17.7 illustrates a typical ranking. Of course, the ranking in your workplace may be different.
- **Look at similar communications.** Often, the level of quality needed is determined largely by what's customary. By looking at communications similar to the one you're preparing, you can see what level of quality has succeeded in the past.
- **Ask someone.** Your boss or co-workers can be excellent sources of information about the level of quality needed, as can your intended readers.

There are sometimes good reasons for wanting your communication to go beyond the minimum level needed to make your communication "good enough."

Reasons for making your communications better than "good enough"

First, your writing is a major factor on which your job performance will be evaluated. In fact, people who are not involved with your work from day to day may base their opinion of you solely on your writing. There's a real advantage to having

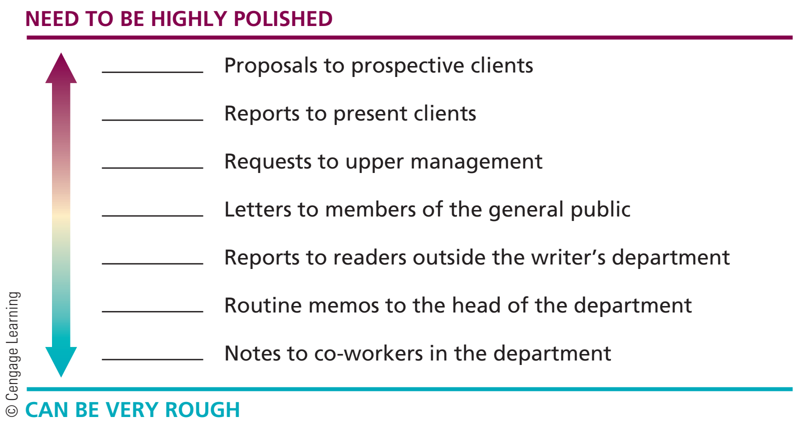


FIGURE 17.7

Amount of Polish Typically Needed by Several Kinds of Communication

readers say not only, "Your report provided us with lots of useful information," but also, "And you wrote it so well!"

Second, communications prepared at work often have a wider audience than the writer assumes. Notes to co-workers and to your immediate manager can often be fairly rough. Sometimes, however, those people may pass your communications along to upper management or to members of other departments for whom you would want to prepare more polished communications. When determining what level of quality to strive for, consider who all your possible readers may be.

Guideline 2 | Make the most significant revisions first

After you've decided how much effort to invest in revising, identify the revisions that will bring the greatest improvement in the shortest time. If you spend fifteen minutes on revisions that result in small improvements rather than large ones, you have squandered your time.

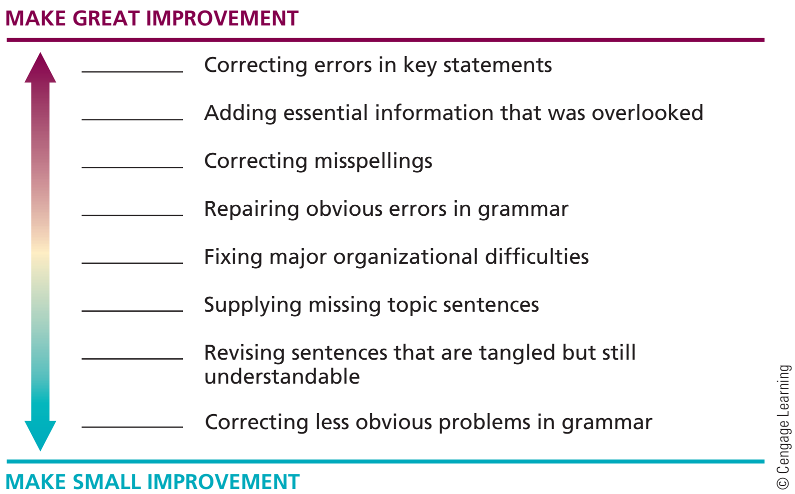
Because the advice to make the most important revision first sounds so sensible, you may wonder whether anyone ever ignores it. In fact, many people do. They begin by looking at the first paragraph, making revisions there, and then proceed through the rest of the communication in the same sequential way. This procedure works well if the most serious shortcomings occur in the opening paragraphs, but not if they come in later passages the writers might not even reach before the time available for revising runs out. Also, some problems—for instance, inconsistencies and organizational problems—require simultaneous attention to passages scattered throughout a communication. A sequential approach to revising may ignore them altogether.

How to Rank Revisions

No single ranking applies to all communications. The importance of most revisions depends on the situation. For one thing, the relative importance of a certain revision is determined by the other revisions that are needed or desirable. Consider, for instance, the place of "supplying missing topic sentences" in the ranked list (Figure 17.8) that Wayne created after surveying the comments made by four reviewers of a proposal he had drafted. In comparison with the other items in the list, supplying topic sentences is relatively unimportant. However, in a draft with fewer problems in more critical areas, providing topic sentences might bring more improvement than any other revision Wayne could make.

FIGURE 17.8

Amount of Improvement That Various Revisions Would Make in Wayne's Proposal



Another factor affecting the relative importance of a revision is its location. Improvements in an opening summary would increase the usefulness and persuasiveness of a long report more than would a similar revision to an appendix. Revisions in passages that convey key points have greater impact than similar revisions to passages that provide background information and explanations.

A third factor can come into play when you are ranking revisions requested by reviewers: the importance of the person making the request. For obvious and practical reasons, you may want to give first attention to revisions requested by people in positions of authority, even if you would not otherwise have given high priority to these same revisions.

When you have limited time for revising, some of the revisions may never be made. By creating a ranked list, you ensure that the revisions you do complete are the ones that contribute most to your communication's effectiveness.

Be Sure to Correct Mechanical Problems

No matter how you rank other possible improvements, place the correction of mechanical problems—those that involve a clear right and wrong—at the top of your list, unless you are writing in a situation where you are sure that errors won't matter. Here are the major mechanical problems you should focus on:

Mechanical issues to focus on

- **Correctness**. Fix all errors in spelling, grammar, and punctuation as well as such things as the numbering of figures and the accuracy of cross-references.
- **Consistency.** Where two or more items should have the same form, be sure they do. For instance, revise parallel tables and parallel headings that should look the same but don't.
- **Conformity**. Correct all deviation from your employer's policies on such matters as the width of margins, the use of abbreviations, and the contents of title pages. Even if your employer hasn't developed written policies on these things, remember that your communication must still conform to your employer's informal policies and expectations.
- **Attractiveness**. Be sure your communication looks neat and professional.

Problems in any of these four areas diminish your communication's persuasiveness by undermining your credibility as a person capable of careful work. They can also reduce usability by distracting readers from your main points, slowing comprehension, and even causing misunderstanding. Often, it's best to postpone revising mechanical matters until the end of your work on a communication unless you are going to give your draft to someone for review. There is no point in investing time in correcting passages that may later be deleted or changed. On the other hand, mechanical problems can distract reviewers from concentrating on more substantive issues.

Guideline 3 | Be diplomatic

When your drafts are reviewed, you may confront situations requiring considerable diplomacy. For example, managers or other influential reviewers may suggest revisions you know will weaken your communication. Without giving offense, you must persuade the reviewers to change their minds. One diplomatic approach is to refer to relevant reader-centered guidelines in this book and explain the reasons for them.

Another awkward situation arises when two reviewers give contradictory advice or make incompatible demands. Sometimes such conflicts are over writing strategy. In other cases, they are about something entirely different. While studying a small software company, researcher Stephen Doheny-Farina (1992) witnessed a months-long dispute over the draft of a business plan designed to raise money from investors. The disagreement, he discovered, was not over the writing but rather the company's mission, organization, and future plans.

If your draft is caught in a crossfire between contending parties, ask the reviewers to explain the reasons for their advice. You may be able to fashion a statement that is acceptable to all parties. If not, ask the reviewers to talk directly with one another and then tell you what they have decided.

Guideline 4 | To revise well, follow the guidelines for writing well

This guideline echoes an observation at the beginning of this chapter: When making changes, follow the same guidelines that you follow when drafting. Whether you are drafting or revising, the principles and guidelines for good communication remain the same. Whether you've found that you need to adjust your organization, polish your style, or recast a graphic, refer back to the relevant advice in this book. And always abide by the central advice of this book: Whether drafting or polishing any aspect of a communication, keep your readers' needs, expectations, preferences, and attitudes chiefly in mind.

Guideline 5 | Revise to learn

The first four guidelines for managing your revising time focus on ways in which revising can improve the effectiveness of your communications. Revising can also help you learn to write better.

When revising, you will often be applying writing skills that you have yet to master fully. By consciously practicing those skills, you can strengthen them for use when drafting future communications. Because you can learn so much from revising, it can often be worthwhile to continue polishing a draft after it is good enough to satisfy the needs and expectations of your readers and employer.

CONCLUSION

The complexities of working situations often require you to play several roles while revising. As an investor, you decide how much time to devote to revising a draft. As a diplomat, you negotiate with reviewers about changes they have requested or demanded. As a student, you revise for the sake of what you can learn. The primary strategies underlying all the guidelines in this chapter are the same ones you should employ when you are planning and drafting any communication on the job: Consider the communication from the perspective of its readers, the contexts in which they will read and you are writing, and the communication's ethical impact on its stakeholders.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Following the advice given in this chapter, carefully check a draft you are preparing for class. Then give your draft to one or more of your classmates to review. Make a list of the problems they find that you overlooked. For three of those problems, explain why you missed them. If possible, pick problems that have different explanations.
2. The memo shown in Figure 17.9 contains eighteen misspelled words. Find as many as you can. Unless you found all the words on your first reading, explain why you missed each of the words you overlooked. Based on your performance in this exercise, state in a sentence or two how you could improve your reading for misspellings and typographical errors.
3. The memo shown in Figure 17.9 has several other problems, such as inconsistencies and missing punctuation. Find as many of those problems as you can.

EXPLORE ONLINE

1. Exchange electronic files of the drafts for your current assignment with a classmate. Using your desktop publishing program, insert comments in your partner's file, then return it to him or her. Evaluate the comments your partner provided for their clarity and ease of use, while he or she does the same for your comments. Share praise for comments that were presented effectively, and share suggestions concerning comments that could be presented more effectively.
2. Open an account at Google Docs (http://docs.google.com) or Acrobat.com (www.Acrobat.com). Upload a short communication you've prepared for this course. Share the uploaded documents with a classmate. When you receive an e-mail saying that a classmate has shared a document with you, go to the document and enter reviewer suggestions. Return to the document you uploaded to see the comments your classmate made in it. For instructions on using Google Docs and Acrobat.com, go to your English CourseMate at www.cengagebrain.com.

COLLABORATE WITH YOUR CLASSMATES

This exercise will help you strengthen your ability to make constructive suggestions to a writer. (See this chapter's advice on reviewing other people's writing.)

1. Exchange drafts with a classmate, together with information about the purpose and audience for the drafts.
2. Carefully read your partner's draft, playing the role of a reviewer. Ask your partner to read your draft in the same way.
3. Offer your comments to your partner.
4. Evaluate your success in delivering your comments in a way that makes the writer feel comfortable while still providing substantive, understandable advice. Do this by writing down three specific points you think you handled well and three ways in which you think you could improve. At the same time, your partner should be making a similar list of observations about your delivery. Both of you should focus on such matters as how you opened the discussion, how you phrased your comments, and how you explained them.
5. Talk over with your partner the observations that each of you made.

6. Repeat steps 3 through 5, but have your partner give you his or her comments on your draft.

APPLY YOUR ETHICS

Find a print or online communication that you believe to be unethical or that you believe might possibly be unethical. Advertising is one possible source of such communications. Imagine that you are seeing it not as a finished communication but in draft form because its creator has asked you to review it. Plan your approach to raising and discussing the ethical issue with the person who drafted the communication. Because this person is free to accept or ignore your suggestions, you will need to convey your recommendation in a way that this person finds persuasive. Present your plan in the manner your instructor requests.

FIGURE 17.9

Memo for Use in Expertise Exercises 2 and 3

MARTIMUS CORPORATION
Interoffice Memorandum

February 19, 2013

From T. J. Mueller, Vice President for Developmnet
To All Staff
RE PROOFREADING

Its absolutely critical that all members of the staff carefully proofread all communications they write. Last month we learned that a proposal we had submited to the U.S. Department of Transportation was turned down largely because it was full of careless errors. One of the referees at the Department commented that, "We could scarcely trust an important contract to a company that cann't proofread it's proposals any better than this. Errors abound.

We received similar comments on final report of the telephone technology project we preformed last year for Boise General.

In response to this widespread problem in Martinus, we are taking the three important steps decsribed below.

I. TRAINING COURSE

We have hired a private consulting form to conduct a 3-hour training course in editing and proofreading for all staff members. The course will be given 15 times so that class size will be held to twelve participants. Nest week you will be asked to so indicates times you can attend. Every effort will be made to accommodate your schehule.

II. ADDITIONAL REVIEWING.

To assure that we never again send a letter, report, memorandum, or or other communication outside the company that will embarrass us with it's carelessness, we are establishing an additional step in our review proceedures. For each communication that must pass throug the regular review process, an additional step will be required. In this step, an appropriate person in each deparmtent will scour the communication for errors of expression, consistancy, and correctness.

III. WRITING PERFORMANCE TO BE EVALUATED

In addition, we are creating new personnel evaluation forms to be used at annual salary reviews. They include a place for evaluating each employees' writing.

III. Conclusion

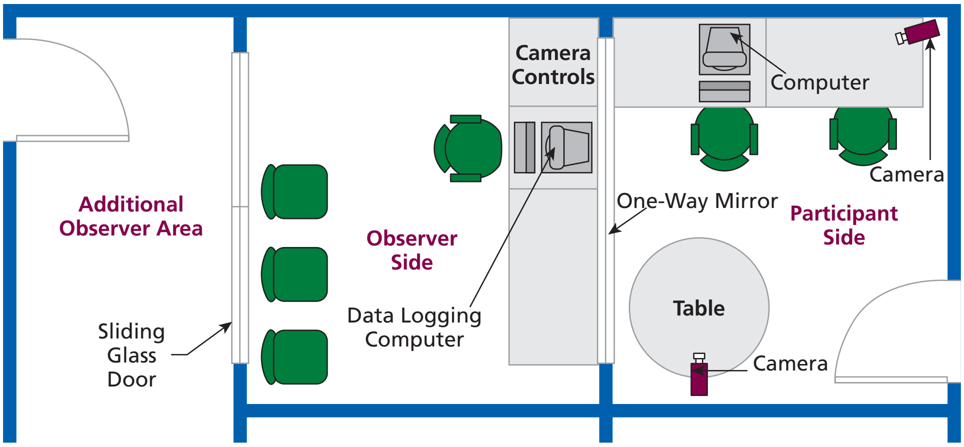
We at Martimus can overcome this problem only with the full cooperation of every employe. Please help.

18 | Testing Drafts for Usefulness and Persuasiveness

By following the reader-centered strategies described elsewhere in this book, you try your best to draft a communication that your readers will find highly usable and persuasive. However, you can't know for sure how your readers will respond until you actually place your draft in their hands. This chapter describes ways you can *test* a draft so that you can identify places that don't work the way you intended. With this knowledge, you can make improvements that increase the effectiveness of the final version you will deliver to your readers.

Companies such as Microsoft and Apple use testing extensively for the online and print instructions that accompany their products. By identifying problems and making improvements before products are launched, these companies reduce customer frustration and also save the significant amounts of money it would take to staff help lines or otherwise help customers out of problems that could have been avoided with clearer communication. In addition to instructions, drafts of websites, informational documents, and a wide variety of other communications are tested by both commercial organizations and government agencies. Testing is such an important activity in some organizations that they employ testing specialists and build special test facilities like the ones shown in Figures 18.1 and 18.2. Even without such facilities, however, you can increase the effectiveness of your communications by using the same basic strategies that testing experts employ.

WEB To read additional information, see more examples, and access links related to this chapter's guidelines, go to your English CourseMate at *www.cengagebrain.com.*



© Cengage Learning

FIGURE 18.1

Layout of a Facility for Testing Computer Manuals

Test readers can use a draft manual or website in the room on the Participant side.

On the Observer side, writers and testing specialists watch through a one-way mirror. They can also record all of the participant's actions and keystrokes.

© Spencer Grant/PhotoEdit

FIGURE 18.2

Professional Testing Facility

The test session is recorded on a video camera.

In the Test Room, the person with his back to the Observation Room asks readers about communications they read or view simultaneously.

The Test Room can be set up to test communications used in large spaces, such as instructions for assembling, servicing, or operating large equipment.

The observers are looking through a one-way mirror.

THE LOGIC OF TESTING

The basic logic of testing is simple: You ask one or more people, called *test readers*, to read and use your draft in the way your intended readers will read and use your finished communication. Then, by various means, you gather information from your test readers that will enable you to predict how other readers will respond. If your test is constructed effectively, the parts that worked well for your test readers will probably work well for your target readers. Where the test readers encounter problems, your target audience probably will too.

This chapter will guide you through the process of planning, conducting, and interpreting a test, whether you are testing a project for your technical writing course or a communication you are preparing on the job. As you read the chapter, discuss it in class, and apply its advice in a test, focus on developing your abilities to do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Define the goals of your test.
2. Choose the people who will be your test readers.
3. Test your draft's usefulness.
4. Test your draft's persuasiveness.
5. Interpret the results of your test.
6. Test communications you write for readers in another culture.
7. Treat your test readers ethically.

HOW TO DEFINE THE GOALS OF YOUR TEST

At a general level, all your tests will aim to answer two questions:

- How can I improve my draft? In the workplace, most tests emphasize the diagnostic goal of learning ways the draft can be improved.
- Is my communication good enough? It is always helpful to learn also how close your draft is to a "final" draft you can deliver to your target audience.

The first step in creating a test for answering these questions is to define its goals. Then you can tailor your test to provide the specific information you need.

DEFINING YOUR TEST'S GOALS

1. **Review your communication's goals.** These goals, which you developed by following the guidelines in Chapter 3, tell exactly how your communication is intended to help and influence your readers. Your test should help you determine where your draft succeeds in achieving these goals and where it needs improvement.
2. **Identify the features you hope will contribute most to your communication's usefulness and persuasiveness.** For longer communications, you may not be able to test everything. Therefore, you need to focus on what you believe will have the greatest impact on your target readers' responses.
3. **Identify any features about which you feel unsure.** You can design your test to determine their effectiveness.

You can encapsulate your test's goals in a set of questions you want your test to answer. How well does my draft support my readers as they perform their first task? Their second one? How effective is it in influencing their attitudes in the way I want? How well do the headings work? Are the technical terms I used in the introduction understandable to them?

If you wish to determine whether your draft is "good enough," you may also want to establish *measurable criteria* for your test. For example, if you are drafting an instruction manual, you might decide that the manual is good enough if it enables test readers to perform their tasks in less than two minutes or with only one error that is easily corrected.

WEB For more information about establishing measurable criteria for testing, go to your English CourseMate at ***www.cengagebrain.com.***

However, in many cases a subjective judgment will be fully adequate: Your draft is good enough if it enables your test readers to perform their tasks without much difficulty and if they say your draft had a positive impact on their attitudes.

HOW TO CHOOSE THE PEOPLE WHO WILL BE YOUR TEST USERS

To construct a test that accurately predicts how your target audience will respond to your finished communication, you must pick test readers who truly represent your target readers. If you are writing instructions for plumbers or computer programmers, choose plumbers or computer programmers for your test readers. If you are creating a website for adults who suffer from asthma, choose adult asthma sufferers. You could actually make your communication *less* effective for your intended readers if you made revisions based on responses from people who are not in your target audience.

The selection of test readers is a critical part of test design.

If it is impossible to locate test readers from your target audience, find people as similar as possible to that audience. Begin by reviewing the knowledge of your readers that you developed by following the guidelines in Chapter 3. Pay special attention to your target readers' familiarity with your subject. If you select test readers who already know what your communication is intended to convey, they will probably understand passages that could baffle your target readers. Consequently, they won't help you detect needed improvements.

TRY THIS Using the search term "usability lab" or "usability test," find a company whose website enables people to sign up to participate in user tests. Can you find a site that conducts user tests on products or services that interest you?

On the other hand, if your test readers know less than your target readers about your subject, their puzzlement could lead you to include background information and explanations your target readers neither need nor want. Imagine, for instance, that in one of your classes you have drafted a report to engineers who design robots. If you can't enlist such engineers as test readers, ask engineering students (rather than history majors) at your school—and ask engineering students who've studied robotics rather than those who haven't.

How many test readers are enough? Because there is generally little variation in the ways readers respond to step-by-step instructions, two or three test readers may be sufficient for them. In contrast, people vary considerably in the ways they interpret and respond to a report or informational website. Common practice is to use about a dozen test readers for such communications. However, testing with even a single reader is infinitely better than no testing at all.

Even a single test reader can provide valuable insights.

HOW TO TEST YOUR DRAFT'S USEFULNESS

Guideline 1 | Ask your test readers to use your draft the same way your target readers will

Whenever you test a draft, one of your primary goals will be to evaluate its usefulness for its target readers. To learn where you need to make revisions, you must construct a test in which the test readers use your draft to perform the same tasks your target readers will want to perform with the finished communication.

At work, most readers' tasks usually fall into three major categories.

- Perform a procedure, as in reading instructions.
- Locate information, as in looking for a certain fact in a reference manual or website.

- Understand and remember content, as when trying to learn about something through reading.

TRY THIS Go to the usability website created by the government of any country (e.g., www.usability.gov for the United States). Find its advice about usability testing. On what points does its advice agree with the advice in this chapter? On what points does its advice disagree?

For many communications, all three types of tasks are important. For example, when people consult the owner's manuals for a desktop publishing program, they usually want to *locate* directions for a particular procedure, *understand* the directions, and then use the directions as a guide while they *perform* the procedure. Although the three types of tasks are often bound together, each can be tested in a different way. Consequently, the following sections discuss separately the design of performance, location, and understandability tests.

Performance Tests

To test a draft's effectiveness at helping its readers perform a procedure, you could simply give the draft to your test readers and watch them use it. To get the best results, however, you must construct several elements in your test so that your test readers' reading situation resembles as closely as possible the situation of your target readers. The below strategies will help you plan the four major elements of *performance tests*.

STRATEGIES FOR PERFORMANCE TESTS	
Tasks	Ask your test readers to perform the same tasks your target readers will perform.
Location	Conduct the test in the same setting as the target readers would use.
Resources	Provide the test readers with the same tools, equipment, reference materials, and other resources that the target readers would have—but not additional ones.
Information gathering	Gather information in ways that enable you to observe the details of the test readers' efforts without interfering in their use of your draft.

To see how you might apply these guidelines, consider the way Imogene tested instructions that would enable ordinary consumers to remove the radios that came with their cars and replace them with the higher-quality ones manufactured by her employer.

First, Imogene recruited two friends as her test readers. Both owned cars and neither had made a similar replacement before, so both represented her target readers. Imogene asked Rob to install the equipment in his garage at home and Janice to install hers in the parking lot of her apartment building. These are work areas that would be used by Imogene's target readers. Rob already had the necessary tools. Imogene supplied Janice with a power drill and Phillips head screwdriver, but nothing else because these might be the only tools an ordinary consumer would have.

While Rob and Janice worked, Imogene took detailed notes, using the form shown in Figure 18.3. During the test, she focused only on the left-hand column, writing down everything that seemed to indicate that Rob or Janice was having difficulty. So that she could pay full attention to the details of Rob's and Janice's efforts, she waited to fill in the other columns until after the test had been completed.

FIGURE 18.3

Test Observation Form

After the test, you can ask the test reader to tell you what caused the problems you observed.

Observation Sheet for User Tests

Problem (What difficulty did the reader have?)	**Interpretation** (What might have caused the difficulty?)	**Solution** (What might prevent this difficulty?)
After completing a step, Rob sometimes hunted around the page for his place.	1. The steps don't stand out plainly enough.	1. Enlarge the step numbers. 2. Print the steps in bold so they are easier to distinguish from the notes and cautions.
At Step 7, Rob couldn't find the hole for the mounting bracket.	1. Rob couldn't understand the figure.	1. Simplify the figure by eliminating unnecessary details.

© Cengage Learning

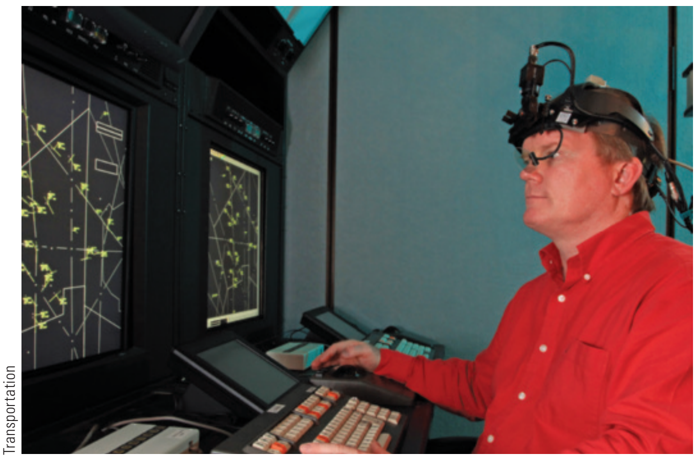
To obtain a full sense of what Rob and Janice were thinking as they used her instructions, she asked them to "think aloud," verbalizing their thoughts throughout the process.

As he worked on the installation, Rob asked Imogene several questions. Instead of answering, she urged him to do his best without her help. If she had begun to provide oral instructions, she would no longer have been testing her written ones. However, she did assist at a point where Rob was completely stumped. Without her help, he would have had to stop work altogether, and Imogene wouldn't have been able to find out how well the rest of her instructions worked.

For some communications, you may need to create *scenarios*, or stories, that tell your test readers the tasks you want them to perform. For example, Shoon has drafted a website for a company that sells sporting goods on the Internet. In his performance test, Shoon asked his test users to imagine that they want to purchase a product for some particular activity, such as day hikes along easy trails or a week-long ascent of a glacier-wrapped mountain peak. He then requested that they use his draft of the website to determine the appropriate products and order them.

Some usability labs have equipment that mirrors the test user's computer monitor (top) or detects where on the screen a test user is looking at each moment (bottom).

AP Photo/Ted S. Warren



Research Development & Human Factors Laboratory at the William J. Hughes Technical Center/FAA/United States Department of Transportation

Several other features of the test Shoon conducted illustrate variations that are possible when applying the strategies for performance tests. Because Shoon's website offered so many different kinds of products, it was not feasible for Shoon to ask his test readers to use every part of the site. Instead, he asked them to use only certain carefully selected parts of the site. Also, instead of using a worksheet to record information, Shoon placed a video camera behind his test users to record the entire test for later study. To learn what his test users were thinking as they used his website, Shoon engaged them in a conversation in which he continuously asked them what they were trying to do and how they were attempting to do it. He did not, however, tell them how to overcome problems they encountered. He chose this technique, developed by researchers M. Ted Boren and Judith Ramey (2000), because it is especially useful for testing online communications, where users often work so quickly that it is difficult to follow their actions.

Location Tests

Location tests closely resemble performance tests: You give your draft to your test readers, asking them to find specific pieces of information or the answer to a particular question as rapidly as possible. This procedure enables you to evaluate the effectiveness of the headings, topic sentences, table of contents, and other guideposts that reveal the organization of print communications (see Chapter 8). For websites and other online communications, location tests can help you assess the organization of your site and the navigational aids it contains. With location tests, as with performance tests, you must simulate your target readers' reading situation as closely as possible in order to achieve the most helpful results.

Understandability Tests

In an *understandability* test, you ask your test readers to read your draft and then you ask them questions designed to determine whether they understood it accurately. Understandability tests often are combined with other kinds of tests. For example, because readers cannot use information unless they understand it, understandability is an element in every performance test, such as those designed by Imogene and Shoon. Similarly, an understandability test can be combined with a location test by asking test readers to use the information they find.

If you want to test understandability in isolation, ask your test readers to read your draft and then pose questions about what they've read. Several types of questions are suggested below. Most were used by Norman, an insurance company employee, to test the following paragraph from a draft version of a new automobile insurance policy.

A passage Norman tested

> In return for your insurance payments, we will pay damages for bodily injuries or property loss for which you or any other person covered by this policy becomes legally responsible because of an automobile accident. If we think it appropriate, we may defend you in court at our expense against a claim for damages rather than pay the person making the claim. Our duty to pay or defend ends when we have given the person making a claim against you the full amount of money for which this policy insures you.

- **Ask your test readers to recognize a correct paraphrase.** By testing your test readers' ability to recognize a paraphrase, you can determine whether they have understood your communication well enough to identify the same meaning expressed in different words.

> **True or false:** We will defend you in court against a claim when we believe that is the best thing to do.
>
> When will we defend you in court? (a) When you ask us to. (b) When the claim against you exceeds $20,000. (c) When we believe that is the best thing to do.

Questions to determine whether test readers accurately recognize a paraphrase

- **Ask your test readers to create a correct paraphrase.** By asking them to paraphrase, you can find out whether they understood well enough to explain your message in their own words.

> In your own words, tell when we will defend you in court.

A request that test readers create a paraphrase

- **Ask your test readers to apply your information.** To test your readers' ability to apply information, create a fictional situation in which the information must be used. Norman created the following question to test the understandability of one section of his draft (not the section quoted above).

> You own a sports car. Your best friend asks to borrow it so he can attend his sister's wedding in another city. You agree. Before leaving for the wedding, he takes his girlfriend on a ride through a park, where he loses control of the car and hits a hot dog stand. No one is injured, but the stand is damaged. Is that damage covered by your insurance? Explain why or why not.

A scenario used to determine whether test readers understood Norman's draft well enough to apply its information

Guideline 2 | Interview your test readers after they have used your draft

By interviewing your test readers after they've used your draft, you can often obtain a wealth of insights you couldn't otherwise have discovered. Here are five especially productive questions.

- **What were you thinking when you encountered each problem?** Even when test readers try to speak their thoughts aloud as they read your draft, their account may be incomplete. For example, some test readers become so engrossed in their task that they forget to speak. Or, their thoughts fly faster than they can report them.
- **How did you try to overcome each problem?** Testing readers' strategies may suggest ways you can improve the presentation of your information.
- **How do you respond to specific elements of my communication?** Ask about any element about which you'd like feedback. Imogene might ask, "Do you find the page design appealing?" Shoon could inquire, "Do you like the website's colors?"
- **What do you suggest?** Readers often have excellent ideas about ways a communication can better meet their needs.


Yuri Arcurs/Shutterstock.com

Interviewing test readers can be informative and enjoyable.

- **How do you feel about the communication overall?** When responding to such an open-ended question about their feelings, test readers may reveal some very helpful information about your communication's usefulness that your other questions didn't give them an opportunity to express.

Guideline 3 | Keep as small as possible the difference between your test readers' and your target readers' experience with your communication

The value of your test depends on how closely your test readers' use of your communication matches your target readers' use of it. Anything that diminishes the closeness of this match can cause you to miss needed changes or to revise in counterproductive ways.

Performance and location tests almost always involve one major difference: Unless you have someone else perform your test, you will be right there when your test readers use your communication; however, you won't be present when your target readers use it. To gain the most value from your test, you must diminish the impact of your presence as much as possible.

MINIMIZING THE IMPACT OF YOUR PRESENCE

- **Remain unobtrusive.** Let the test readers focus on their tasks. Be quiet. Sit to the side or behind them, out of their line of sight. If they are overly conscious of being observed, they may have difficulty concentrating.
- **Refrain from intervening unless absolutely necessary.** Even if your test readers ask for help, request that they rely only on the draft to solve problems. Intervene only if you must do so to enable them to continue with other parts of the test or if they are about to injure themselves or others.
- **Emphasize that you want to find problems and ways to improve your draft.** If they believe you will be disappointed to hear criticisms, they may refrain from pointing out some problems.

HOW TO TEST THE PERSUASIVENESS OF YOUR DRAFT

To test the persuasive impact of a draft, compare your test readers' attitudes before and after reading. At work, user tests usually focus on the readers' attitudes toward one or both of the following:

- **The *subject matter* of the communication.** Among other things, Imogene would look for positive changes in the readers' attitudes toward the radio/CD player and the job of installing it by themselves. Among other things, Shoon would want to determine his website's ability to prompt positive changes in his test readers' attitude toward products sold there.

- **The *quality* of the communication.** Imogene would be concerned with test readers' attitudes toward the instructions she drafted and Shoon toward the website he created.

Guideline 1 | Use Likert-scale questions to evaluate persuasiveness

There are several ways to obtain information about your test readers' attitudes before and after they read your draft. Once they've finished reading, you can ask how their attitudes have changed. This approach may yield flawed results, however, because readers sometimes misremember their earlier attitudes.

A more effective method for determining attitude change is to ask your test readers to respond to the same Likert-scale question before and after they use your draft. Likert-scale questions use a numerical scale. If your test readers respond with the same numbers both times, there's been no change. If they respond with different numbers, change has occurred. Figure 18.4 shows three questions Imogene used.

Of course, there's also value in asking test readers to answer open-ended questions related to the persuasiveness of your draft, such as "How do you feel about my communication?" and "What could I do to make it more appealing or attractive?"

Guideline 2 | Avoid biasing your test results

Unless you are careful, your test readers may report their attitudes inaccurately. For example, if they believe you want praise more than suggestions for improvement, they will try to please you rather than help you improve your communication. You can take practical action to avoid accidentally biasing what your test readers tell you.

AVOIDING BIAS

- **Emphasize your hope that the test readers will help you improve your draft.** Say this before anything else, and repeat the message from time to time.
- **Phrase questions in a neutral way.** When drafting Likert-scale questions and interviewing test readers, avoid phrasing questions in ways that seem to steer them toward a certain answer. Your test readers may comply, thereby depriving you of accurate information needed as the basis for solid, reader-centered revisions.

Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I am confident that I can replace a car radio without difficulty.	1	2	3	4	5
The instructions for replacing the radio will be easy to follow.	1	2	3	4	5
Replacing a standard car radio with a high-quality one is worth the work it requires.	1	2	3	4	5

FIGURE 18.4

Likert-Scale Questions Imogene Used to Test Her Instructions' Persuasiveness

By asking her test readers to answer these questions before and after they used her instructions, Imogene could determine whether the instructions affected their attitudes.

- **Welcome criticism.** If you seem disappointed or unreceptive to criticisms, test readers will stop making them. Assure the readers that all comments are helpful to you.

HOW TO INTERPRET THE RESULTS OF YOUR TEST

As explained at the beginning of this chapter, testing involves prediction. Based on the responses of your test readers, you predict how members of your target audience will respond. However, every reader is an individual. Different persons respond in different ways to any communication.

Your challenge when interpreting test results is to determine whether the responses to a particular paragraph, graphic, or design element by your test readers is likely to be typical of the responses that your larger audience will have. There's no surefire way to answer that question. However, answering the following three can be helpful.

- **How many test readers did you have?** The more you have, the more likely that responses they share represent your target audience's likely responses.
- **In what ways do your test readers differ from your target readers?** Do they have a different level of prior knowledge about your subject? Different expectations and needs? You will need to make such comparisons in order to determine whether your target readers would respond differently than your test readers did.
- **What did you observe during the test that can help you interpret the results?** Sometimes your observations of test readers can help you interpret results. For example, if you notice that some test readers rushed through the instructions you are testing, you might conclude that their hurry, not a deficiency in your draft, may account for some of the difficulties they encountered.

HOW TO TEST COMMUNICATIONS YOU WRITE TO READERS IN ANOTHER CULTURE

Testing communications that will be used in other cultures can present special challenges. For reasons explained throughout this book, the language, images, and other aspects of a communication that seem perfectly clear and appropriate in one's own culture can be incomprehensible, laughable, or offensive in another. When preparing communications for audiences outside your own culture, make a special effort to use test readers that represent those audiences. Readers from different cultures can approach communications from different perspectives and expectations. For example, researcher Daniel D. Ding (2003) found significant differences between instruction manuals for installing a water heater that were written in China and in the United States. The Chinese manual describes a series of ideal relationships among the parts, but does not describe the specific actions the installer would take to achieve these relationships. Installers must bring their experience to the instructions in order to perform the task. Ding explains that this understanding of the way instructions should be written emerges from Chinese culture, in which context and individual objects are seen as a unity. In contrast, the U.S. instructions consist of lists of actions, described in detail, so that the installation can be accomplished independent of the installer's previous knowledge. These substantial differences illustrate how important it is for writers in one culture who are addressing readers in another culture to use test readers from that other culture.

If it is impossible for you to arrange for such test readers, it will be particularly important for you to have your communication reviewed by persons who are knowledgeable about those audiences.

HOW TO TREAT TEST READERS

An ethical principle developed for research in medicine, psychology, and many other fields also applies to the testing of the drafts you write at work or in class. This principle states that the people involved should be volunteers who have agreed to participate after being fully informed about what you are asking them to do.

For certain kinds of research, this is not only an ethical requirement but also a legal one. Researchers must tell potential volunteers about the study in writing and obtain in writing the volunteers' consent to participate.

WEB For information on the legal requirements that apply to certain tests, go to your English CourseMate at *www.cengagebrain.com.*

Although such legal requirements probably will not apply to the testing you do of draft communications you prepare at work, the ethical principle still does. When asking others to try out something you have drafted, let them know the following:

- The test's purpose
- The things you will ask them to do during the test
- The time required for the test
- Where the test will take place
- Any potential risks to them (some lab procedures, for instance, do involve risk if not done properly)
- Their right to decline to participate
- Their right, if they do volunteer, to stop participating at any time

Figure 18.5 shows a sample informed consent form.

CONCLUSION

WEB To see a proposal for testing and a report on the results of a test, go to your English CourseMate at *www.cengagebrain.com.*

Figure 18.6 shows a planning guide that will help you learn how your readers will respond to a communication you are drafting. With the insights your tests produce, you will have the surest possible guide to revising your drafts so you can create final versions that work for your readers in exactly the ways you want them to.

FIGURE 18.5

Sample Informed Consent Form

Using this informed consent form, a student efficiently communicated the information needed to treat his test readers ethically.

- The writer tells potential volunteers what they would be doing during the test.
- The writer describes the risks involved. (There are none in this case. For tests that involve risk, the statement would need to be changed.)
- The writer explains the test's purpose.
- He lets potential volunteers know that they would also be asked to answer questions.
- The writer explains how much time he is asking potential volunteers to give.
- He explains that volunteers can stop participating at any time.
- The writer tells when and where the test will take place.
- The writer provides a place for volunteers to confirm that they are participating voluntarily.

LEARN MORE For a copy of this form that you can download and edit, go to your English CourseMate at *www.cengagebrain.com.*

WEB For usability tests that are subject to federal regulation, a different informed consent form is used. For information go to your English CourseMate at *www.cengagebrain.com.*

Informed Consent

I am seeking volunteers to test a ________________________ that I am creating as part of my work for__________________.

If you are interested in volunteering, please read the following information carefully. If you decide to participate, please sign below.

1. In the test, you will use a draft of ____________________.
2. You will not encounter any risk of harm in this process.
3. The purpose of this test is to enable me to identify ways to make my draft more effective. It is not a test of your abilities.
4. I will observe you as you read and use my draft. Afterward, I will ask you questions about the draft.
5. The entire test will take between _____ and _____ minutes.
6. You may stop participating in this test at any time.
7. I will conduct the test at a time that is convenient for you.
8. The test will take place at ________________________________.
9. I will be glad to answer any questions you have about the test.

____

I have read and understood the description given above concerning the test. I volunteer to participate.

Name ______________________________

Signature ___________________________

Date ________________________________

© Cengage Learning

FIGURE 18.6

Writer's Guide for Testing Drafts

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
TESTING DRAFTS

Goals of Your Test

1. What are your communication's usefulness objectives?
2. What are its persuasive objectives?
3. What parts or features do you need to test for the following reasons?
   - ❑ Because they are so crucial to your communication's success
   - ❑ Because you are unsure how well they will work

Test Readers

1. Who are your target readers?
2. Can you find test readers from this group? If you cannot, what test readers would closely resemble your target readers? What are the important differences between your test readers and the target readers?

Testing Your Draft's Usefulness

1. What will you ask your test readers to do so you can evaluate your draft's usefulness?
2. What resources will your target readers have that you should provide to your test readers?
3. Can you conduct your test where your target readers will use your communication? If not, how can you simulate that location?
4. How will you observe what your test readers do while using your draft?
5. How will you learn what your test readers are thinking as they use your draft?
6. What questions will you ask your test readers when you interview them after they've finished using your draft?

Testing Your Draft's Persuasiveness

1. What attitudes will you ask your test readers about?
2. How will you avoid biasing their responses?

Ethics

1. What do you need to say in your informed consent form in order to treat your test readers ethically?

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Explain how you would test each of the following communications:
   a. A display in a national park that is intended to explain to the public how the park's extensive limestone caves were formed.
   b. Instructions that tell homeowners how to design and construct a patio. Assume that you must test the instructions without having your test readers actually build a patio.
2. Following the guidelines in this chapter, design a test for a communication that you are now drafting.
3. Complete the assignment on user testing given in Appendix B.
4. Design a user test for your school's website. Imagine that the target audience is high school students who are deciding what college to attend. Who would you select as test readers? How would you define the objectives of the test? What would you ask them to do, and how would you gather information from them concerning the site's usefulness and persuasiveness?

EXPLORE ONLINE

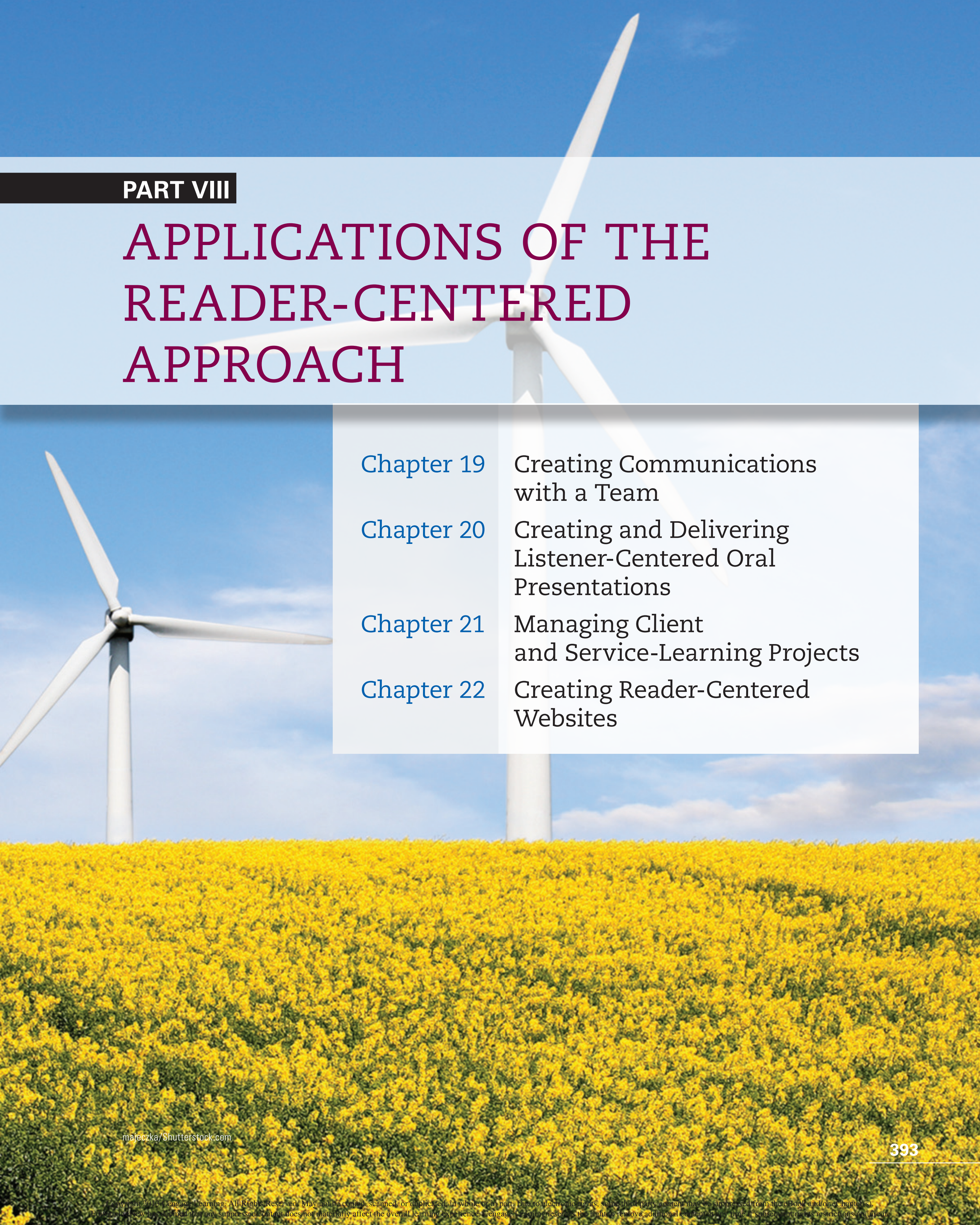
At one of its websites, the United States government provides instructions for conducting usability testing (www.usability.gov). After visiting the site, write a memo to your instructor explaining why the government feels that usability testing is so important that it publishes instructions for performing the tests.

COLLABORATE WITH YOUR CLASSMATES

Interview a classmate about a project he or she is drafting. Then design a test that will help your partner identify ways that he or she could revise the draft to make it more usable and persuasive for its target audience.

APPLY YOUR ETHICS

Following the advice given on pages 389–390, develop an informed consent form that you could give to people you ask to volunteer as test readers of a draft you are preparing for your class. How could you recruit volunteers so that they won't feel pressured to agree to be test readers even though they would prefer not to? Are there any aspects of your test that could conceivably harm your test readers physically, emotionally, or socially? If so, how can you alter your test to eliminate this risk?



PART VIII

APPLICATIONS OF THE READER-CENTERED APPROACH

majeczka/Shutterstock.com

19 | Creating Communications with a Team

Teamwork skills are highly valued in the workplace. When hiring new workers and promoting current ones, employers put a premium on an applicant's or employee's ability to function effectively on a team. Employers value team skills because they rely so often on teams to accomplish important goals. However, the difference in the quality of work produced by effective teams and ineffective ones can be tremendous. And a team's effectiveness depends as much on teamwork skills of its members as on their technical or other specialized knowledge. This chapter will help you increase your value to your employer by helping you develop your workplace teamwork skills.

VARIETIES OF TEAM STRUCTURES

In the workplace, you will see teams with many different structures. The structure of any particular team depends on many factors, such as the employer's preferred practices, the size and nature of the project, and the talents of the team members. Three variables are especially important for you to understand as you strive to build your expertise at teamwork.

- **Leadership.** On some teams—especially large ones— a single person is designated as the leader or manager. In other cases, team members are collectively responsible for all aspects of their work. Both arrangements have variations. For example, the person assigned as team leader may make all critical decisions personally or may facilitate discussions that produce consensus among team members.
- **Distribution of tasks.** Some teams give each member exclusive responsibility for a specific portion of the final written work. This approach can produce

excellent results because each person concentrates on the sections related to his or her area of expertise. However, it risks creating redundancies and inconsistencies among sections of the final document because teams work in isolation, without knowing in detail what other team members are writing. In contrast, on some teams all members work together on every task. This arrangement can produce a highly polished outcome because all minds are applied to the entire project, but it can also be slow and inefficient.

Many teams use a hybrid model. For example, the whole team may define the communication's objectives but then assign individuals to draft different sections. The team may reassemble to edit collaboratively.

- **Technology.** Different teams use the growing array of online collaborative writing tools in different ways. Some develop online locations for storing research resources that can be accessed by all team members; many share, review, and edit one another's drafts online; some hold meetings over the Internet. Using these resources, some teams complete entire projects without ever meeting in person.

Yuri Arcurs/Shutterstock.com

© BananaStock/Alamy

Members of a writing team can share leadership responsibilities (top) or one person can be designated as the team leader (bottom).

KEYS TO TEAM SUCCESS

No matter how they are structured, all teams depend on the same strategies to maximize their success. This chapter's goal is to supplement your instructor's guidance in helping you learn to use—and help your teams use—these strategies. While you read the chapter, discuss it with your instructor, and work on a team project in your class, concentrate on expanding your skill at encouraging and helping your teams do the following:

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Develop a shared understanding of team goals and procedures.
2. Make team meetings efficient and highly productive.
3. Use technology to increase the team's effectiveness.

HOW TO DEVELOP A SHARED UNDERSTANDING OF TEAM GOALS AND PROCEDURES

Teams are able to accomplish more than individuals not only because a group can accomplish more work than a single person but also because several minds working together can often produce better, smarter, and more effective results. To enable your teams to realize this strength in numbers, help them develop a shared understanding of what you collectively seek to accomplish and how you will work together to produce this result.

WEB To read additional information and access links related to this chapter's guidelines, go to your English CourseMate at *www .cengagebrain.com.*

Guideline 1 | Create a shared understanding of the communication's objectives

The first steps toward creating a team-authored reader-centered communication are identical to the steps you take when writing single-authored reader-centered communications:

LEARN MORE To review the reader-centered approach to defining a communication's objectives, go to Chapter 3.

- Learn about your readers' characteristics, situation, needs, and expectations.
- Define your communication's usability objectives by identifying the tasks your readers will use the communication to perform.
- Define your readers' persuasive objectives by describing how you want it to influence their attitudes and actions.

The following guidelines describe strategies that help team members achieve a common understanding of the communication they are working together to create.

DEFINING OBJECTIVES AS A TEAM

- Take sufficient time to explore the diverse views of all team members regarding the communication's objectives. Ask questions yourself and invite questions from others.
- Keep the team talking until it is clear that everyone agrees on what the communication's true objectives are.
- Summarize and record the conclusions and decisions you reach and provide each team member with a copy.
- Remain open to new insights about your readers and purposes as your team's work progresses.

WEB The Worksheet for Defining Objectives can be used for team projects as well as for individual ones. To download a copy, go to Chapter 3 in your English CourseMate at *www.cengagebrain.com.*

Guideline 2 | Develop and share a detailed plan for the finished communication

When planning a communication that you'll write by yourself, you can begin with fairly general plans that become more specific as you proceed. With team projects, however, hazy plans can create multiple problems. When team members begin their individual work based on a vague plan, they often find they've invested a significant amount of time and creativity in producing drafts that later have to be modified significantly or even discarded because they don't match the more detailed plan that the team eventually develops.

Here are three actions that can help your teams avoid the frayed nerves and wasted time that such misunderstandings can cause.

PLANNING TEAM PROJECTS

- **Discuss plans as a team.** When teams discuss plans, the individual members gain a fuller understanding of what they are trying to accomplish together. In addition, the plans themselves often improve as a result of the discussion.

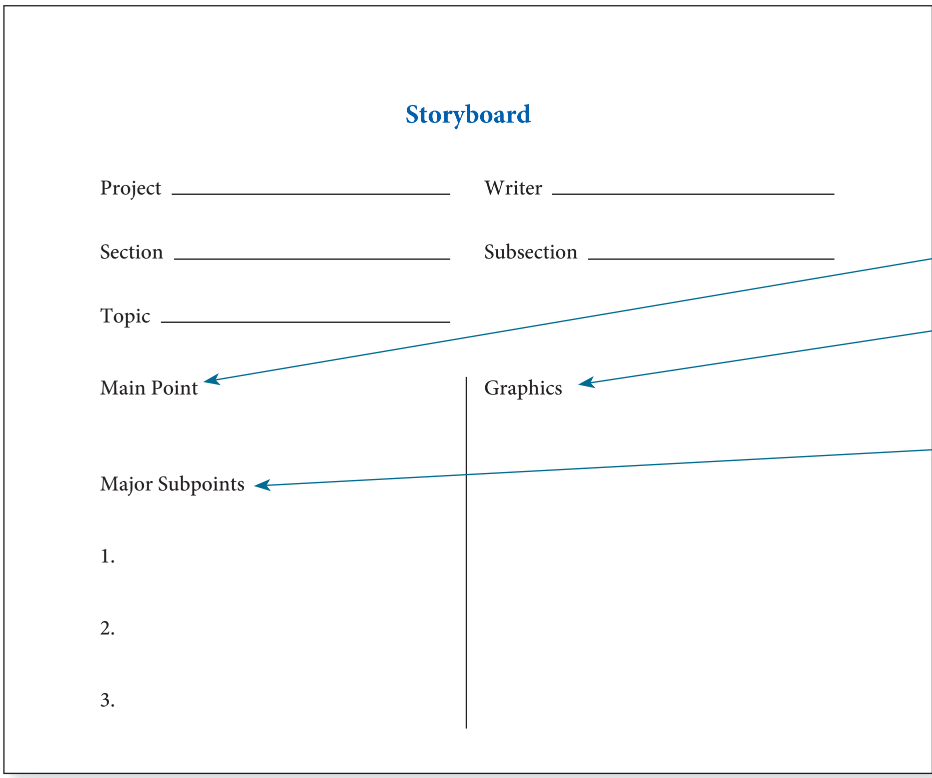
- **Discuss the communication's outline together.** By discussing the outline, teammates can develop a common, detailed understanding of the communication's logic and structure. The team may create the outline from scratch during discussion or begin with an outline developed in advance by one team member.
- **Create storyboards.** After your team has discussed the outline, each team member can complete a storyboard form for the sections he or she will write. As you can see in Figure 19.1, the form asks for the section's main point, supporting points, and graphics. The team can then assemble and review the various storyboards, adjusting each so they fit tightly together. At the end of this storyboard review, each writer should have a clear sense of what he or she will write.

LEARN MORE For information about a different variation of storyboarding used with oral presentations, see page 423.

Although teams benefit from making detailed plans early, the plans need to remain flexible. New information and ideas gained along the way can require a new organization and different presentational strategies.

Guideline 3 | Make a project schedule

Encourage your teams to make a schedule at the very beginning of their efforts. A simple timetable, with interim deadlines, assures that the team advances steadily



Storyboard

Project ____________ Writer ____________

Section ____________ Subsection ____________

Topic ____________

Main Point

Graphics

Major Subpoints

1.

2.

3.

FIGURE 19.1

Storyboard for Use by Writing Teams

Before anyone begins drafting, team members can use storyboards to decide together how each part will be written.

Team members state the major point their sections will make

Team members sketch or make notes about the graphics that will be integrated into their sections.

Team members identify the points that will support or explain the major point.

After all storyboards have been reviewed by the team or the team leader, each team member will have a clear idea about how to write his or her section so it will fit easily into the communication's overall structure.

toward its goal and allows adequate time for all stages of its work. Each person thus knows exactly when his or her tasks must be completed. This provides motivation to complete assignments on time since it palpably demonstrates how missing a deadline will create problems for later steps in the process.

When you create a schedule, include the following elements.

LEARN MORE For advice about creating schedules for client and service-learning projects, see Chapter 21, pages 438–439.

CREATING A PROJECT SCHEDULE

- **Include time for defining objectives and planning.** The team will have an opportunity to act on Guidelines 1 and 2 above only if sufficient time is provided in the schedule.
- **Include milestones.** Milestones indicate the dates by which various stages of the work will be completed. These interim deadlines help teams progress at a steady pace. If a milestone is missed, the team understands it must speed up its remaining work to complete the entire project on time.
- **Create enough milestones to catch potential problems early.** For instance, in addition to a deadline for the completion of final drafts, set a date for completing rough drafts for team review. These deadlines will allow the team to identify writers who are having difficulty so that assistance can be provided early enough for them to complete the final draft on time.
- **Include time for editing.** No matter how much discussion and planning have occurred earlier in the process, almost every team-written communication needs editing before delivery to its readers. The sections may be written in different styles, leave gaps, or repeat some of the same information. Whether one editor is chosen or everyone edits together, time will be needed for this activity.

LEARN MORE For guidelines for creating schedule charts, see page 333.

Guideline 4 | Establish shared responsibility for team progress and cohesion

Communication experts Kenneth D. Benne and Paul Sheats (2000) have identified a wide range of roles that someone in the group must play if the team is going to maximize its productivity. On collaborative teams, all members should assume equal responsibility for performing these roles when the situation requires. On teams with a designated leader, this person would usually perform most of these roles. Even then, however, all team members can increase the team's effectiveness by stepping in to perform one or more of these roles as needed.

Benne and Sheets divide their roles into two groups. The first, task roles, keep the team moving toward its goal.

TASK ROLES	CONTRIBUTIONS
Initiators	offer new ideas, propose new solutions, and restate old issues in new ways. They provide creativity and direction as the team explores its subject matter and communication strategies.

Information seekers	request clarification and additional information. They ensure that the team members understand all relevant factors—including their subject matter, their readers, and communication alternatives.
Information givers	furnish the facts needed by the team, sometimes on their own initiative, sometimes in response to information seekers, sometimes through their own knowledge, and sometimes through research.
Opinion seekers	ask other team members to express their judgments, values, and opinions. They also share their own views with the team.
Clarifiers	clear up misunderstandings or confusion by explaining points or providing additional information.
Summarizers	consolidate the team's deliberations by stating concisely what has been said or decided. They help team members see what has been accomplished so the team can proceed to the next task.
Energizers	motivate the team to take action, often by communicating a sense of enthusiasm or by emphasizing its commitment to its goals.

TRY THIS Identify the task and group maintenance roles at which you excel. Among the other roles, which ones would be the most valuable for you to learn how to perform more expertly?

The second group of roles, called group maintenance roles, assures good working relationships among team members.

GROUP MAINTENANCE ROLES	CONTRIBUTORS
Encouragers	offer warmth, praise, and recognition during team discussions. They support quieter team members, whom they gently encourage to join in.
Harmonizers	help team members explore differences of opinion without hurting one another's feelings. They detect and reduce friction by helping the team to focus on ideas rather than on personalities.
Feeling expressers	share their own feelings or articulate those of the team, thereby enabling members to deal with emotions that might interfere with the team's ability to work together productively.
Compromisers	volunteer concessions of their own positions on controversial issues and suggest a middle ground when other team members seem stuck in opposing positions. They help all team members realize that they are contributing even when their ideas are altered.
Gatekeepers	assure that all team members have an opportunity to speak, sometimes by asking more talkative members to be brief and by inviting quieter members for their contributions.

HOW TO OBTAIN THE COMMITMENT AND EFFORT NEEDED FROM ALL TEAM MEMBERS TO MAINTAIN STEADY PROGRESS

Students often complain or hear others complain about team members who don't do their share of the work, making more work for others and also reducing the quality of the final product by withholding their creativity and ideas. While this problem occurs less often in the workplace, it does arise. Here are four simple strategies that can help your teams avoid this difficulty.

For sample team charters, go to your English CourseMate at ***www .cengagebrain.com.***

- **Create a team charter.** A charter is a written agreement about the ways the team will work together. Typical topics include the team's goals, the roles of each member, and ground rules about such things as expectations for attendance and completion of tasks, as well as the team's plans for dealing with conflicts and failure to meet expectations.
- **End each meeting by deciding what each member needs to do *before* the next meeting.** Nothing is more discouraging than discovering at a team meeting that the team is at exactly the same point as it was at the previous meeting. The reason could be that team members didn't know what they were supposed to do in the meantime. Before adjourning any meeting, make specific, explicit decisions about the assignment each member is to complete before the next meeting.
- **Prepare and distribute meeting minutes.** Minutes provide a way to remind team members of their responsibilities before the next meeting. They also save time that might have been spent trying to remember previous decisions or in reconsidering issues that have already been settled.
- **Treat each other respectfully.** In the workplace, as at school, a great deal of team members' motivations to contribute to team efforts depends on the relationships they have with one another. By showing appreciation for each person's contributions and by following the next section's advice for engaging in respectful meetings, any team can greatly increase the productivity and pleasure of working together.

HOW TO MAKE TEAM MEETINGS EFFICIENT AND HIGHLY PRODUCTIVE

In addition to helping your teams develop effective plans for working together, you can increase their productivity by helping them conduct efficient meetings at which all team members are encouraged to fully contribute their knowledge, creativity, and energy.

Guideline 1 | Set and follow an agenda

Nothing will be more precious to your communication teams than time. Each participant has other projects and responsibilities and is taking time away from them. You can help your teams spend as little time as possible in meetings by encouraging them to employ the following strategies.

CONDUCTING EFFICIENT MEETINGS

- **Prepare an agenda.** Before the meeting, have someone list the major issues to be discussed. Open the meeting by having the team review the agenda to be sure everyone agrees on what is to be accomplished. This small amount of preparation by one person can save large amounts of meeting time for many persons.
- **Stick to the agenda.** As the meeting proceeds, keep the discussion on track by referring to the agenda.
- **Bring discussions to a close.** Communication teams sometimes keep debating a topic even after everything useful has been said. When a discussion becomes repetitive, say something like, "We seem to have explored the options pretty thoroughly. Let's make a decision."

  Some teams continue talking even after they have reached consensus. If your team does that, try formalizing the agreement by saying, "I think I hear everyone agreeing that . . ." If someone objects, the team can clear up any point that still needs to be resolved. Otherwise, the team can move on to the next item of business.
- **Sum up.** After all the topics have been covered to everyone's satisfaction, sum up the results of the meeting verbally. Such a statement consolidates what the team has accomplished and reinforces its decisions. Follow up this summation in writing.
- **Set goals for the next meeting.** Make sure everyone knows exactly what he or she is to do before the next meeting. This strategy helps assure that when you meet again, you will have new ideas and material to discuss.

TRY THIS Think of a meeting in which you recently participated. Which of these strategies for conducting efficient meetings would have most improved that meeting?

Guideline 2 | Encourage discussion, debate, and diversity of ideas

One of the chief benefits of group work is that many people bring their expertise and creativity to a project. To take full advantage of that benefit, all team members must offer their ideas freely—even if the ideas conflict with one another. In fact, debate and disagreement can be very useful if carried out in a courteous and nonthreatening way. Debate ensures that the team won't settle for the first or most obvious suggestion. It also enables your team to avoid *groupthink,* a condition in which everyone uncritically agrees at just the time when critical thinking is most needed.

Encouraging debate and diversity of ideas can be difficult. Some people are naturally shy about speaking, and many avoid disagreeing, especially if they fear that their ideas will be treated with hostility rather than openness and politeness. The following sections describe strategies your teams can use to promote productive debate and consideration of a rich diversity of ideas.

iStockphoto.com/pixdeluxe

In group meetings, active listening is as important as it is in one-to-one conversation.

Active Listening

Good listening is one key to good discussions. In fact, the quality of your contributions to team discussions can depend at least as much on how well you listen as on what you say. By following the strategies for active listening described below, your teams can encourage full and open participation by all members. The strategies will also help team members fully understand one another and build on one another's ideas.

LISTENING ACTIVELY

- **Give everyone a chance to speak.** If someone is quiet, ask for—actively encourage—the person's thoughts and ideas.
- **Let each speaker finish.** Hold your thoughts until they've finished theirs. Don't interrupt.
- **Show that you are paying attention.** If you agree with the person, say such things as "That's interesting," "I hadn't thought of that," or even simply "Uh-huh."
- **Look at the speaker.** People raised in the United States and similar cultures believe that listeners who maintain lots of eye contact are friendlier than those who maintain less eye contact (Kleinke, Bustos, Meeker, & Staneski, 1973). When speakers think they are receiving more eye contact, they also think their listeners are more attentive (Kleck & Nuessle, 1967). As page 405 explains, however, eye contact is interpreted differently in some cultures.
- **Refrain from distracting gestures.** Researchers have found that speakers feel uncomfortable if their listeners engage in such nervous gestures as cleaning their fingernails, drumming their fingers, or holding their hands over their mouths (Mehrabian, 1972). Replace such gestures with note taking, or assume a relaxed but alert posture. Keep your expression pleasant or neutral. Avoid signaling disagreement or displeasure through nonverbal language.
- **Focus on ideas.** Be sure you understand what the person is saying. Ask for examples, clarifications, or elaborations. Before responding, get a full picture of the speaker's thoughts.

Fostering Productive Debate and Handling Conflict

At meetings, highly effective teams do more than share ideas. They explore, test, and refine them through discussion and debate. Some teams disagree too little. Some disagree too much. The following strategies will help you increase productive debate as well as defuse demoralizing interpersonal conflicts.

FOSTERING PRODUCTIVE DEBATE AND HANDLING CONFLICT

- **Be open to others' ideas.** Don't be so attached to your own thoughts that you can't hear theirs.
- **Respect the other person's ideas**. First show that you understand the other person's position by paraphrasing it. Identify the points on which you agree before explaining why you have a different view on other points.
- **Discuss ideas, not persons.** Refrain from implying that the person is wrong. Express your reasons for thinking that another idea is better. Avoid moral judgments (right/wrong) in favor of qualitative judgments (better/worse).

- **Watch nonverbal communication.** Another team member's facial expression or body language may suggest that they are feeling uncomfortable, hurt, or angry about an issue. Respond in a respectful and sensitive way.
- **Look for the "third way."** Sometimes, ideas that seem to be in conflict can both be accommodated.
- **Be prepared to compromise.** Stalemate is unproductive. If another team member continues to disagree with you, your best contribution to the team may be to compromise—even if you are certain you are correct. Being a productive team member can require supporting writing choices you wouldn't make on your own. Remember that the point of group work is exactly that—the result of the group's efforts. Don't allow yourself to think that your ideas must triumph.
- **Paraphrase and vote if team members become deadlocked.** If two team members are unable to find a resolution to their disagreement, suggest that the team decide. Then paraphrase each position fairly and take a vote. Once the decision has been made, encourage the team to move forward; emphasize that there are no "winners" or "losers."

Discussing Drafts

Teams can increase the usability and persuasiveness of their drafts by sharing suggestions for revision. To benefit fully from these discussions, members must help one another overcome the fear that their suggestions could offend the person who drafted the section under discussion and the tendency of some members to resist changes to parts they drafted. Chapter 17's guidelines for reviewing drafts can help teams avoid these barriers to productive reviews. Especially relevant to team writing are the following six guidelines from Chapter 17, plus two more that apply specifically to team projects.

DISCUSSING DRAFTS

STRATEGIES FROM CHAPTER 17

- Begin comments about a draft with praise for what's strong.
- Explain the reader-centered reasons for all suggestions. Remind the writer that your suggestions are intended to improve the communication for its intended audience.
- Avoid phrasing suggestions in ways that sound like criticisms of the writer's work.
- Rank suggested revisions beforehand and focus on the ones that will have the greatest impact.
- Distinguish matters of substance from matters of style.
- Accept all reasonable suggestions for improving your own draft and thank team members for their ideas.

LEARN MORE For a fuller discussion of these strategies, go to pages 367–368.

SPECIAL GUIDELINES FOR TEAM PROJECTS

- **Treat drafts as team property, not individual property.** Encourage each other to give up personal "ownership" of drafts. Take pride in your contributions, but view your drafts as something you've created for the team; they have become its property.

This doesn't mean that you should remain silent if someone suggests a change that would weaken your draft. Join in a reasoned conversation about the best way to write "our" communication rather than struggling to protect "my" writing. Your lack of defensiveness about your draft will encourage others to adopt the same attitude concerning theirs.

- **Swap responsibilities.** Responsibility for revising each section could be given to someone other than the person who drafted it. When all drafts are combined into a single communication, one person might be responsible for editing and polishing. With these arrangements, all drafts clearly become team drafts.

Guideline 3 | Global Guideline: Help your team work across cultural differences

Successful teamwork requires that each team member needs to be fully engaged. One hazard for multicultural teams is that members can misinterpret one another's ways of interacting, with the result that opportunities for engagement are missed.

A first step in helping your teams work across cultural differences is to recognize the many ways these differences can impact discussions of ideas.

Cultural Differences in Discussions of Ideas

Bosley (1993) has identified four important differences in the ways that people from various cultures may interact on workplace teams.

Recognizing cultural differences

- **Expressing disagreement.** In some cultures, individuals typically express disagreement directly. In others, people say "no" only indirectly in order to save face for themselves and the other person.
- **Making suggestions.** People from some cultures offer suggestions freely. To avoid embarrassment, people from some other cultures avoid saying anything that might be interpreted as disagreement.
- **Requesting clarification.** In some cultures, individuals frequently ask others to explain themselves more clearly. People from other cultures feel that it's rude to ask for clarification; doing so would imply that the speaker doesn't know what he or she is talking about or hasn't succeeded in explaining things clearly.
- **Debating ideas.** Whereas members of work teams in some cultures debate ideas vigorously as a way of exploring ideas, people from other cultures regard such behavior as disloyal and unacceptable.

Cultural Differences in Behaviors in Conversation

The ways people interact in everyday conversation show up in the ways they converse in team meetings. In Sweden, listeners signal that they are being attentive by sitting straight and folding their arms in front of them (Rabinowitz & Carr, 2001). However, if you were raised in the United States, you might interpret the Swedish posture as signaling boredom, disagreement, or even hostility. In the U.S., most people signal attentiveness by leaning forward and openness by keeping their arms spread.

WEB For more on culture and collaboration, go to your English CourseMate at *www.cengagebrain.com.*

Similarly, cultural differences exist concerning eye contact. People raised in the United States are likely to interpret eye contact as a signal of sincerity and interest in the other person. Eye contact is even more important in Arab cultures, where people use intense eye contact to read someone's real intentions. However, if you were raised in Korea, you might interpret constant eye contact as rudeness. In Japan, looking someone in the eye is an invasion of his or her space (Varner & Beamer, 2005).

Cultural Differences and Gender

Different cultures also have different expectations about the ways men and women will behave. For example, research shows that many men in the United States present their ideas and opinions as assertions of fact. When exploring ideas, they may argue over them in a competitive manner. In contrast, some women offer their ideas tentatively, introducing them with statements such as, "I think," or, "I'm not sure about this, but . . . ." If there is disagreement, women may support part or all of the other person's ideas and seek to reach consensus (Lay, 1989). Differences in gender expectations can lead to misinterpretations even when team members are from the same culture.

WEB For more on gender and collaboration, go to your English CourseMate at *www.cengagebrain.com.*

Improving Team Effectiveness Across Cultural Difference

The best tools for assuring team effectiveness across cultural difference are knowledge, self-awareness, and flexibility.

- **Knowledge.** The more members of your teams know about one another's cultural expectations and behaviors, the greater their ability will be to avoid counterproductive misinterpretations. No guidebook can beat the effectiveness of conversation for developing this knowledge. These conversations can occur during team meetings or outside of them. In fact, you'll find that one of the great pleasures of working with persons from different cultural backgrounds is learning about the cultures and the people who reside in them.
- **Self-awareness.** Also important is your own awareness of the extent to which your own cultural background influences your interpretations of your teammates' behaviors. If you grew up in a culture where people explore ideas through competitive debate, you may misinterpret the style of a team member whose culture values indirectness as signaling a lack of commitment to the team. If you are the person from a culture that values indirectness, you may misinterpret the other person's directness as rude and aggressive. Talking with other team members about your understanding of them is the best way to test your interpretations. But remember to be sensitive and cautious at first. Ask questions rather than make blunt statements.
- **Flexibility.** Through conversation, you will likely learn that you, too, are being interpreted incorrectly by others. In addition to discussing the "meaning" of these behaviors in your culture and that of one or more teammates, think of ways you can modify your behavior to reduce your chances of being misunderstood.

Ultimately, each multicultural team must develop its own ways of working as productively as possible. A team can't succeed in doing that if the members merely share generalizations about their cultures. Instead, they must develop a mutual understanding that sees each member's ways of interacting as partly an expression of his or culture. This understanding is an important element in the working relationships that team members develop.

HOW TO USE TECHNOLOGY TO YOUR ADVANTAGE

Most teams make extensive use of computer technology to support their work. You can increase your value to your teams by helping them use these resources as productively as possible.

Guideline 1 | Choose the computer technology best suited to your team's project

Many companies offer computer programs and services that support team efforts. Some are very expensive. Some are free. Each supports some team activities better than others. There's a considerable payoff from investing the time to identify the one program or group of programs that best supports your team's project.

The range of tasks that need to be supported is often more complex than might appear at first glance. One or more team members will create an initial draft or drafts, which they will distribute to the rest of the team. When reviewing these drafts, each team member will make comments, raise questions, offer suggestions, and revise by adding, deleting, or moving content. The resulting drafts will be reviewed, perhaps through many cycles. The larger the team, the more drafts to be prepared, the more difficult the work will be.

Here are three kinds of computer support, each suited to different situations.

- **Circulating drafts made with standard desktop programs.** Programs that you use every day such as Microsoft Word and PowerPoint include many features that support people working collaboratively. You and others on your team can insert comments, highlight changes you've made for others to review, and compare drafts readily. Drafts can be distributed as e-mail attachments. Note, however, that if more than one of you works simultaneously on a draft, someone will need to enter both sets of changes into the same draft—and decide which version to use when they disagree. To avoid this complication, some teams pass a single draft from person to person in an agreed-upon pattern.
- **Working on a single draft on the Internet.** Rather than circulating a draft by e-mail, you can place it at Google Drive (www.drive.google.com) or a similar site where all team members can work on it using Internet Explorer, Firefox, or another browser. Because all revisions are made to this single draft, there's no need to merge changes from separate versions. Unfortunately, these programs have limited word-processing options, so you can't add many of the page design features that increase a communication's usability and persuasiveness until you've downloaded it to your own computer. Also, these programs have trouble with tables, graphs, and similar content. However, when you are working with simple designs and straight text, they are very helpful.

LEARN MORE For more on the collaboration features of Word, see pages 369–370.

TRY THIS Set up a free account at Google Drive. Upload a draft of a project for one of your courses. Using Google Drive's Share feature, send an e-mail to a classmate asking for suggestions. Return to your account to review his or her recommendations.

- **Storing and downloading drafts on the Internet.** For documents that feature sophisticated page designs and complex content, you can also place your drafts at Google Drive, wikispaces.com, or a similar site for downloading only. If you don't open the files, the downloads will be identical to what you or your teammates uploaded.

Internet resources also enable you and your teammates to talk about drafts without being in the same room. If are using Google Drive, for instance, to share the document, you can open the document in one window and a Skype audio or video chat in another.

Guideline 2 | For virtual teams, foster personal relationships and conversational interchanges

As you learned in Chapter 1, some teams, called *virtual teams*, work entirely online. Employers have found that, along with its benefits, this arrangement sometimes reduces employee motivation and produces misunderstandings that slow progress and degrade results. Research suggests three remedies.

- **Include opportunities for social conversation.** When teams meet in person, members chat while waiting for the session to begin, during breaks, and when walking to or from the room. The personal relationships they develop motivate them to help one another by contributing to the team effort.
- **Encourage team members to be especially attuned to others' responses.** When meeting in person, you can often tell whether someone is puzzled, irritated, or reluctant to speak up by reading the persons' facial expressions, body language, and other behaviors. These same signals are not easy to detect in virtual meetings. The best solution? Ask frequently for each person's thoughts.
- **Be especially alert to cultural differences.** The Internet can magnify people's impressions of others' communication styles, increasing the chances that team members from cultures with different communication customs will make negative judgments about one another. Does one team member seem to you to be overly aggressive? Perhaps the person is from a culture accustomed to exploring ideas through competitive debate. Does a team member seem to lack the conviction of points he or she seems to be making? Maybe the person is from a culture where people usually make suggestions indirectly.

LEARNING TEAM SKILLS THROUGH FEEDBACK

As Chapter 1 explained, feedback from your instructor, fellow students, and others is a powerful resource as you seek to extend your communication abilities. Feedback from other team members can be especially helpful. They are able to see you in action in ways your instructor cannot. Figure 19.2 shows a feedback form that you and your teammates may complete for one another. You'll learn most if your ratings and explanations are candid rather than flattering. Also, try using the form to evaluate your own performance.

FIGURE 19.2

Collaboration Feedback Form

For a copy of this form that you can download, go to your English CourseMate at www.cengagebrain.com.

COLLABORATION FEEDBACK FORM

Team Member ______________________________ Date______________

	Poor			Excellent
Helps the team develop a shared understanding of its goals an procedures				
• Helps team members create a shared understanding of the project's objectives	1	2	3	4
• Helps the team develop and share a detailed plan for the finished communication	1	2	3	4
• Helps the team make a project schedule	1	2	3	4
• Helps team members establish shared responsibility for productivity and cohesion	1	2	3	4
Explanation of ratings:				
Helps the team have productive meetings				
• Helps the team conduct efficient meetings by helping it set and follow agendas, maintain focus, bring discussion to a close, sum up, and set goals for the next meeting	1	2	3	4
• Encourages discussion, debate, and diversity of ideas by helping all team members feel welcome and appreciated, listening actively, encouraging expression of ideas that differ from his or her own, and discussing drafts diplomatically	1	2	3	4
• Helps the team work across cultural differences by helping other members express their concerns, understanding and responding to others' feelings, showing sensitivity to others' style of interacting	1	2	3	4
Explanation of ratings:				
Helps the team use technology to its advantage				
• Helps team choose the technology that best supports its project	1	2	3	4
• If the team is virtual, fosters personal relationships and conversational interchanges	1	2	3	4
Explanation of ratings:				
Fulfills personal responsibilities				
• Completes assignments on time	1	2	3	4
• Completes assignments thoroughly	1	2	3	4
• Meets deadlines	1	2	3	4
• Produces high-quality work	1	2	3	4
• Takes initiative	1	2	3	4
• Offers ideas and suggestions	1	2	3	4
Explanation of ratings:				

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

APPLY YOUR EXPERTISE

1. Write a memo to your instructor in which you describe difficulties encountered by a team on which you have worked. Describe strategies presented in this chapter that you employed in an attempt to address these problems. Also reflect on things that you could have done differently that might have overcome the problems.
2. Write a memo to your instructor describing the style and strategies you have brought to team projects in the past. First, identify the strengths of your approach, referring to specific advice given in this chapter. Second, pinpoint ways in which you can achieve an even higher level of effectiveness.
3. If you are working on a team project in your technical communication course or another class, write a memo to your teammates suggesting three ways the team could improve its productivity. Persuasively explain the reasons for each suggestion.

EXPLORE ONLINE

1. Compare two services that enable teams to post a single draft that all team members access to add comments and revise. If you will be working on a team project in your technical communication course or another class, which one would be most helpful to your team? Why?
2. Services like Google Drive are considered to be examples of "cloud computing." Using a search engine for your research, develop a brief definition of cloud computing and explain to other students how it is affecting or might affect professionals in your field of study.
3. Find and describe a college course in which students at different schools (possibly in different countries) collaborated on one or more course projects.

COLLABORATE WITH YOUR CLASSMATES

1. If you are currently involved in a team project, fill out the Collaboration Feedback Form shown in Figure 19.2 for each of the other team members.
2. If you are about to begin a group project, write a memo to your instructor detailing the plans you have made in accordance with the advice given in Guidelines 3 and 4 on pages 397–399.

APPLY YOUR ETHICS

Various team members may bring different talents, commitments, and values to collaborative projects. What are your ethical obligations if one team member doesn't contribute, persistently completes work late, or resists compromise? What if one member is plagiarizing? Who are the stakeholders in these cases? What are your options? What is an ethical course of action? What are your obligations if members of your team ask you to contribute more, or in a manner that others consider more productive? Would any of your responses be different if the project were assigned at work rather than in school? Present your results in the way your instructor requests.

20 | Creating and Delivering Listener-Centered Oral Presentations

Throughout your career, you will make many oral presentations. Sometimes you will speak to people you work with every day, sometimes to groups you haven't met previously, such as prospective clients, members of professional organizations in your field, or the general public. On occasion your audience will be small, only one or two people. At other times, it will be large, perhaps even hundreds.

Your ability to make effective presentations under these varying circumstances can help you advance in your career. It can also help you obtain your first job after college. In response to a survey of 400 U.S. companies that employ over two million people, 94 percent said that the ability to make oral presentations is "very important" when hiring college graduates (Conference Board, 2006).

Regardless of all other variables, the audiences for the presentations you make on the job will almost always want the same thing that workplace readers will desire from your writing: information they can *use*. They will want help from you in performing a practical task, making a decision, or otherwise advancing their own work. Even the most overtly persuasive presentations, such as sales pitches to prospective customers or clients, involve practical decisions when viewed from the listener's perspective: Should they buy this product or service from your company or from a competitor?

WEB To read additional information, see more examples, and access links related to this chapter's guidelines, go to your English CourseMate at *www.cengagebrain.com.*

To prepare and deliver presentations that satisfy your listeners' needs, you must polish speaking skills you already posses as well as develop some new ones. This chapter describes practical, listener-centered strategies for preparing and delivering presentations that parallel the reader-centered strategies for writing described in the rest of the book. As you read this advice and listen to your instructor's teaching and feedback, focus on developing your ability to do the following:

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Define your presentation's objectives in a *listener-centered* way.
2. Select the oral and visual media most likely to achieve your objectives with your listeners.
3. Help your listeners fully understand and remember your main points.
4. Maintain your listeners' attention and goodwill.
5. Create and deliver effective team presentations.

HOW TO DEFINE YOUR PRESENTATION'S OBJECTIVES

Begin work on an oral presentation the same way you begin work on a written one—by defining its objectives. This means determining what will make your presentation usable and persuasive for your readers.

Guideline 1 | Determine who your listeners are, what task they want to perform, what they need, and what they expect

Most of what you need to know about your listeners is the same as what you need to know about the readers of your written communications. Who, exactly, are they? What task will your presentation help them perform? Make a decision? Perform a procedure? Apply the knowledge you supply to their own work?

Next, identify the facts, suggestions, and recommendations that your listeners need in order to complete their work. Find out also how much they already know about your topic. Consider, too, their professional roles. Managers, engineers, and customers may all need different information on the same subject. This information about your audience helps you see what to include in your presentation and how to present it.

To review additional information about defining your communication's objectives, see Chapter 3.

In addition, find out how long your audience thinks your presentation should be. Even when you aren't given a time limit, your listeners are likely to have firm expectations about how much time you should take. Don't ruin an otherwise successful presentation by running overtime.

Although their audiences, topics, and goals vary considerably, oral presentations are everyday occurrences in many careers.

© Illene MacDonald/Photo Edit

© iStockphoto.com/sjenner13

© Andresr/Shutterstock.com

Guideline 2 | Define your persuasive goals

In addition to identifying your listeners' goals, define your own. Determine how you want to influence listeners' attitudes toward your topic, an activity that requires you to determine what their current attitudes are and to define what you want them to be after your presentation. Are your listeners prospective clients or customers who view you as an expert who can help them solve a problem they face? Do they see you as an adversary, for example, as the representative of a company that has created an environmental hazard in their community? Answers to such questions help you identify the kinds of information and ideas most likely to lead your listeners to make the decision or adopt the attitude you desire.

HOW TO SELECT THE ORAL AND VISUAL MEDIA MOST LIKELY TO ACHIEVE YOUR OBJECTIVES

When planning your presentations, you might think of yourself as having a toolbox of oral and visual media. Your success at making presentations will depend partly on your ability to pick the right tools—the most effective type of oral and visual media—for each situation.

Guideline 1 | Choose the type of oral delivery by considering your audience and purpose

At work, people generally use three forms of oral delivery: scripted talks, outlined talks, and impromptu talks. The choice among them depends largely on the kind of information you are presenting and the type of relationship you wish to establish with your listeners.

Scripted Talk

A scripted talk is a speech that you write out word for word in advance and deliver by reading the script or by reciting it from memory.

Scripted talks offer security, but can be rigid.

Scripted talks are ideal for presenting complex or sensitive information where a small slip in phrasing could cause confusion, embarrassment, or harm. They can also help you keep within your time limit.

On the negative side, scripted talks take a long time to prepare, and they can be difficult to adjust if, while you are speaking, you see that your audience wants something different from what you have written. Equally important, they are difficult to compose and deliver in a natural speaking style that helps to establish a personal relationship with your audience.

Outlined Talk

To prepare an outlined talk, you do what the name implies: Prepare an outline—perhaps very detailed—of what you plan to say.

Outlined talks offer flexibility within a general framework.

Outlined talks are easy to deliver in a "speaking voice," which helps increase listener interest and appeal. They are also very flexible. In response to your listeners' reactions, you can speed up, slow down, eliminate material, or add something that you discover is needed. Outlined talks are ideal for presentations on familiar topics to small groups, as in a meeting with co-workers in your department.

The chief weakness of the outlined talk is the same as its major strength, its flexibility. Unskilled speakers can easily run over their time limit, leave out crucial information, or have difficulty finding the phrasing that will make their meaning clear.

Impromptu Talk

An impromptu talk is one you give on the spur of the moment with little or no preparation. At most, you might jot down a few notes beforehand about the points you want to cover.

The impromptu talk is well suited to situations in which you are speaking on a subject so familiar that you can express yourself clearly and forcefully with little or no forethought.

Impromptu talks are ideal for topics you know well.

The chief disadvantage of the impromptu talk is that you prepare so little that you risk treating your subject in a disorganized, unclear, or incomplete manner. For these reasons, the impromptu talks given at work are usually short, and they are usually used in informal meetings where listeners can interrupt to ask for additional information and clarification.

Guideline 2 | Choose your visual medium by considering your audience, topic, and purpose

In school, you are probably most familiar with using PowerPoint or other presentation software for the visual component of presentations. At work, you will have a wider variety of media to select from, including handouts and whiteboards.

Presentation Software

Software programs such a PowerPoint and Prezi enable you to create attractive, polished slides with text, photographs, tables, movies, drawings, and many other kinds of content. Used skillfully and in the right circumstances, slides can help an audience readily grasp your meaning and appreciate the significance of your statements. The Writer's Tutorial on pages 414–416 explains how to use many of PowerPoint's most useful features.

However, presentation slides are not suited for every situation and every audience. Some people and organizations complain PowerPoint and similar programs induce speakers to oversimplify complex problems into bullet lists or to provide more information than their listeners can digest. Also heavily criticized is the unskillful use of presentation software by people who, for instance, read their slides to the audience or use annoying transitions between slides. Of course, the central question when you are *planning* a presentation is whether software is the best choice for that occasion. When it is, advice given later in this chapter will enable you to use it effectively.

TRY THIS Learn some of the criticisms of PowerPoint by searching for "Death by PowerPoint" on the Web or YouTube.

Handouts

When you are discussing a complex topic for which you will want your readers to examine a large table, detailed drawing, or other graphic requiring close study, handouts can be the ideal medium. Handouts also give listeners something to take away from your presentation, something they can refer to later. For this reason, speakers sometimes distribute printed copies of their presentation slides.

CREATING A LISTENER-CENTERED PRESENTATION

MAKE YOUR PRESENTATION

Follow this tutorial by typing your own text rather than the text shown in the sample slides. This tutorial was created for Microsoft PowerPoint 2011. If you are using another program, you may need to use its online help for assistance.

Define Your Objectives

- Who are your listeners?
- What are their characteristics?
- What are your communication's usability and persuasive goals? (See Chapter 3.)
- How long should your presentation be?

Plan

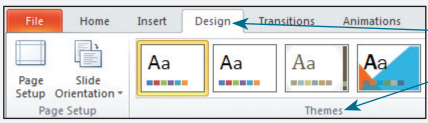
Introduction	1 minute
Problem	2 minutes
Method	2 minutes
Results	3 minutes
Discussion	4 minutes
Recommendation	2 minutes
Conclusion	1 minute

- Pick three or four main points.
- Pick your graphics.
- Plan a reader-centered introduction and conclusion.
- Assign a time to each part of your presentation.

Tip

Assign the least time to your introduction and conclusion.

Draft



© 2012 Microsoft

Choose a "theme" or visual style.

1. Open a new PowerPoint file.
2. Click on the **Design** tab.
3. Roll the cursor over the options in the **Themes** area, watching the demonstrations in your slide.
4. To see more options, click on the arrows to the right of the samples.
5. Click on the design you've chosen.

Tip

Choose a simple design. At work, fancy designs can distract readers and may seem inappropriate for a business setting.

Learn More at the Website

To learn advanced features of PowerPoint, go to Chapter 20 in your English CourseMate, accessed through www.cengagebrain.com.

Create a Title Slide

1. In the top rectangle, type a short, informative title.
2. In the bottom rectangle, type a subtitle.

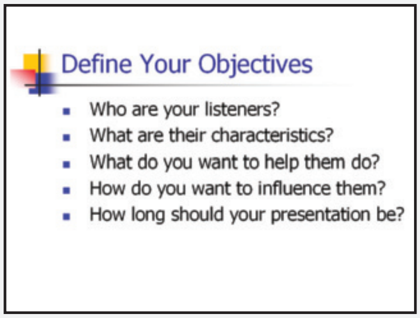
Tip
Use the subtitle to explain the topic's relevance to your listeners or to identify your approach to the topic.

© 2012 Microsoft

Create a Bullet Slide

1. Click on the **Home** tab.
2. Click on **New Slide**.
3. Type the slide's title in the space provided.
4. In the box marked "Click to add text," type your first bullet item.
5. To create another bullet item, press **Enter**.
   - Stick to six or fewer bullet items per slide.
   - Use parallel constructions (see page 194).
6. To use bold, color, and other choices for the text, use the options under the **Home** tab.

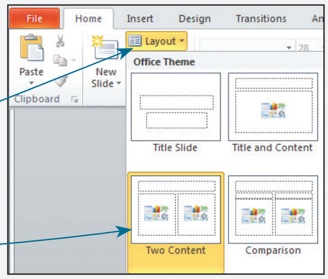
Tip
Write slides that present an outline, not a script. Your listeners will not want you to read your PowerPoint slides to them.



© 2012 Microsoft

Choose a Special Layout

1. Click on the **Home** tab.
2. Next to the **New Slide** icon, click on the small Layout icon (top icon).
3. Click on a layout appropriate for your needs. (For this example, choose Two Content.)

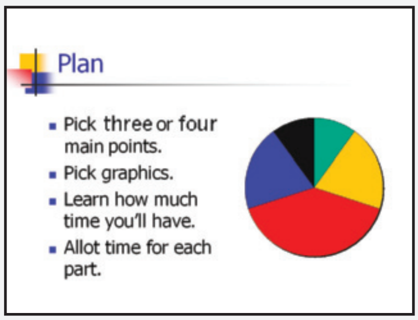


© 2012 Microsoft

Insert a Graphic

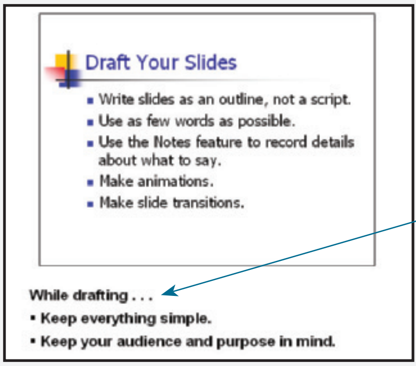
1. In the left-hand area, type your text.
2. In the right-hand area, click on the icon for **Chart**.
3. Click on the image of the type of graphic you want to insert. (For this example, choose **Pie**.)
4. Replace the data in the spreadsheet that appears with your data.
5. Close the spreadsheet.

(continued)



© 2012 Microsoft

CREATING A LISTENER-CENTERED PRESENTATION



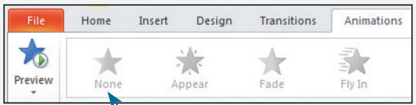
© 2012 Microsoft

MAKE POWERPOINT NOTES

The notes you create can be printed with your slides or viewed by you (but not your audience) when you give your presentation.

1. Click in the space at the bottom of the PowerPoint window that says, "Click to Add Notes."
2. Type your notes.

Tip: You can increase the size of the notes to make them easier to read when you are giving your presentation.



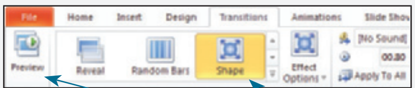
© 2012 Microsoft

CREATE ANIMATIONS

Animations define the ways items on a slide come into view and exit.

1. Click on the **Animations** tab.
2. Highlight the items you want to animate, such as a bullet list.
3. Watch the demonstrations as you roll over the choices in the ribbon.
4. Click on the animation you want.

Tip: Animations can slow your presentation and distract listeners. Use them only where they serve a purpose.

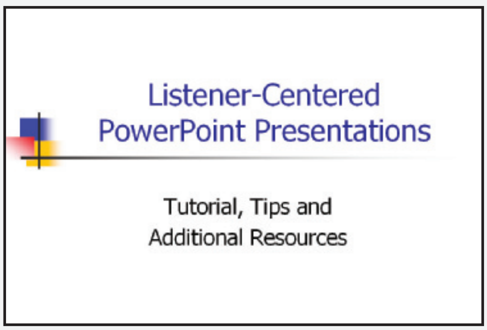


© 2012 Microsoft

CREATE TRANSITIONS

A transition is the visual effect as you switch from slide to slide.

1. Click on the slide for which you want a special transition.
2. Click on the **Transitions** tab.
3. Click on each choice to see a demonstration.
4. Click on the transition you choose.
5. To use the transition for all slides, click on **Apply to All**.



© 2012 Microsoft

REVISE

1. Rehearse by yourself.
   - Time your presentation.
   - Practice making your points without reading slides to your listeners.
2. Rehearse with reviewers.
3. Based on what you learn, polish your presentation.

Also, your listeners can make their own notes on your handout, increasing its value to them.

However, handouts can distract your audience from what you are saying, perhaps causing them to miss the crucial points on which you want them to focus.

Whiteboards

Using a whiteboard, you can create graphics while you are speaking, enabling you to find out during your interaction with your listeners what graphics will be most helpful and persuasive for them. Whiteboards are very effective when you want to lead your audience through a process. You can add elements to your graphic as you move from one step or stage to the next. In some fields, such as computer science and software engineering, team members gather daily to discuss progress and issues. The ability to quickly sketch a concept, solution, or design while making an impromptu presentation is highly valued.

A disadvantage of whiteboards is that while you are writing on them, your listeners may lose focus or become impatient. Also, whiteboards restrict you to using words and line drawings, so you can't take advantage of the other visual representations that can be so effective when discussing certain topics.

In some presentations, you can increase your ability to help and persuade your listeners by using more than one medium. When speaking to a group of managers, a chemical engineer used PowerPoint to display photographs of the crystals grown in an experiment, a whiteboard to explain the process used, and a handout to discuss detailed experimental data.

HOW TO HELP YOUR LISTENERS FULLY UNDERSTAND AND REMEMBER YOUR MAIN POINTS

People find it more difficult to understand what they hear than what they read.

Difficulties listeners face

- Listeners have more difficulty than readers in concentrating for extended periods. People can read for hours at a time, but many listeners have trouble concentrating for more than twenty minutes.
- A talk proceeds at a steady pace, so listeners have no chance to pause to figure out a difficult point.
- If listeners fail to understand a point or let their attention wander, they cannot flip the pages back and reread the passage. The talk goes forward regardless.

The following guidelines describe five strategies you can use to make your most important points easy for listeners to understand and remember. When reading them, focus on learning how to do the following:

- Identify the main points you want to make.
- Plan a presentation's verbal and visual elements to convey these points clearly and memorably.
- Increase your effectiveness when presenting to listeners whose cultural background is different from yours, a common situation in the increasingly diverse and global workplace where you will have your career.

Guideline 1 | Identify the main points you want to make

The fewer major points you make, the more likely that your listeners will remember.

Many experienced speakers limit themselves to three or, at most, four. Of course, major points may have subpoints, but their number should also be limited and they should be linked to the main points in an easy-to-grasp, hierarchical way.

To identify your main points, answer the two central questions of the writer-centered/listener-centered approach to technical communication. Given that your presentation's purpose is to help your listeners perform some practical task, what are the most helpful things you can tell them? And, given that you want to shape your listener's attitudes and actions, what can you say that *they* will find most persuasive?

How might such a presentation look? Imagine that you are recommending ways to solve a problem your employer faces. Your three points might be that you (1) understand the major features of the problem, (2) identified its principal causes, and (3) have developed a strategy for addressing each cause.

Guideline 2 | Create a simple structure built around your major points

The most important step you can take to make your major points stand out is to structure your presentation around them—and to assure that the structure is evident to your listeners. Thus, the **heart** of your presentation on solving a problem for your employer would have three parts, each with appropriate subparts. Part 1, which describes the major features of the problem, would have a subsection for each feature. To describe the major causes of the problem, Part 2 would have a subpart on each major cause. Similarly, Part 3 would have a parallel number of subparts, each describing a strategy targeting each cause.

Note that your subpoints are important elements of your presentation. Their major purpose is to help your readers understand your main points by providing the details and justification that make them useful and persuasive.

The sharply focused core of the presentation would be preceded by an **introduction** that, like the introduction to a written communication, would introduce your topic and explain its relevance to your listeners. In oral presentations, you can also almost always increase your listeners' understanding if you preview the organization of your talk. Depending on your purpose and audience, your introduction may also provide background information and state the overall point or points you want your listeners to take away.

To enhance the memorability of your presentations, end with a **conclusion** that sums up the main points. This strategy elevates the main points above the details of the subpoints that may have taken the largest part of your presentation's time. Where appropriate, you may also indicate the next steps listeners might take to act on the information and ideas you have provided. Always, it is wise to ask for questions. Answering them gives you an additional opportunity to state your main points again.

Guideline 3 | Help your listeners follow the structure of your presentation

Even when you employ a very simple organization, your listeners may need help discerning it. Help them by forecasting the structure in the introduction, signaling transitions clearly, and summarizing the structure (and main points) in the conclusion. The following list describes techniques for guiding your listeners in these ways.

SIGNALING THE STRUCTURE OF ORAL PRESENTATIONS

GENERAL STRATEGIES	TECHNIQUES
Forecast the Structure	• In the introduction, tell what the structure will be: "In the next ten minutes, I will address the following three topics . . . ." • Show a graphic that outlines the major parts of your talk.
Signal Transitions	• Announce transitions explicitly, "Now I would like to turn to my second topic, which is . . . ." • Show a graphic that announces the next topic and, perhaps, lists its subtopics. • Highlight your main points. Your discussion of each main point is a major section of your talk. "I'm going to shift now to the second cause of our problem, a cause that is particularly important to understand." • Pause before beginning the next topic. This pause will signal to your listeners that you have completed one part of your presentation. • Slow your pace and speak more emphatically when announcing your major points, just as you would when shifting to a new topic in conversation. • Move about. If you are speaking in a setting where you can move around, signal a shift from one topic to another by moving from one spot to another.
Review	• In your conclusion, remind listeners explicitly about what you've covered: "In conclusion, I've done three main things during this talk: . . . ."

Guideline 4 | Make easy-to-understand visuals

To contribute fully to a presentation's effectiveness, graphics must be easy to read and understand. These two qualities depend on the way you design your graphics.

Designing Effective Graphics

All of Chapter 17's guidelines for designing pages apply also to the design of graphics for oral presentations. The following list highlights particularly important points from Chapter 17 and adds some that apply specifically when you are addressing an audience in person. Figure 20.1 shows how these guidelines can be applied to slides in a computerized presentation.

FIGURE 20.1

Presentation Slides Made with PowerPoint

Katherine created this presentation for a meeting about possible new projects for her employer, a research company.

Her title slide clearly indicated the topic and focus of her presentation.

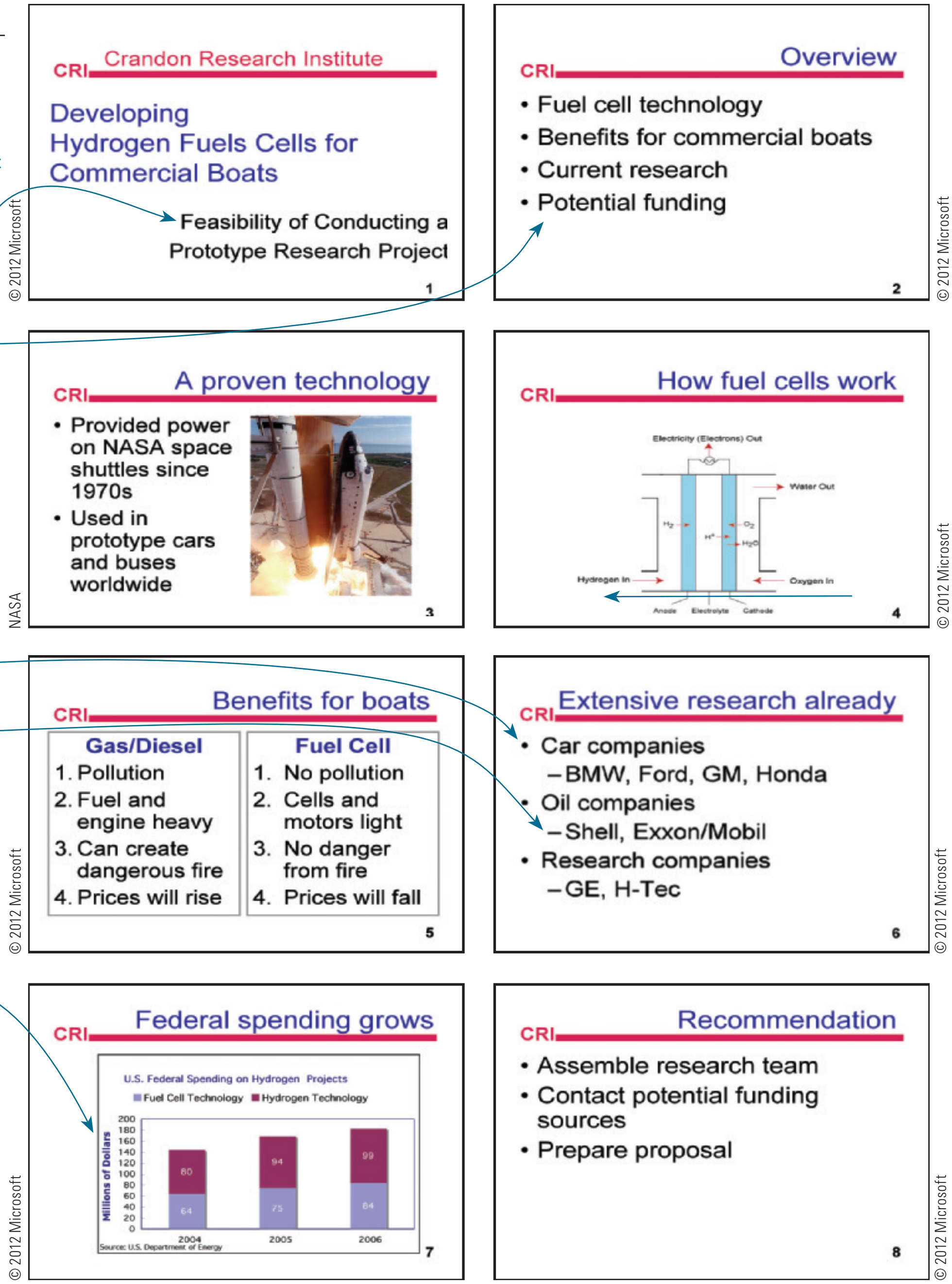
Katherine's second slide provided an overview of what she would say.

Her slides provided only key words or phrases, not her script.

Katherine used large letters and high contrast to make her slides very readable.

She used graphics to highlight major points.

Katherine used a consistent overall design for all her slides while also adding graphics and varying other elements in some slides to maintain visual interest.



DESIGNING GRAPHICS THAT ARE EASY TO READ AND UNDERSTAND

- Use type large enough to be read throughout the room.
- Use an easy-to-read typeface.
- Use a light background and dark letters—or vice versa—for high contrast.
- Use color to highlight key points and focus attention.
- Put text in bullet lists.
- Use key words and phrases rather than whole sentences.
- Avoid overcrowding.
  - Limit each slide to five or fewer bullet items.
  - Break larger topics into several graphics.
  - Leave plenty of white space (blank area) between items and around margins.
  - Keep tables, graphs, and drawings simple.
- Provide a brief title for every graphic.
- Use a consistent design for all your graphics.

So that the verbal and visual elements of your presentation can support one another harmoniously, distill your verbal statements into key words and phrases for the bullet lists in your graphics.

> In this report, I will discuss three major causes of the extinction of animal and bird species in Asia: loss of habitat due to development and the harvesting of natural resources, increasing pollution from automobiles and factories, and poaching.

Statement you will make verbally

> Causes of extinction
> - Loss of habitat
> - Pollution
> - Poaching

Content of the corresponding visual

Like any other element of a communication, graphics should be tested beforehand to make certain they will be as understandable and persuasive as possible. Once you've completed the set, show them to other people, preferably members of your target audience. Do this early enough to allow time to polish them, if that seems advisable, before your presentation.

Displaying Graphics Effectively

During your talk, use your graphics in ways that support and reinforce your presentation rather than detract from it:

- **Display a graphic only when you are talking about it.** If you talk about one thing but display a graphic about something else, each person in your audience must choose whether to listen to your words or read your graphic. Either way, your audience may miss part of your message.
- **Leave each graphic up long enough for your listeners to digest its contents.** Sometimes this pacing will require you to stop speaking while your listeners study your graphic.

TRY THIS Presentation programs such as PowerPoint enable you to make "kiosk" presentations that run continuously on their own on a computer. Try making a presentation that, by itself, informs viewers about something important to you. Play with your program's features, including those that let you add music or record a script.

- **Explain the key points in your graphic.** If you want your readers to notice a particular trend, compare certain figures, or focus on a particular feature in a drawing, say so explicitly.
- **Do not read from your graphics.** Remember: Your visuals should provide key words and concepts on which you elaborate. Your listeners will become very restless if you merely read your graphics.
- **Stand beside projected graphics, not in front of them.** Your listeners can't read what they can't see.

Guideline 5 | Plan the verbal and visual parts of your presentation as a single package

When people read, they can focus on only one item at a time, either your paragraphs or your graphics. In contrast, when people listen to a presentation, they can simultaneously hear your words and look at a graph, table, diagram, or other visual item you show them. If the two are coordinated, they will reinforce another. If not, your listeners will be distracted, greatly reducing the likelihood that they will grasp the main points you want them to take away.

Here are three commonly used relationships between the verbal and visual parts of a presentation.

- The slides can focus on key words, while you speak the full sentences.
- The slides can state key points, while you explain.
- The slides can display a graphic that you discuss.

Storyboards are an excellent tool for planning the verbal and visual together.

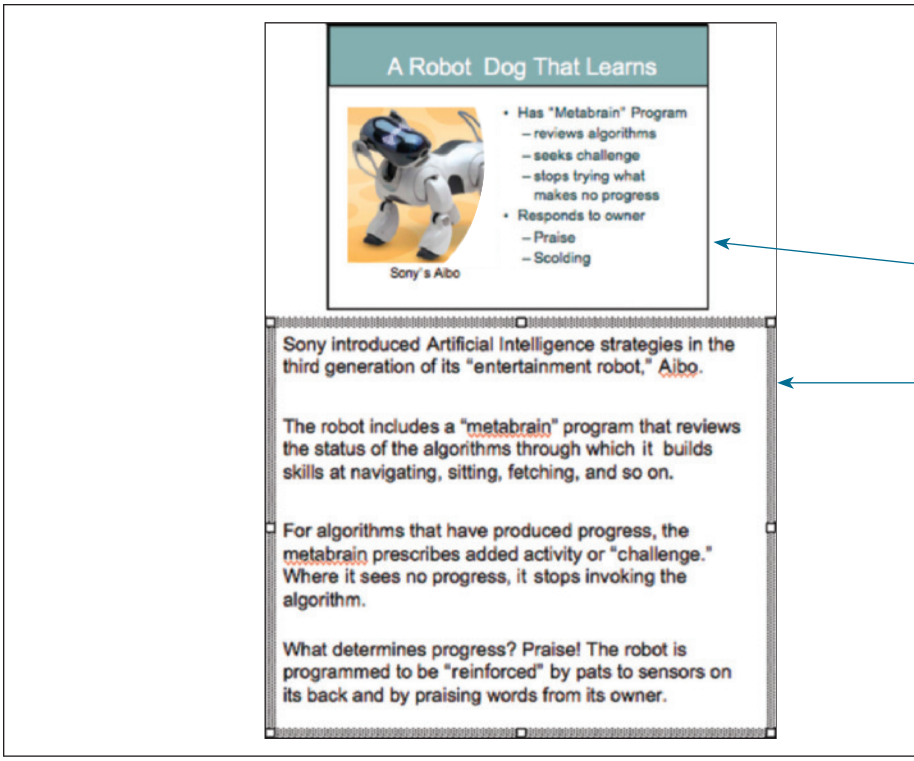
To gain the full advantage of the power of combining the verbal and visual dimensions, plan how you will weave your words and images together. Storyboards provide an excellent tool for this purpose. Devised by people who write movie scripts, storyboards are series of pages that are divided into two parts. One describes (in words or sketches) what moviegoers will see at each moment of the film. The other indicates the words and other sounds they will hear. To create a storyboard for your presentations, divide a sheet of paper down the middle. On one side, write the main points you want to make or the script you will read. On the other side, sketch or describe the graphics you will show simultaneously. Figure 19.1 shows an example (page 397).

You can also make storyboards using presentation software such as PowerPoint. These programs enable you to write notes or a script below each slide. Figure 20.2 shows an example. When you are delivering a presentation, the slide is projected for your audience to see but your computer screen shows your notes as well.

Guideline 6 | Adapt to your listeners' cultural background

An audience's cultural background affects its expectations about an oral presentation in much the same way that it influences readers' expectations about written communications.

- **An audience's expectations may be shaped by several cultures.** These include the culture of their region and the national or ethnic group to which they belong, the culture of their employer's organization, and the culture of their profession, among others.



© 2012 Microsoft

FIGURE 20.2

Creating a Storyboard Using PowerPoint

By pulling down the **View** menu and selecting **Notes Page**, you can prepare storyboards for your presentations.

At the top of the page, one of your slides appears.

At the bottom is an area in which you can write notes or even an entire script associated with the slide.

During a presentation, you can show your notes on your computer screen as an aid to speaking. See page 427.

- **The members of an audience are individuals, not cultural stereotypes.** Although it can be useful to learn about your audience's culture, also find out as much as you can about the specific people you will be addressing.

Several aspects of oral presentations vary from culture to culture. Investigate your audience's expectations about each of them as you plan and prepare your presentation. You may learn that you can create a truly listener-centered presentation only if you do something different from what this chapter's other guidelines suggest.

ADAPTING TO YOUR AUDIENCE'S CULTURAL BACKGROUND

- **Opening.** In some cultures, presentations typically begin with the main point. In others, they begin with formal greetings. In the United States, presentations often begin with an effort to build rapport with an audience—for instance, by telling a joke or personal anecdote. Beginning in a way that differs from what the audience expects can get a talk off to a weak start.
- **Organization.** Different cultures have developed different patterns for organizing presentations. For example, Wolvin and Oakley (1985) report that in China a presentation may have the following structure:

Typical structure of a Chinese talk

KI	An introduction offering an observation of a concrete reality
SHO	A story
TEN	A shift or change in which a new topic is brought into the message

KETSU A gathering of loose ends, a "conclusion"
YO-IN A last point to think about, which does not necessarily relate to the rest of the talk

In this style of Chinese presentation, speakers do not state the main points explicitly nor do they preview the structure of the talk, as is customary in some European countries and the United States.

- **Directness.** As the example of the traditional form of a Chinese presentation suggests, some cultures prefer to make their points indirectly, while others, including the general U.S. culture, prefer to make them explicitly.
- **Tone.** To illustrate the way expectations about tone vary from one culture to another, Carté and Fox (2004) describe the stereotypes that two English-speaking cultures have of each other's presentations. To the British, U.S. presentations seem overly optimistic, boastful, and superficial. To U.S. audiences, British presentations seem gloomy, pessimistic, and preoccupied with problems, not solutions. Both believe that the other's presentations are badly prepared.
- **Eye contact.** Whereas eye contact is highly valued in some cultures such as in the United States, it can seem aggressive and unwelcome in some other cultures.
- **Gestures.** Gestures that have a positive meaning in some cultures can be incomprehensible, rude, or obscene in others.
- **Visuals.** Images of people and gestures that seem natural in one culture can offend audiences in another. Carté and Fox (2004) describe a presentation in which a large European company used an image of a lion tamer and lion to symbolize the way their computer systems would tame potential clients' problems. Although the presentation worked in several countries, it failed in an African country whose symbol was a lion. To this audience, the image suggested a colonial power subduing their state.

When speaking to an audience from another culture, you may also be addressing persons who are not fluent in English. In those situations, the following suggestions should help you succeed.

SPEAKING TO LISTENERS WHO ARE NOT FLUENT IN ENGLISH

- **Use words your audience can understand.** Learning the audience's level of proficiency in English may require research. Many technical and scientific terms are the same in many languages, so that you may be able to use them even when you need to simplify your language in other ways.
- **Use graphics.** Although you should be cautious about graphics, people who don't understand one another's languages can still understand the same drawings, graphs, flowcharts, and other visuals.
- **Provide a handout.** If you are speaking from a script, the script itself is the best handout, along with copies of your key graphics. Otherwise,

create a detailed outline. Consider using full sentences—even in an outline—rather than words or brief phrases. Beyond helping your listeners follow your talk, a handout provides a resource they can study later to understand points they missed.

HOW TO MAINTAIN YOUR LISTENERS' ATTENTION AND GOODWILL

Oral presentations are eminently personal events. You are speaking to and with persons who are right there in front of you. Their responses to your presentation depend substantially on the quality of the relationship you establish with them. The following guidelines describe strategies you can use to maintain your listeners' attention and goodwill throughout your time with them.

Guideline 1 | Speak in a conversational style

For most talks, a conversational style works best. It helps you express yourself clearly and directly, and it helps you build rapport with your listeners. A more abstract, impersonal style can lead you to make convoluted statements that are difficult to understand and leave your listeners feeling that you are talking at them rather than with them. Although people often associate a conversational style with informality, the two are not synonymous. The two keys to a conversational style are (1) speaking directly to your listeners, and (2) expressing yourself in the simple, natural, direct way you do in conversation. Here are suggestions for mastering this style, ones you can use whether you are giving a scripted, outlined, or impromptu talk.

STRATEGIES FOR DEVELOPING A CONVERSATIONAL STYLE

- **Create your talk with your audience "present."** While preparing your talk, imagine that members of your audience are right there listening to the words you are planning to speak.
- **Use the word *you* or *your* in the first sentence.** Thank your listeners for coming to hear you, praise something you know about them (preferably something related to the subject of your talk), state why they asked you to address them, or talk about the particular goals of theirs that you want to help them achieve.
- **Continue using personal pronouns throughout.** Let the use of *you* or *your* in the first sentence establish a pattern of using personal pronouns (*I, we, our, you, your*) throughout.
- **Use shorter, simpler sentences than you might use when writing.**
- **Choose words your listeners will understand immediately.** If your audience stops to figure out the meaning of a word you have used, they will stop listening to the next point you are making.

As you strive to create a conversational style, remember that the way you use your voice can be as important as the words and phrasing you select. Listen to yourself and your friends converse. Your voices are lively and animated. To emphasize points, you change the pace, the rhythm, and the volume of your speech. You draw out words. You pause at key points. Your voice rises and falls in the cadence of natural speech.

Using your voice in the same way during your oral presentations can help you keep your listeners' interest, clarify the connections between ideas, identify the transitions and shifts that reveal the structure of your talk, and distinguish major points from minor ones. It can even enhance your listeners' estimation of your abilities. Researcher George B. Ray (1986) found that listeners are more likely to believe that speakers are competent in their subject matter if the speakers vary the volume of their voices than if the speakers talk in a monotone.

Exhibit enthusiasm for your subject. In conversation, we let people know how we feel as well as what we think. Do the same in your oral presentations, especially when you are advocating ideas, making recommendations, or promoting your employer's products and services. If you express enthusiasm about your topic, you increase the chances that your listeners will share your feelings.

Finally, use gestures. In conversation, you naturally make many movements—pointing to an object, holding out your arms to show the size of something, and so on. Similarly, when making oral presentations, avoid standing stiffly and unnaturally. Use natural gestures to help hold your listeners' attention and to make your meaning and feelings clear.

Guideline 2 | Establish and maintain a personal connection with your audience

In an oral presentation, you can interact in person with your audience, something you can't do through a written communication. By taking advantage of this opportunity, you can ensure that your listeners pay close attention and that you are meeting their needs.

Look At Your Listeners

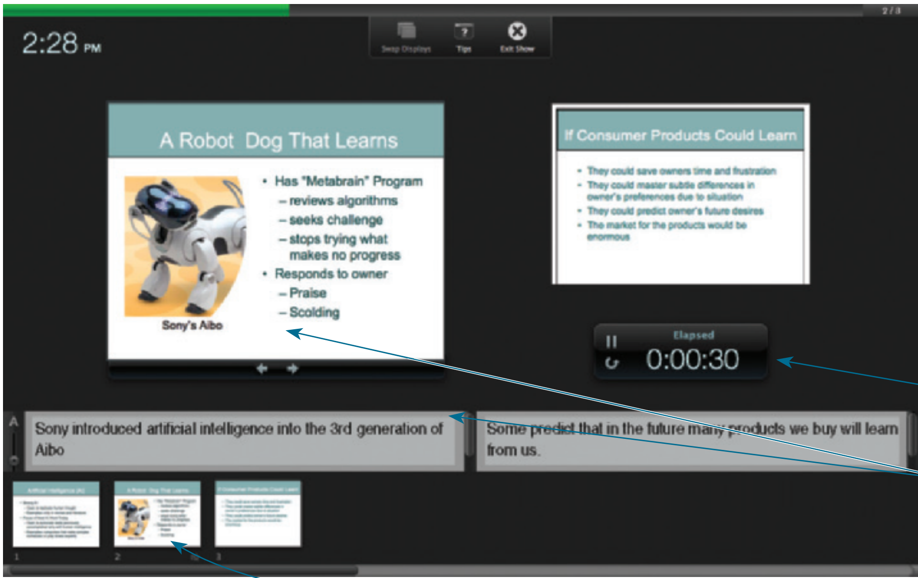
LEARN MORE For more on cultural conventions concerning eye contact, turn to page 405.

In North America and much of Europe, the most basic way to involve listeners in your talk is make them feel that that are in a direct interchange with you—something you can accomplish simply by making eye contact with them. Through eye contact, you convey that you are interested in your listeners as individuals, both personally and professionally.

Benefits of maintaining eye contact with your listeners

Eye contact has the additional benefit of giving your audience a more favorable impression of you. Researcher S. A. Beebe (1974) first demonstrated this effect when he asked two groups of speakers to deliver the same seven-minute talk to various audiences. One group was instructed to look often at their listeners, whereas the other group was told to look rarely. Beebe found that the speakers who looked more often at their listeners were judged to be better informed, more experienced, more honest, and friendlier than those who used less eye contact.

Eye contact also enables you to judge how things are going. You can see the eyes fastened on you with interest, the nods of approval, the smiles of appreciation, or the puzzled looks and the wandering attention. These signals enable you to adjust your talk, if necessary.



© 2012 Microsoft

FIGURE 20.3

Presenter Tools from PowerPoint

This figure shows the Presenter Tools in Microsoft PowerPoint 2010 for Windows. PowerPoint 2011 for Mac has a different layout, but similar content.

By pulling down the View menu and choosing Presenter Tools, you can show a screen like this on your computer during your presentation.

A clock tells how many minutes have passed since you began speaking.

It shows the slide being projected and your notes about it.

At the bottom, it shows the current slide between the one before it and also the next one. You can move to any slide in your presentation by clicking on the thumbnail of it in this row.

There are situations when it is appropriate for you to look briefly away from your listeners. For example, if you are using an outline or script, you may want to refer occasionally to your notes. Just don't rivet your gaze on your papers. Look back at your audience. The same is true if you look at graphics that are behind you, for instance on a chalkboard or a screen for an overhead or data projector.

If you are using a presentation program such as PowerPoint, place your computer screen so that it faces you as you look at your audience. By looking at the screen, you will see the same graphics that your audience sees projected behind you. Also, if your computer supports two monitors (most laptops do), you can use the Presenter View (PC) or Presenter Tools (Mac) to display helpful items on your screen that your audience won't see (Figure 20.3).

If you have difficulty looking at your listeners, try the following strategies.

Masterfile (Royalty Free Div.)

To maintain a connection with your audience when using projected visual aids, face your listeners and look at your slides on your computer screen rather than on the large screen behind you.

STRATEGIES FOR LOOKING AT YOUR LISTENERS

- **Look around at your audience before you start to speak.** This will give you an opportunity to make initial eye contact with your listeners when you aren't also concentrating on what to say.
- **Follow a plan for looking.** For instance, at the beginning of each paragraph of your talk, look at a particular section of your audience—to the right for the first paragraph, to the left for the second, and so on.
- **Target a particular feature of your listeners' faces.** You might look at their eyes, but you could use their foreheads or noses instead. Unless they are very close, they won't notice the difference.
- **When rehearsing, practice looking at your audience.** For instance, develop a rhythm of looking down at your notes, then up at your audience—down, then up. Establishing this rhythm in rehearsal will help you avoid keeping your head down throughout your talk.

- **Avoid skimming over the faces in your audience**. To make someone feel that you are paying attention to him or her, you must focus on an individual. Try setting the goal of looking at a person for four or five seconds—long enough for you to state one sentence or idea.

Ask Your Listeners to Say or Do Something

In some oral presentations, you can ask your audience to contribute information. For example, if you are making a presentation to fellow employees about ways to improve customer satisfaction, you might ask what kinds of complaints they have heard. If your purpose is to train your listeners to perform a procedure, you may be able to ask them to perform the steps as you talk and demonstrate.

Help Your Listeners Take Notes

Note taking is another way in which listeners actively participate in a presentation. You can encourage note taking by distributing an outline at the beginning of your talk. If you are using a program such as PowerPoint, you can print out copies of the slides you will project so that members of your audience can jot notes on them.

Invite Questions

In almost every situation, it is appropriate to invite listeners to ask questions either during your presentation or after it. Guideline 3 provides advice about ways to prepare for and respond to questions.

Give Your Listeners Something to Take Away

You may want to encourage your listeners to continue their interaction with you after your presentation. For instance, your listeners may include people who might become customers or clients of your employer's organization. If so, provide them with something to take away that includes the main points you made or supplemental information, along with your name, phone number, and e-mail address. If you distributed a handout for note taking, that would be perfect.

Guideline 3 | Respond effectively to your audience's comments and questions

Audiences at work often ask questions and make comments. In fact, most of the talks you give there will be followed by discussion periods during which members of your audience will ask you for more information, discuss the implications of your talk, and even argue with you about points you have made. This give-and-take helps explain the popularity of oral presentations at work: They permit speaker and audience to engage in a discussion of matters of common interest.

Part of preparing to deliver a talk is preparing yourself for questions and discussions. In a sense, you do this when you plan the presentation itself, at least if you follow Chapter 4's advice that you begin planning your communication by thinking about the various questions that your readers will want it to answer.

Usually, however, you will not have time in your talk to answer all the questions you expect your listeners to ask. The questions you can't answer in your talk are ones your listeners may raise in a question period. Prepare for them by planning your responses.

When one of your listeners asks a question—even an antagonistic one—remember that you want to maintain good relations with all your listeners. If you are speaking in a large room, be sure that everyone hears the question. Either ask the questioner to speak loudly or repeat the question yourself. If people hear only your answer, they may have no idea what you are talking about. Respond to all questions courteously. Remember that the questions and comments are important to the people who ask them, even if you don't see why. If you don't know how much detail the questioner wants, offer some and then ask the questioner if he or she wants more. If you don't know the answer to a question, say so.

Some speakers ask that questions and comments be held until after they have finished. Others begin by inviting their listeners to interrupt when they have a question. By doing so, they are offering to help listeners understand what is being said and relate it to their own concerns and interests. Sometimes listeners will interrupt without being invited to do so. Such interruptions require special care. Speak to the person immediately. If you are planning to address the matter later in your talk, you may want to ask the questioner to wait for your response. If not, you may want to respond right away. After you do so and resume your talk, be sure to remind your listeners of where you broke off: "Well, now I'll return to my discussion of the second of my three recommendations."

Guideline 4 | Rehearse

All of your other good preparations can go for naught if you are unable to deliver your message in a clear and convincing manner. Whether you are delivering a scripted or outlined talk, consider the following advice.

GUIDELINES FOR REHEARSING

- **Rehearse in front of other people.** They can help you identify weak spots and make suggestions for improvement.
- **Pay special attention to your delivery of the key points.** These are the points where stumbling can cause the greatest problems.
- **Rehearse with your graphics.** You need to practice coordinating your graphics with your talk.
- **Time your rehearsal.** Be sure that you speak at the same pace you will use in your actual presentation so you have an accurate sense of how long your talk will require.

Guideline 5 | Accept your nervousness—and work with it

A final piece of advice about the nervousness you will almost certainly experience as the time approaches for you to deliver your presentation: Accept it. It's natural. Even practiced speakers with decades of experience sometimes feel nervous when they face an audience. If you fret about being nervous, you merely heighten the emotional tension. Keep in mind that your nervousness is not nearly so obvious to your listeners as it is to you. Even if they do notice that you are nervous, they are more likely to be sympathetic than displeased. Furthermore, a certain amount of nervousness can help you. The adrenaline it pumps into your system will make you more alert and more energetic as you speak.

Here are some strategies for reducing your nervousness and controlling the pacing, fidgeting, and other undesirable mannerisms it can foster.

STRATEGIES FOR CONTROLLING NERVOUSNESS

- **Arrive early.** Avoid rushing from a previous activity to your talk. Give yourself plenty of time to set up and look around before you begin.
- **Devote a few minutes before your talk to relaxing.** Take a walk or spend a quiet moment alone.
- **Speak with audience members before your presentation begins.** Doing this enables you to make a personal connection with at least some of your listeners before you begin.
- **Remind yourself that your listeners are there to learn from you, not to judge you.**
- **When it's time to begin, pause before you start your talk.** Look at your audience, say "Hello," and take out your outline or notes as you accustom yourself to standing before your listeners.

HOW TO MAKE EFFECTIVE TEAM PRESENTATIONS

At work, team presentations are as common as team writing. They occur, for example, when a project team reports on its progress or results, when various departments work together on a joint proposal, or when a company is selling a technical product (such as customized software) that requires the participation of employees from several units of the company.

LEARN MORE The guidelines in Chapter 19, "Creating Communications with a Team," are as helpful to teams creating oral presentations as they are to teams creating written communications. Turn to page 394.

Team presentations are so common because it is usually more effective to have several members make a presentation than to have one person speak for all team members. In a team presentation, each topic can be discussed by the person who is most expert in it. Moreover, the use of a variety of speakers can help retain the audience's attention.

The following sections provide advice for creating and delivering effective team presentations.

Guideline 1 | Plan thoroughly as a team

When developing a team presentation, plan as carefully as you would if preparing a team-written document. Devoting a team meeting to making plans can be very helpful. Decide which topic each team member is to discuss, which points are to be made, and how each part fits with the others. Set a time limit for each part so that the total presentation doesn't run too long. Also, decide whether the team is going to ask the audience to hold questions until the end or invite the audience to interrupt the speakers with questions. In either case, provide time for the interchange between the team and its listeners.

Guideline 2 | Maintain overall consistency while allowing for individual differences

In a team-written project, the goal is usually to produce a document with a single voice for the entire document. In team presentations, however, each speaker can speak in his or her own style and voice, provided that the general tone of the presentation is relatively consistent.

Guideline 3 | Make smooth transitions between speakers

To help the audience discern the overall structure of your presentation, switch speakers where there is a major shift in topic. Also, tell your listeners how the two parts of the presentation fit together. For example, the speaker who is finishing might say, "Now, Ursula will explain how we propose to solve the downtime problem I have just identified." Or, the next speaker might then say, "In the next few minutes, I'll outline our three recommendations for dealing with the downtime problem Jefferson has described."

Guideline 4 | Rehearse together

Rehearsals are crucial to the success of your team presentations. You can help one another polish your individual contributions and ensure that all the parts are coordinated in a way that the audience can easily understand. Rehearsal also enables you to see that the entire presentation can be completed in the time allotted. Running overtime is a common and serious problem for groups that have not rehearsed together.

CONCLUSION

Making oral presentations can be among your most challenging—and rewarding—experiences at work. By taking a listener-centered approach that is analogous to the reader-centered approach described elsewhere in this book, and by striving to communicate simply and directly with your audience, you will prepare talks that your listeners will find helpful, informative, interesting, and enjoyable. The Writer's Guide shown in Figure 20.4 will help you succeed in doing so.

FIGURE 20.4

Writer's Guide for Creating and Delivering Oral Presentations

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
CREATING AND DELIVERING ORAL PRESENTATIONS

1. Define your presentation's objectives.

   Who are your listeners?

   What task will your presentation help them perform?

   What do they need from you in order to perform that task?

   How do you want to influence their attitudes and actions?

   What do they expect?

2. Choose the media you will use.

   What type of oral delivery is most likely to achieve your objectives?

   What type or types of visuals are most likely to achieve your objectives?

3. Plan your presentation.

   What three for four points will your listeners find most helpful and persuasive? (Organize the body of your presentation around them.)

   What will you say in your introduction?

   What will you say in your conclusion?

   How will you coordinate the verbal and visual elements of your presentation?

   How will you adapt your presentation to your listeners' culture (if their culture is different than yours)?

   What strategies will you use to maintain your listeners' attention and good will?

4. Rehearse—and time your rehearsal to stay within your time limit.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. Outline a talk based on a written communication that you have prepared or are preparing in one of your classes. The audience for your talk will be the same as for your written communication. The time limit for the talk will be ten minutes. Be sure that your outline indicates the following:
   - The way you will open your talk.
   - The overall structure of your talk.
   - The main points from your written communication that you will emphasize.
   - The graphics you will use.
   - Be ready to explain your outline in class.
2. Imagine that you must prepare a five- to ten-minute talk on some equipment, process, or procedure. Identify your purpose and listeners. Then write a script or an outline for your talk (whichever your instructor assigns). Be sure

to plan what graphics you will use and when you will display each of them.

3. Do one of the Oral Briefing projects in Appendix B.
4. Using PowerPoint or a similar program, prepare a brief set of slides for the talk you will give in one of the preceding exercises.

EXPLORE ONLINE

1. Using a search engine, find an online source for advice about oral presentations. Compare the advice given there with the advice you have found in this chapter.
2. Locate two PowerPoint presentations online that are about a topic of interest to you. View them in html and then download them for viewing on your computer. Which of the two is most effective when viewed in html? Why? Which of the two is most effective when viewed on your computer? Why? Write a memo to your classmates explaining what you've learned about the Internet and about PowerPoint. To find PowerPoint presentations using Google, click on Advanced Search. On the page that opens, enter your topic. From the dropdown menu for Filetype, choose Microsoft PowerPoint.

COLLABORATE WITH YOUR CLASSMATES

At work, you will sometimes be asked to contribute to discussions about ways to make improvements. For this exercise, you and a classmate are to deliver a five-minute impromptu talk describing some improvement that might be made in some organization you are familiar with. Topics you might choose include ways of improving efficiency at a company that employed you for a summer job, ways of improving the operation of some club you belong to, and ways that a campus office can provide better service to students.

Plan your talk together, but divide your content so that you both talk. In your talk, clearly explain the problem and your solution to it. Your instructor will tell you which of the following audiences you should address in your talk:

- Your classmates in their role as students. You must try to persuade them of the need for, and the reasonableness of, your suggested action.
- Your classmates, playing the role of the people who actually have the authority to take the action you are suggesting. You should take one additional minute at the beginning of your talk to describe these people to your classmates.

APPLY YOUR ETHICS

Prepare a brief (three- to five-minute) presentation concerning an ethical issue that you or someone you know has confronted on the job. Describe the situation, identify the stakeholders, tell how the stakeholders would be affected, and tell what was done by you or someone else. If nothing was done, tell why. Be sure to keep within your time limit. According to your instructor's assignment, give your report to the entire class or to two or three other students.

majeczka/Shutterstock.com

21 | Managing Client and Service-Learning Projects

In almost every field, from engineering to medicine and physics to environmental sciences, some companies earn at least some of their income by working under contract for corporate or government organizations. Within many companies, some departments routinely conduct projects at the request of other departments in the same organization who are, in essence, their clients.

To prepare you for the likelihood that you will write for clients in your career, your instructor may ask you to prepare a communication on behalf of a company, agency, or university office. Perhaps you write a procedure manual, improve a website, or study the feasibility of a new venture that is considered. In a variation on this type of assignment, your instructor may ask you to use your talents to assist a nonprofit such as United Way or a volunteer or community organization such as a neighborhood health clinic. Projects of the latter type are often called service-learning projects.

Whatever the details, a client project can be one of the most satisfying assignments of your college years. You get

Client projects give students an opportunity to research practical problems and challenges and then develop effective solutions.

Alexander Raths/Shutterstock.com

Martin Shields/Science Source/Photo Researchers, Inc.

© imageegami/Shutterstock.com

to produce a communication that has real, practical results, work with people who greatly appreciate your assistance, and develop valuable project management skills. This chapter, in conjunction with your instructor's guidance, will help you learn how to produce results you will be proud to deliver and your clients will praise.

OVERALL PROJECT MANAGEMENT STRATEGY

The project management strategies presented in this chapter have two overall goals. The first is to enable you to develop a close, cooperative, productive partnership with your clients. The success of your clients' projects will often depend largely on the quality of the relationship you build with your client. The second goal is to enable you to plan and conduct your work efficiently so that you produce an excellent communication that pleases your client as well as its target readers. Underlying all of this chapter's specific advice are three key principles, which will lead you through the three major stages of work on client and service-learning projects.

WEB For additional information and links related to this chapter's guidelines, go to your English CourseMate, at *www.cengagebrain.com.*

PRINCIPLES OF EFFECTIVE CLIENT PROJECT MANAGEMENT

- **Begin your partnership with your client by reaching a detailed, written understanding of all important aspects of the project.** This agreement should guide your work on the project and prevent later misunderstandings about what each of you will provide to and receive from the other.
- **As your work proceeds, use your reader-centered communication skills to maintain a productive relationship with your client.** Ensure that your client understands how you are proceeding and agrees with you on all major decisions along the way.
- **As you finish, help your client take the next step.** In addition to presenting your completed communication, explain what the client must do to use it as effectively as possible.

Because this chapter covers the entire process of working on a client or service-learning project, your instructor may ask you to read different parts of it at different times as you are working on your project. Whenever you read the chapter, discuss its parts in class, and apply its advice as you work on your project, focus on developing the following abilities.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Establish a detailed, mutual understanding of all important aspects of the project.
2. Maintain a productive relationship with your client throughout your project.
3. Hand off your project in a way that helps your client use your results effectively.

HOW TO ESTABLISH A DETAILED, MUTUAL UNDERSTANDING OF ALL IMPORTANT ASPECTS OF THE PROJECT

Think of your first steps in a client project in the same way you think of the first steps in creating a reader-centered communication: Learn your client's goals and preferences, plan ways you can help the client achieve what the client wants, and then test out your plan by presenting it to your client in a project proposal.

Guideline 1 | Determine what your client wants and why

The best way to learn your client's goals and desires is to ask. If possible, arrange a face-to-face meeting. Bring a list of questions you need to have answered in order to create a "client-centered" plan. In the meeting, however, let your client speak first. Then you may ask any questions from your list that remain unanswered. The Writer's Guide for Defining Your Communication's Objectives (Figure 3.1, page 62) can provide a helpful starting point for your list. Be sure to include questions on the following topics.

LEARN MORE Review Chapter 3 for advice about defining a communication's objectives.

- **Client's organization.** Learn about the organization's products or services, as well as its goals and values. In addition, inquire about the events that led the client to request your assistance. The story of these events can help you understand what the client wants your communication to achieve. It can also reveal a wealth of information about factors you need to consider as you proceed.
- **Readers.** Determine whom the client sees as the target audience. Who will use the communication report, instructions, or website you create?
- **Usefulness and persuasive objectives.** Learn what the client wants the communication to enable the readers to do. How does the client want it to affect the readers' attitudes?
- **Stakeholders.** Learn who, besides the target readers, will be affected by the communication. This information will help you understand the ethical dimensions of the project.
- **Deadlines.** Determine when the client wants you to complete the project. Are there interim deadlines for completing certain parts of it?
- **Preferences and requirements.** Find out what characteristics your client wants the communication to have. Should it be written in a certain style? If it will be printed, is there a page limit?
- **Resources.** Learn which members of the client's staff will answer your questions and when they will be available to you. What hardware, software, or other equipment will the client provide?

By interviewing your client, you gain information needed to develop a detailed, effective project plan.

© Geri Engberg/The Image Works

- **Budget.** If you will be paid or if production expenses are involved, ask how much the client has allocated for the project.

Guideline 2 | Develop your own assessment of the situation

The next step in preparing your proposal is to deepen your understanding of the communication's goals by seeking your own answers to each of the questions you asked your client. When describing projects, clients sometimes forget to mention important facts. Sometimes they don't realize the importance of certain kinds of information that you know to be critical. As you size up the situation, focus on gathering information about the readers, their tasks, and their attitudes. Talk with some of them, if possible, or with other people knowledgeable about them.

Through this process, you may reach some conclusions that differ from your client's. For example, you may reach a different understanding of what the readers want, what will inspire them to change their attitudes in the desired way, and even who the readers will be. Discuss these differences with your client as soon as possible.

Also clarify the scope of the work and the resources you will have. In their initial descriptions, clients sometimes underestimate how much work a project will involve, and thus expect more than can be accomplished with the time and money allotted. You and your client will both benefit from reaching a clear, mutual understanding of what you'll produce and what your client will provide.

Guideline 3 | Define what you will do for your client and how you will do it

After you've developed a full understanding of the project, define what you'll do for your client and explain how you'll produce that result. In the plan, describe in detail each of the following key elements of the project: the **deliverable** (the finished communication you will deliver to your client at the end of the project), the **resources** you'll need from the client to complete the project, and the **schedule** you and your client will follow as you work together.

Your Deliverable

Describe your deliverable in as much detail as you can without prematurely making decisions that are best made as the project unfolds. Here are three major topics to include.

- **Size.** You and your client will both be unhappy with the results of your project if one of you is expecting the final product to be twice the size the other is expecting. Use numbers when describing size rather than adjectives. Instead of saying that the document will be "short," decide whether you are going to deliver 10, 20, or 50 pages. Rather than saying the website you are creating will "provide all the information visitors might desire," say whether it will have approximately 12 screens or 120.

- **Overall content and major features.** Although you should remain open to new ideas and insights as you work on the project, your proposal should describe the general nature of the communication you will deliver. Be careful not to promise more than you can prepare in the time available and (if you are being paid) for the price you are quoting. Don't agree to create features that require you to learn new skills unless you have the time necessary to do so.
- **Technical aspects.** If you are creating an online communication, describe its functionality. Will it be created only for a PC or Mac platform, or for both? If it is a website, which versions of which browsers will it display in? If the communication will be printed, will it be in black and white or full color?

Your Client's Contributions

In addition to describing your deliverable, identify what you will need from your client. In most cases, this will include information as well as access to people who can answer the questions you encounter along the way. Perhaps you'll also need access to certain equipment or facilities or the use of certain software. If you are going to test for usefulness and persuasiveness, you may need your client to provide you with a certain number of persons from the target audience to serve as test users. Certainly you'll need responses to outlines, drafts, and other materials you provide for review. If you are working on a service-learning project, specify the ways the client will help you learn about the organization and community.

Your Schedule

A detailed project schedule will serve you in many ways. It will enable you to determine how many hours, days, and weeks it will take you to complete the project and will assure your client that you have a workable plan. It will also tell your client when to expect drafts, progress reports, and other communications from you. And it will guide your activities, telling you when you need to complete each task in order to complete your deliverable on time.

As the first step in creating your schedule, list all major activities you will perform. Begin with the framework provided in this book: defining objectives (including learning in detail about the communication's readers and purpose), planning (including conducting necessary research), drafting, and revising (including testing for usefulness and persuasiveness, if appropriate). Next, identify the specific tasks you will need to perform as part of each of these major activities. Will your research include interviewing subject matter experts as well as reading additional information? While drafting, will you create charts, drawings, and other graphics from scratch as well as acquire existing ones?

Once you've identified the activities you'll perform, create a detailed schedule. Work backwards from the final deadline, allotting a reasonable proportion of the available time to each activity. Establish milestones, or mini-deadlines, to tell when each task needs to be accomplished so that adequate time remains for the rest of the work to be completed. For instance, indicate the date by which research needs to be done so that you can begin drafting.

In most projects, several tasks can be performed simultaneously. For example, research can be conducted for one section of a website while another section is being built. In these cases, identify the sequence of tasks that determines the quickest time the project can be completed. This is the sequence along which the addition of one hour or day to any task postpones completion of the entire project. It is called the *critical path*. For large projects, you may find it helpful to use project management software such as Microsoft Project.

In your schedule, include your client's deadlines as well as your own.

In your schedule, identify the dates when you and your client will communicate with one another. Include the deadlines for each draft and progress report you will submit. Also schedule interactions at the points where you need to check your results with your client. For example, if your work includes audience analysis, set a time to go over the results to be sure that your client agrees with your analysis. Disagreement here could lead to very different expectations about what you'll produce. Other times to check with your client are after you've created a detailed outline of the communication, after you've completed your usefulness test, and when you have completed an early or partial draft that shows how you will implement your communication strategies.

Finally, be sure your schedule clearly tells when you will need things from your client. Specify not only the dates you will submit drafts or other material, but also the dates you need to hear back from the client. In terms of your ability to complete your project on time, there is a great difference between waiting two days or two weeks for the approval or comments you need before you can proceed to the next task.

LEARN MORE For advice about schedule charts, see page 333.

Guideline 4 | Give your client a written proposal—and ask for a written agreement

A written proposal is an excellent tool for reaching a common understanding with your client as well as a valuable guide to your ongoing work together. It can serve two important purposes.

The two purposes of a proposal

- **To build your client's confidence in your ability to do an excellent job.** A well-written proposal shows the client that you thoroughly understand the client's goals and the process and product needed to achieve these goals. In business situations, where individuals and organizations often compete for work from clients, the persuasive aspects of a proposal can be extremely important. However, establishing the client's confidence in your knowledge and professional approach is also important in the projects you might do in school.
- **To ensure that you and your client reach substantial agreement about the project before you begin work on it.** A well-written proposal provides explicit details about the final product you will deliver to your client, the things your client will provide you, and the schedule and other arrangements for your work together. It provides an excellent opportunity for you and your client to be sure that you both have the same vision of the project. This will spare you both frustration and lost time as the project advances. Also, the proposal can provide a framework that helps both of you plan your time and other commitments. Finally, it can protect you both from the problems that might arise if you had only an oral agreement and later discovered that you recollected some significant aspect of that agreement differently.

Ask for a written response to the proposal. If the client agrees to the proposal as you've written it, then a one-sentence memo will do. If not, then your proposal provides the perfect basis for detailed, specific negotiations. In either event, it provides you—and your client—with an invaluable measure of protection.

LEARN MORE Chapter 25 provides detailed advice for writing proposals.

WEB For additional sample client proposals and links to advice about writing them, go to your English CourseMate at *www.cengagebrain.com.*

When preparing your proposal, be cautious about appearing to promise more than you can deliver. Clearly distinguish what you will definitely provide from what you might be able to provide if there is time and budget allotted. Also, be sure to identify everything you expect your client to provide so your client isn't surprised later by unexpected requests.

Even though the proposal is primarily a formal agreement designed to protect you and your client, remember that its overall goal is to create a cordial, cooperative, mutually satisfying partnership. Be careful to avoid taking on a demanding tone when describing what your client will give you. Write in a cordial, businesslike manner. Convey enthusiasm for working with the client on the project.

Figure 21.1 shows a sample client proposal written by students.

FIGURE 21.1

Client Proposal Written by a Student Team

October 7, 2013

Dr. G. F. Hargis, Curator
Wright Zoology Museum
Crandell University
Iowa City, IA 52240

Dear Dr. Hargis:

The student team opens by continuing to build a positive relationship with their client, Dr. Hargis.

We are very excited about the opportunity to work with you to develop a website for the Wright Zoology Museum. As you know, our work on the site will serve as a project for our technical communications course with Professor Dellapiana.

The students tell what they want Dr. Hargis to do with the letter: determine whether he agrees with what they say.

In this letter, we explain our understanding of your objectives for the site and our proposed strategy for creating it. If you approve of what we say, please send us a memo authorizing us to begin work. If you want to discuss the project further, please contact Tim at T_Banner@Crandell.edu.

Background

The students briefly summarize information they've heard from Dr. Hargis to demonstrate that they've understood him accurately.

We understand that you wish to increase greatly the number of visits the museum receives from elementary school classes in grades three through six. You have recently developed new programs for this purpose. As you've also explained, very few teachers in the region know that the museum exists because it has been used primarily as a resource for students here at the university. Also, you have reported that some teachers who have brought their classes to the museum have been disappointed because its programs have been designed for older students.

Objectives

The students state their understanding of Dr. Hargis's objectives.

Through talking with you, we have established the following objectives for the website.

1. To introduce the museum's programs in a way that encourages teachers to visit.
2. To enable teachers to pick the programs best suited to their classes.
3. To enable teachers to request additional information or arrange a class trip online.

Dr. G. F. Hargis 2 October 7, 2013

We also have these additional objectives.

1. To provide a site that you or your graduate students can easily manage and update.
2. To help you develop a plan for publicizing the site.

Final Product

We propose to achieve these objectives by creating a site that has the following features.

1. An attractive home page that provides easy navigation to the information teachers most want.
2. Detailed information about each of your programs.
3. Lesson plans teachers can use to prepare their students for a visit.
4. Information about arranging visits and the downloadable forms and email links that will enable teachers to make their arrangements online.
5. Photographs, drawings, and other images that make the museum and its programs seem attractive.

We will build the site in Dreamweaver for use on the museum's server. The site will include approximately 60 pages and about 45 images.

Process for Developing the Website

While creating the site, we will focus on five types of activities.

Research. We will study the museum's new programs, interview teachers from your target audience, and visit websites for small scientific museums that offer similar programs for elementary schools. We will learn what types of information teachers will want from the site and what type of presentation they would find usable and persuasive. We will report our research results to you in a memo, asking you to add your own comments and insight.

Planning. We will develop three alternative screen designs for the home page and three designs for the other pages in the site. After you select the elements you like from the alternatives, we will combine them into a final design. We will also develop a site map, which we will submit for your approval.

Building. We will build the site on developmental server space arranged by Professor Dellapiana.

FIGURE 21.1

(*continued*)

By adding two objectives that Dr. Hargis had not mentioned but that will benefit the museum, the students demonstrate their knowledge of web design and emphasize that their goal is to help the museum.

The students begin their description of what they will deliver to Dr. Hargis by describing their proposed site's major features. Each feature addresses one or more of the major goals Dr. Hargis has for the site.

The students provide specific details to prevent the client from expecting more than the students will be able to do.

The students describe their process in ways that establish confidence in their ability to successfully complete the project.

The students highlight the times they will submit their ideas and results to the client for review and approval.

FIGURE 21.1

(*continued*)

By describing the user testing they will perform, the students assure Dr. Hargis that the site they propose will succeed in achieving the museum's objectives.

The schedule identifies key interim deadlines for the student team and the client.

The students use bold type to help Dr. Hargis spot the deadlines for steps the museum will perform.

Dr. G. F. Hargis 3 October 7, 2013

User testing. When planning the site, we will ask selected teachers to respond to paper copies of our alternative designs. Besides asking how well each design appeals to the teachers, we will ask them what they would expect to see if they clicked on the links we plan to include. Through these and similar questions, we will learn how to increase the site's appeal and usability. After we've built the site, we will ask users to test it online. We will send the user test results to you, along with a list of our proposed revisions for your approval.

Technical testing. We will test the site's performance when displayed on a variety of computers using a variety of web browsers.

Schedule

The following schedule is our plan to ensure timely and accurate completion of the project. Significant deadlines for you are in bold.

Activity	Date of Completion
Conduct research	October 14
Deliver report	October 18
Receive your response	**October 21**
Create and test site map	October 21
Create and test screen designs	October 21
Submit alternatives	October 25
Receive your decisions	**October 28**
Build site	October 29–November 26
Show the site to you	November 27
Receive your comments	**November 29**
Revise site in light of your comments	November 29–December 5
Conduct user test online	December 3
Submit user test report	December 9
Receive your response	**December 11**
Test site on several platforms and browsers	December 9
Submit a report to you	December 11
Receive your response	**December 13**
Revise the site	December 13–19
Deliver the final site	December 20

FIGURE 21.1

(*continued*)

Dr. G. F. Hargis 4 October 7, 2013

Qualifications

The students cite specific knowledge and skills they have that are required to create a website that will achieve Dr. Hargis' objectives.

We possess the skills needed to create an effective website for the museum. Sheila, a computer science major, has created several websites using Adobe Dreamweaver, a professional-level design program. Knowledge Tim gained in his marketing minor will help us design a website that will entice teachers to bring their classes to the museum. Using information management skills learned during an internship at the Houston Environmental Office, Vijah will organize our research efforts.

Museum's Contributions

The students detail the things the client must contribute.

To meet all of your deadlines, we will need your assistance. First, we will need you to provide program descriptions and materials, as well as photographs and other images for the site. To help us meet the deadlines above, we will need in three days the responses to the questions we ask you. We will also need to use your digital camera to take pictures needed by the site.

Conclusion

The students conclude with enthusiasm. By saying that they want to "work with" the client, they reinforce the point that they want to be partners with the client.

We are eager to begin working with you on the Wright Museum's website. Please let us know as soon as convenient whether the arrangements we described in this letter are acceptable to you.

Sincerely,

Tim Banner	*Sheila Esterbook*	*Vijah Singe*
Tim Banner	Sheila Esterbook	Vijah Singe
T_Banner@Crandell.edu	E_Esterbook@Crandell.edu	V_Singe@Crandell.edu

HOW TO MAINTAIN A PRODUCTIVE RELATIONSHIP WITH YOUR CLIENT THROUGHOUT YOUR PROJECT

The extent to which clients are pleased with the work you do for them will depend not only on the quality of your work but also the quality of the relationship you maintain with them during that work. The following guidelines explain the two most important strategies for effective client communication as your work on the project advances.

Guideline 1 | Communicate candidly with your client during the project

How often should you communicate with your client while working on a project? Too many contacts can annoy. Too few can frustrate the client and even lead to misunderstandings. Certainly, you should communicate at the times specified in the project schedule, such as times when you committed to providing a progress report or something else for your client to review.

In addition, contact your client promptly when you require some information, need to make a basic decision about how to proceed, or encounter a problem the client should know about. The two most common problems involve a project's schedule and its scope. Schedule problems usually arise because you are taking longer than anticipated to complete some part of the project or because your client is taking longer than you expected to provide needed information or feedback on a draft or other material. Scope problems can arise when either you or the client begins to enlarge the project beyond what you both agreed to in your proposal. Sometimes the size of a project increases in small increments, a situation called *scope creep*. In other situations, an entirely new task is contemplated. The key to completing your project successfully is to bring all problems and significant decisions to your client's attention so that the two of you can determine together how best to address them.

Whenever you communicate with your client, whether at a prearranged time or because a need has arisen, follow these practices.

COMMUNICATING WITH YOUR CLIENT

- **Be candid.** Don't hide or minimize problems. Clients need to know about difficulties so they can work with you to solve them and so that they can make contingency plans, if necessary.
- **Be specific.** The more precisely you describe the progress you've made, the information you need, the problems you've encountered, or the strategy you are recommending, the better you are preparing your client to help you complete the project successfully. Similarly, when submitting materials for review, let your client know the specific issues you'd like comments on—overall strategy? phrasing? color choice?—while also inviting comments on any topic.

- **Communicate constructively.** Even if you are discussing a problem caused by your client, remember that your goal is to prepare a communication that your client approves. You stand the best chance of achieving this goal if you always maintain a positive relationship.
- **Respect your client's time.** If you can do so without delaying your work, collect questions so you can ask many of them at once or incorporate them in a regularly scheduled progress report. Find out when it would be most convenient for you to call. Ask whether your client prefers e-mail or paper mail.

Guideline 2 | Advocate and educate, but defer to your client

As you share your strategies, outlines, drafts, and other materials with your client, you may discover that you and your client disagree about some large or small aspect of the communication you are preparing. These differences may concern content, writing style, page design—any aspect of the communication whatsoever.

If you disagree with your client, explain why.

If this happens, explain to your client the reader-centered reasons for the choices you think best. Using your knowledge of what makes a communication useful and persuasive, educate your client and advocate for your positions.

Remember that the client is always the client.

In the end, however, remember that the communication you are preparing is not your communication but the client's. As communication specialist Tony Marsico (1997) says, "The client may not always be right, but the client is always the client." The only exception is a situation where you believe it would be unethical to proceed. Even in this extreme case, however, you can't force the client to give your version of the communication to the target audience. Your option is to resign from the project.

When educating and advocating, take a strategic approach. Distinguish large matters—those that have the greatest impact on the communication's effectiveness—from small ones. Then focus first on the large issues, postponing discussion of small ones or letting them go entirely. Also, know when to quit. As long as your client is listening, help the client make good decisions. But once the client's decision has been made and you have no new perspectives to offer, stop. If you continue, the time you take from the client and the irritation you cause will only harm your relationship and diminish or completely eliminate your ability to persuade about future issues and to get future work with the client.

HOW TO HAND OFF YOUR PROJECT IN A WAY YOUR CLIENT WILL FIND HELPFUL

When you have completed your deliverable, you are not necessarily finished with the project. In the workplace, almost all client projects are accompanied by a transmittal letter that reviews the assignment, describes important features of the deliverable, and closes in a cordial fashion. In some cases, you can best serve your client by writing a longer transmittal letter or preparing a separate document to provide additional information, advice, and assistance. For example, if you have

LEARN MORE For advice about writing transmittal letters, see page 277.


© James Marshall/The Image Works

At the end of client projects, students often meet with their clients to summarize their results, present their findings, and answer questions.

created a website, you may be able to accompany the site with instructions for updating the content, recommendations for drawing people to the site, and information about sources for future assistance with it. You may also have generated ideas about additional ways the site could be improved in a future project. Your client would also benefit from information about the software you used to create the site and the logic you used in creating it, because this information could help others working on the site in the future. By carefully planning how you will hand off your project, you provide added assistance and gain added praise for your work.

CONCLUSION

When working for a client, you must be a manager as well as a communicator. This chapter's guidelines have focused on the most important strategies for managing both the project and your relations with your client: Reach a written agreement about the project before you begin, work carefully with your client throughout the process, and hand off your deliverable in a helpful way. Figure 21.2 provides a Writer's Guide for Managing Client and Service-Learning Projects.

USE WHAT YOU'VE LEARNED

For additional exercises, go to your English CourseMate at www.cengagebrain.com. *Instructors:* The book's website includes suggestions for teaching the exercises.

EXERCISE YOUR EXPERTISE

1. If your instructor has assigned a client or service-learning project, list the specific questions you will need to ask your client in order to learn about the organization, the communication, and the communication's objectives. Report the results in a memo to your instructor.
2. Draft a project schedule for your project.

EXPLORE ONLINE

If your instructor has assigned a client or service-learning project, use the Internet to learn about the organization's mission and goals and its structure. Based on what you learn, speculate about the style and features you believe the client would want used in the communication you will prepare. Identify other information you believe will enable you to plan successful strategies for establishing a successful partnership with this organization. If you can't find information about this specific organization, study ones that are similar to it. Report the results in a memo to your instructor.

COLLABORATE WITH YOUR CLASSMATES

If you are part of a team that is working on a client or service-learning project, decide how you will assign responsibilities within your team. Consult Chapter 19's guidelines for creating communications with a team as well as this chapter's advice for establishing productive relations with clients. Report your results in a memo to your instructor.

APPLY YOUR ETHICS

As a service-learning project for their course, Celia and Stephen have been working together for the last six weeks to create a new website for a social services agency in their community. At the beginning of the project, they used a thorough proposal to develop mutually agreeable commitments with the director

FIGURE 21.2

Writer's Guide for Managing Client and Service-Learning Projects

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide

MANAGING CLIENT AND SERVICE-LEARNING PROJECTS

Determining What's Needed

1. Learn about your client's organization.
2. Learn the client's perception of the readers, communication objectives, and stakeholders.
3. Learn the client's deadline, requirements for the communication, and budget.
4. Learn what information and other resources the client will provide to you.
5. Develop your own assessment of the situation.

Creating a Project Plan

1. Determine the size, overall content, major features, and technical aspects of your deliverable.
2. Create a project schedule that includes project milestones, dates for meeting with or submitting material to your client, and dates for your client's responses.
3. Include your client's contributions.

Writing a Proposal

1. Be as specific as possible to protect your client and yourself.
2. Ask for a written agreement from your client.

Conducting the Project

1. Monitor your progress continuously by comparing it against your project schedule.
2. Talk with your client about changes to your original agreement.
3. Communicate with your client in ways that are candid, specific, and respectful of your client's time.
4. Advocate for your positions, but ultimately defer to your client when necessary.
5. Hand off your project with a transmittal letter and helpful information and advice.

of the agency. They have worked very hard, and they have had good cooperation from the agency, which has devoted many hours to working with them. However, the project has turned out to be larger than they anticipated, so they have been unable to complete the project by the end of the term. Their instructor understands the circumstances and will allow the work they have completed to serve as their project so that they will be able to finish the course. However, the agency will not have the new website it had counted on launching. For each of the following circumstances, discuss the ethical obligations Celia and Stephen would have to complete the project during the upcoming vacation or during next semester, when they will both have a full load of courses.

- If they were unable to complete the project this term because they promised features they didn't know how to implement.
- If Celia and Stephen's inability to complete the project resulted because the agency director thought they had promised to do a larger site than they thought they had agreed to provide.
- If the delay were caused by the director's wanting very substantial revisions when Celia and Stephen submitted drafts of the site map and sample sections to the director for review.
- If the delay were caused by the director's illness, which delayed the agency's response to drafts.

22 | Creating Reader-Centered Websites

In this chapter, you will learn how to design and construct effective websites, as well as how to help others evaluate and devise strategies for improving their websites.

Many employers in engineering, scientific, and other specialized fields use websites for purposes that differ significantly from the purposes of the entertainment, shopping, and marketing sites with which we are all familiar. For example, some use websites to provide their clients with detailed technical information about their products and services, to share proprietary information among their employees while keeping it hidden from competitors, or to advocate on technical, scientific, or environmental issues. This chapter focuses on the reader-centered approach to creating these specialized sites, although the strategies presented are equally helpful when creating any other kind of website.

HOW TO GAIN THE MOST VALUE FROM THIS CHAPTER

If you've already developed websites in other courses or designed web pages at a social media site, you may be asking, "Do I really need to read this chapter? Don't I already know everything it will say?" On the other hand, if you haven't created anything for the web before, you may be skeptical that one small chapter could enable you to build a website from scratch.

Together with your instructor, this chapter has a lot to teach you in either case. If you are a novice, you will find all the information needed to construct your first website with free, easy-to-use programs already on your computer. In fact, the writer's tutorial on page 450 explains the simple process of making one with Microsoft Word. If you have plenty of web experience, you can skip this information to focus on what matters most: the reader-centered strategies people in engineering, technical, and other specialized fields use to make their websites effective.

The Writer's Tutorial on pages 450–452 gives step-by-step directions for creating a website using Microsoft Word.

As you read the chapter, discuss it in class, and apply its advice as you create a website of your own, focus on developing your abilities to do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Develop reader-centered content for a website.
2. Help your readers quickly and easily find what they are looking for.
3. Design web pages that are easy to read and attractive.
4. Design a website for diverse readers.
5. Follow ethical and legal practices concerning your website's content.

THIS CHAPTER'S EXAMPLE: DIGITAL PORTFOLIO WEBSITES

To help you learn strategies for creating effective websites, this chapter guides you through the process of creating one. The example used is a digital portfolio website, which can help you obtain an internship or job. In a digital portfolio, you can highlight your capabilities in ways that are not possible in a résumé and job application letter—for instance by displaying and discussing projects you have completed. Figure 22.1 shows two pages from one portfolio. However, the reader-centered communication strategies illustrated with this example will be just as useful for any other website your instructor may assign or that you may work with in your career.

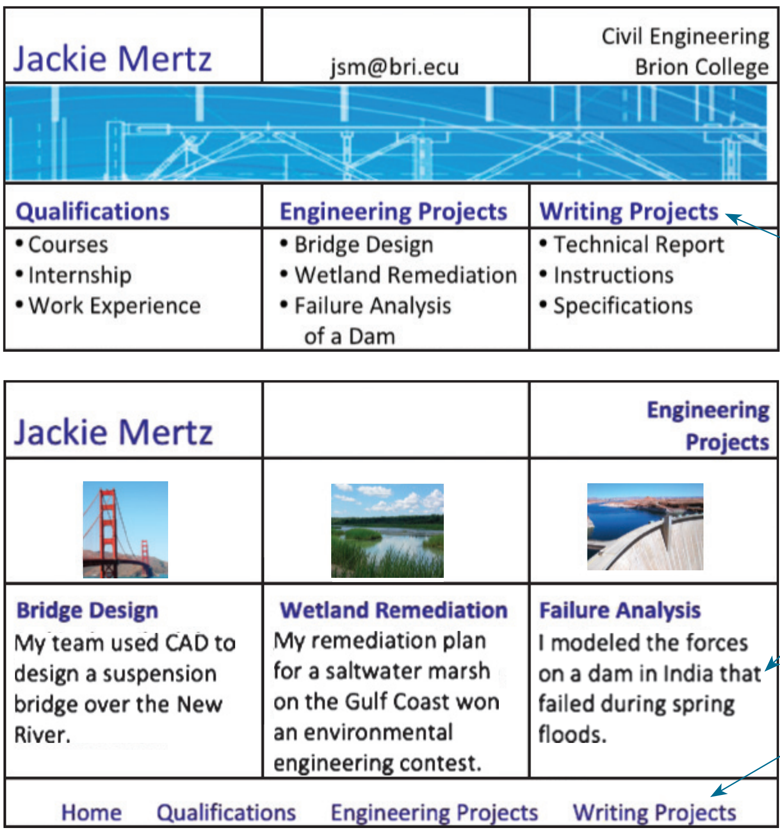


FIGURE 22.1

Digital Portfolio Main Page and Section Page

Jackie includes her name and contact information.

Jackie uses a graphic related to the job she wants.

These headings are links to her project portfolio's major sections.

Jackie uses the same three-column design here as in her main page.

She identifies the subject of this section. The photos are links to her projects.

Jackie briefly describes each project, giving employers background information that will help her impress them with her talents.

These links provide easy navigation throughout the portfolio.

Jackie prepared a similar section page for her writing projects.

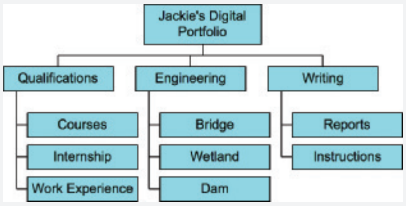
Text, © Cengage Learning; background image, Amgun/Shutterstock.com; left photo, acoi/Shutterstock.com; middle photo, Peter Blottman/Shutterstock.com; right photo, Peter Kunasz/Shutterstock.com

CREATING A WEBSITE USING TABLES

This tutorial shows how to create a website using Word for Windows 2010. If you use a different word processor or get stuck, click on your program's **Help** menu for assistance. To illustrate the process, the tutorial shows how to create a digital portfolio website, but you can create a website on any other topic using these instructions.

Define Your Website's Objectives

1. Pick a topic or use "My Digital Portfolio."
2. Identify your target readers.
3. Define your website's usefulness and persuasive objectives.



© Cengage Learning

Plan Your Website

1. Determine your website's topics and subtopics, each identified by one word.
   - If you are making a digital portfolio, the major topics might identify your areas of expertise.
2. Draw a site map that organizes the topics and subtopics.

Make Your Website Folder

© 2012 Microsoft

1. Make a new folder.
2. Title it "Website," followed by your initials.
   - All files for your website must be saved in this folder.
3. In the folder, put all files that will be displayed at your website.
   - For a digital portfolio, these might be projects you want employers to admire.

Create Your Home Page

1. Open a new Word document.
2. Under the **Insert** tab, click **Table**.
3. In the box that appears, choose 3 columns and 4 rows.
4. From the **File** pulldown menu, choose **Save As**.
5. Navigate to the website folder you created.
6. For **File Name**, type "Index."
   - "Index" is the name browsers look for at websites.
7. From the **Save as type** menu, choose **Web Page**.
8. Click **Save**.

Create One Other Page

1. **Copy** the table from Index.
2. **Open** a new Word document.

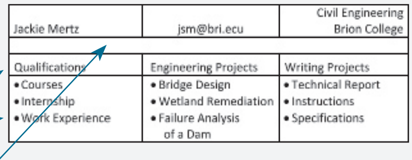
3. **Paste** the table into the new document.
4. **Save** the page as **Page 2** by using Steps 4 to 8 in Create Your Home Page.

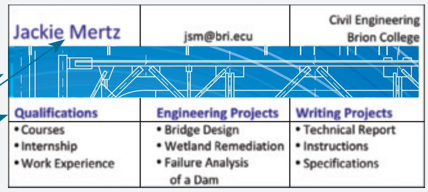
Open Your Home Page for Editing

1. From the **File** menu, choose **Open**.
2. Navigate to "Index.htm."
3. Click **Open**.

Enter Information into Your Home Page

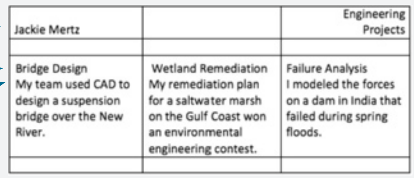
1. In Row 1, enter heading text for your website.
   - For a digital portfolio, you might enter your name, contact information, major, and college.
2. In Row 3, enter the words that identify your website's topics.
3. In Row 4, enter information related to each topic.
   - For a digital portfolio, you might enter your projects' names.
4. In Row 2, highlight all the cells.
5. Under the **Table Tools** tab for **Layout**, click **Merge Cells**.
6. In Row 2, **Insert** a graphic related to your website's subject.
7. Change the color, type size, and alignment of the items to guide the reader's eye and make the page attractive.
8. **Save** your home page.

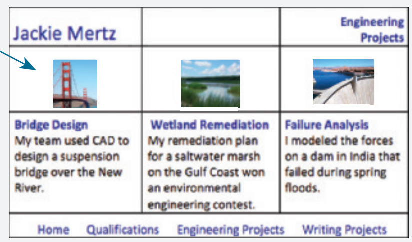




Enter Information into Your Topic Pages

1. In Word, open the second page you created.
2. In Row 1 of the table, enter heading information.
3. In Row 3, enter the titles of your website's topics.
4. In Row 3, you may also enter a description of each topic.
5. In Row 2, enter an appropriate image for each topic.
6. In Row 4, highlight all the cells.
7. Under the **Table Tools** tab for **Layout**, click **Merge Cells**.
8. In Row 4, type "Home" and the names of all your topics.
9. Change the color, type size, and alignment of all items to harmonize with those used in your home page.
10. **Save** the page.



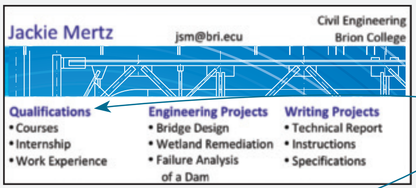


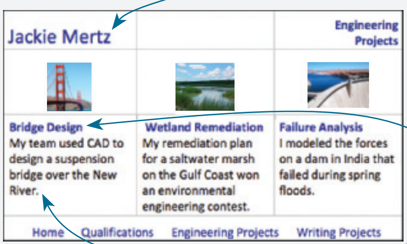
(continued)

CREATING A WEBSITE USING TABLES

11. Make one copy of this page for each of your other topics.
12. Create each topic's page by replacing the appropriate items.

Finish Your Pages





1. On all pages, eliminate the table's grid lines.
   - Highlight the entire table.
   - Under the **Table Tools** tab for **Design**, click **Borders**.
   - In the menu that appears, click **No Border**.
2. Create links among your pages.
   - In the home page's Row 3, highlight the text in one cell.
   - Under the **Insert tab**, click **Hyperlink**.
   - In the window that opens, click on **Existing File or Web Page**.
   - In the **Link to** column, click on **Current Folder**.
   - In the **Look in** column, choose **Current Folder**.
   - Click on the appropriate file.
   - Click **OK**.
   - Repeat for all links on all pages.
3. **Save** each page when you finish.

Test Your Website

1. Open a web browser.
2. From the **File** menu, select **Open File**.
3. Navigate to Index.
4. Click **Open**.
5. Test all links.
6. Ask other people to review your portfolio.
7. Revise.
8. Test all links again after revising.

HOW TO DEVELOP READER-CENTERED CONTENT FOR YOUR WEBSITE

A critically important point to remember about workplace websites is that although the medium is very different from paper and ink, the goals are the same: to help readers perform some task that they want to perform and to influence the readers' attitudes and actions in ways that you desire.

Consequently, the first step in developing reader-centered content for your website is to determine what it needs to tell your readers so they can perform their tasks and what kinds of ideas and information will influence their attitudes and actions in the manner you want. Chapter 3 provides detailed advice about identifying this content. However, two points are worth emphasizing.

LEARN MORE Start by following Chapter 3's guidelines for defining your communication's goals.

First, it's almost as important to eliminate content the reader will find irrelevant as it is to include everything the reader wants.

Second, the fact that you are creating a website does not mean that the web should necessarily be your primary source of information. Books, professional journals, and knowledgeable people you can interview may be much more valuable sources, depending on your website's topic and readers.

LEARN MORE For detailed advice about conducting research, turn to Chapters 6 and 7.

A digital portfolio provides a good example of the way to develop reader-centered content. The portfolio's reader has a specific task to do—namely, to find the right person to fill a specific position. He or she wants your portfolio, along with your résumé and job application letter, to indicate how well your qualifications match the employer's needs. To be *useful* to this reader, your portfolio must highlight your relevant qualifications. To be *persuasive*—to influence the reader to invite you for an interview or give you a job offer—your portfolio must explain convincingly that your qualifications match the employer's needs better than do the other applicants'. Thus, when choosing the projects and accomplishments you will include, pick ones that demonstrate that you possess the knowledge and skills the employer wants.

TRY THIS List the qualifications desired by employers for the kind of job you would like. This list can guide your selection of samples to include in a digital portfolio.

HOW TO HELP YOUR READERS QUICKLY FIND WHAT THEY ARE LOOKING FOR

When people visit workplace websites, they are looking for something in particular. A major way to increase your site's usefulness is to help your readers find what they want quickly, without making guesses that sometimes send them traveling down dead ends. In fact, the travel metaphor is helpful. Think of each piece of information in your website as a destination. To create an effective website, you need to help them reach their destinations rapidly.

Guideline 1 | Organize your website to match your readers' search strategies

As you learned in Chapter 3, there are many logical ways to organize the content of any printed or online communication. For a website, the most useful organization is one that matches your reader's intuitive strategy for finding what he or she wants.

For example, Jackie could have organized her digital portfolio around the courses in which she produced the projects she displayed. Or, she could have organized under headings that indicated when she worked on the projects: First-Year Projects, Second-Year Projects, and so on. However, she wisely organized under headings for Engineering Projects and Writing Projects, knowing that her reader's basic task was to learn whether she had the engineering and communication abilities the employer was looking for. Note, by the way, how organizing around her reader's search strategy help Jackie make her digital portfolio persuasive. The headings for her two major sections make persuasive claims: I have the engineering and communication expertise you are seeking. The sample projects she included became her supporting evidence (see the discussion of effective persuasive arguments on page 109.)

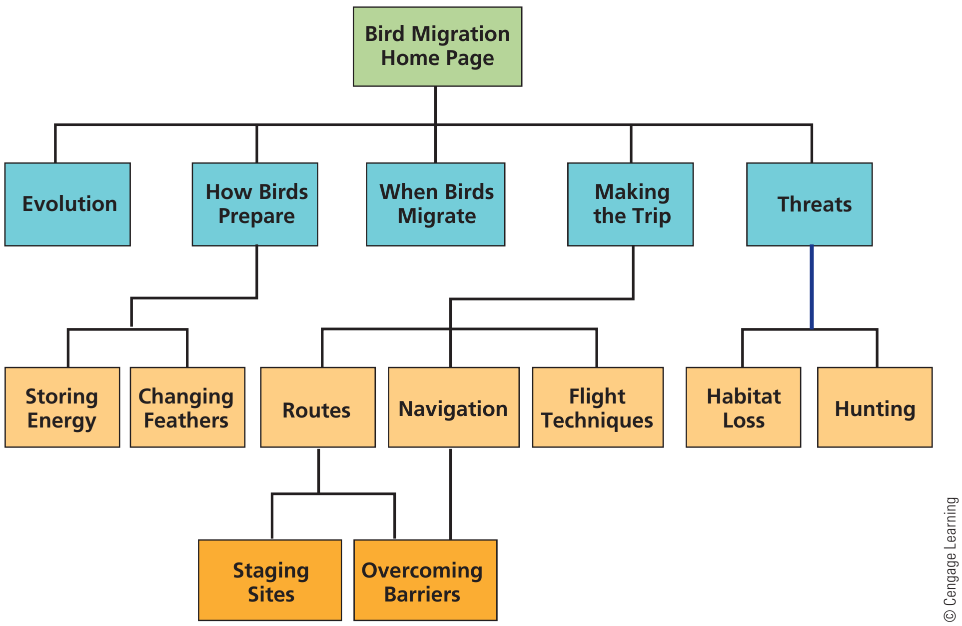
Often, you can use your readers' questions to identify their search strategies. Figure 22.2 shows the structure of a website on bird migration whose creators did that. Imagining that their readers would want know what birds do to prepare to fly hundreds, even thousands, of miles without stopping, the creators organized some of their information under a heading that announces the answer to their question: "How Birds Prepare." Knowing that some readers would be curious about dangers birds encounter during migration, they organized a section whose label, "Threats," clearly says, "Here's your answer."

The more clicks readers must make to travel from a website's home page to the answers or information they want, the less helpful the site's organization is. A goal for many workplace websites is to enable readers to reach their destinations in three or fewer clicks from the home page. Achieving a three-click structure is rarely a problem for small websites. You may even be able to put links to every other page on the home page. However, if you are creating a larger site, count the clicks your readers will need to make. Try to simplify the structure if it will take them more than three.

TRY THIS What would be a good site map for your digital portfolio? Try sketching one based on your list of qualifications desired by employers you would like to work for (see Try This on page 453).

FIGURE 22.2

Website Map with Hierarchical Organization and Intuitive Categories



Guideline 2 | Include a variety of navigational guides in your web pages and website

After you have carefully organized your site in a reader-centered way, you have done half the work needed to help your readers locate the information they want. The other half is to design navigational aids that enable readers to find their way quickly from the home page to their destinations. Using the following strategies, which are illustrated in Figure 22.3, you can help your readers quickly find what they want.

HELPING READERS NAVIGATE YOUR SITE

- **Include the main menu on every page.** Enable your readers to start a new "drill down" from whatever page they are on.
- **On every page, provide a link to the home page.** If the link isn't in your main menu, provide it elsewhere on every page.
- **On each page, provide a menu for the category in which that page is located.** Once readers are in a category, they may want to explore the various types of information you provide in it. A category menu enables them to do so without backtracking to a higher-level page.
- **Place navigational aids in the same location on every page.** Once readers have learned where your navigational aids are, let them use that knowledge throughout the time they spend at your site. Placing navigational aids in the same place on every page also helps you create a visually unified site.
- **Use clear, specific labels for all menu items.** The words you choose make a great difference to your readers. Links are helpful only if readers can accurately predict what they will find if they click on them.
- **Make clear, informative in-text links.** When creating links within your text, signal clearly what your readers will find there.
    - **Highlight only the major words.** If all the words in the following sentence were highlighted, readers wouldn't know whether the link leads to information on whales, the Bering Sea, or krill. Highlighting only krill makes clear what the topic of the link is.

      | When whales reach the northern Bering Sea, they feed on the plentiful krill. |

    - **Supply explanations of the links.** These are especially helpful for links included in a list.

      | International projects—Read about our current projects in Europe and Asia. |

    - **Include a site map.** Many readers use site maps as a navigation shortcut or as an aid to finding information they haven't otherwise been able to locate. See Figure 22.4 for an example. Each word in the lists is a link to a page that has the information named.

Blue type indicates the link.

TRY THIS The Writer's Tutorial places links at the bottom of the section pages (see Figure 22.1). Where else could the links be placed that would be handy and attractive?

FIGURE 22.3

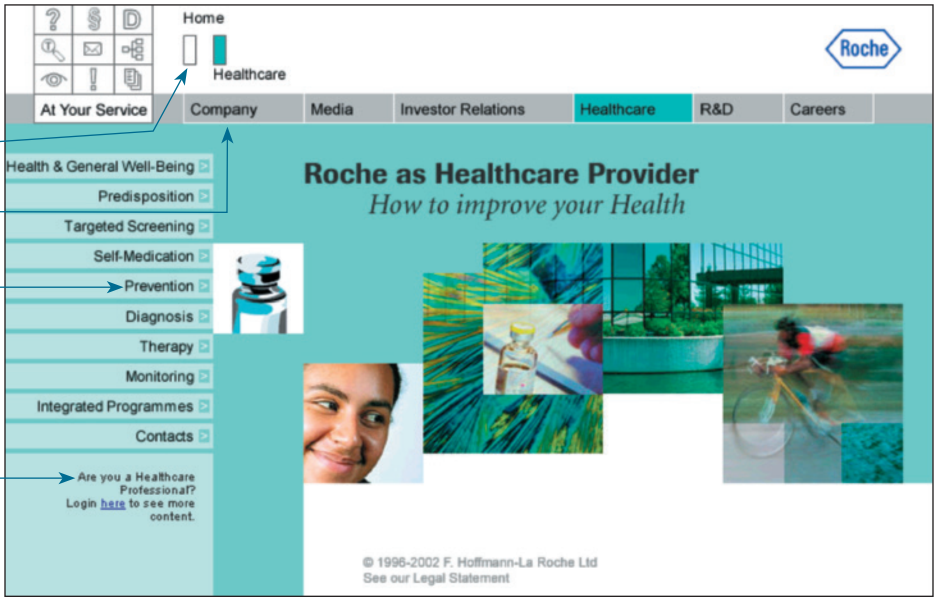
Navigational Aids for Website Readers

A link to the home page is provided on every page.

The main menu is located in same place on all pages.

On each page, a menu for the category is provided.

A link is provided for special groups of readers.



© 2013 Hoffmann-La Roche Inc.

Icons provide part of the main menu. Top row: help, legal statement, Deutsch (German version of the site).

The main menu highlights the category being viewed.

Labels for the menu items tell readers clearly what they will find if they click on the links.

To view another set of navigational aids, see Figure 22.5 on page 459.

© 2013 Hoffmann-La Roche Inc.

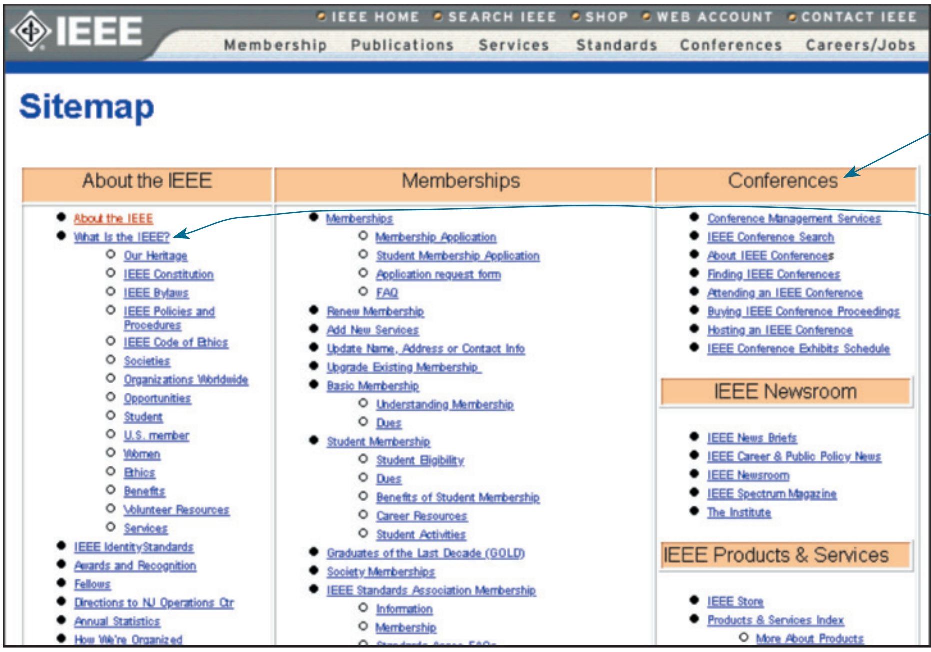


FIGURE 22.4

Site Map

Headings and subheadings show the structure of the site and help readers find specific information.

Links that have been visited are displayed in red.

The menu is longer than shown in this figure. All items in the main menu (top of page) are included, plus others.

To see other ways of designing site maps, go to your English CourseMate at www .cengagebrain.com.

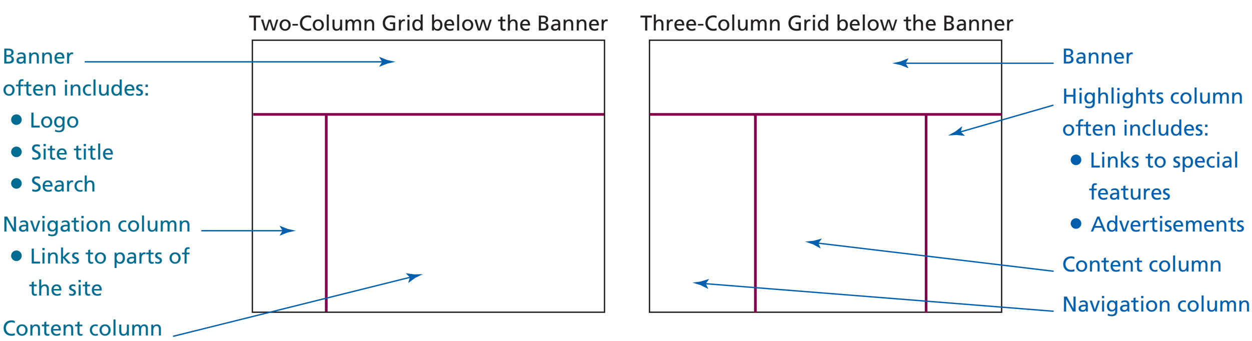
HOW TO DESIGN WEB PAGES THAT ARE EASY TO READ AND ATTRACTIVE

When designing pages for a website, your goals are the same as when designing for print: to create pages that are useful and attractive for your readers.

Guideline 1 | Help your readers immediately understand the organization of your web pages

Web pages typically have a more complex page design than printed ones, making it especially important that you help your readers understand immediately how you have organized your information. As with printed pages, your basic tool is a grid of horizontal and vertical lines that helps you communicate visually the relationships among a page's elements. In fact, almost all web pages are constructed as tables that form grids—quite literally. The most frequently used letter in the source code for most web pages is *t*, for table. Here are two widely used grids for web pages.

LEARN MORE To learn more about grid design, turn to Chapter 16, page 336.



By turning to pages 460–461, you can see how these two patterns form the major structural components of sample websites. These samples also illustrate three very useful strategies you can use to answer visually the readers' most basic question about the organization of your web pages: which elements on the page go together and which don't.

LEARN MORE To learn more about the use of alignment and visual grouping, turn to Chapter 16, "Designing Reader-Centered Pages and Documents," pages 334–357.

- Place related items against the same vertical and horizontal grid lines.
- Use small amounts of white space between related elements and larger amounts of white space to separate unrelated groups of elements. (In websites, "white" space is often colored.)
- Add borders—black or colored lines—to one or more sides of a table cell to define groups of related items and separate them from other groups.

The samples on pages 460–461 also show how you can use contrast to signal the hierarchical relationships among the items on your web pages. By contrasting the appearance of two items or sets of items, you can make the more prominent set appear higher in the page's hierarchy. The techniques for giving greater visual prominence to some items are the same for web pages as for printed ones:

TRY THIS Is the web page design used in the Writer's Tutorial on pages 460–461 the best possible one? Following the advice for this guideline, sketch a different design that works as well or better.

- Use larger type for the more major items.
- Put the larger items farther to the left by indenting less major ones.
- Use bold for the more major items.
- Use a more prominent color for the more major items.

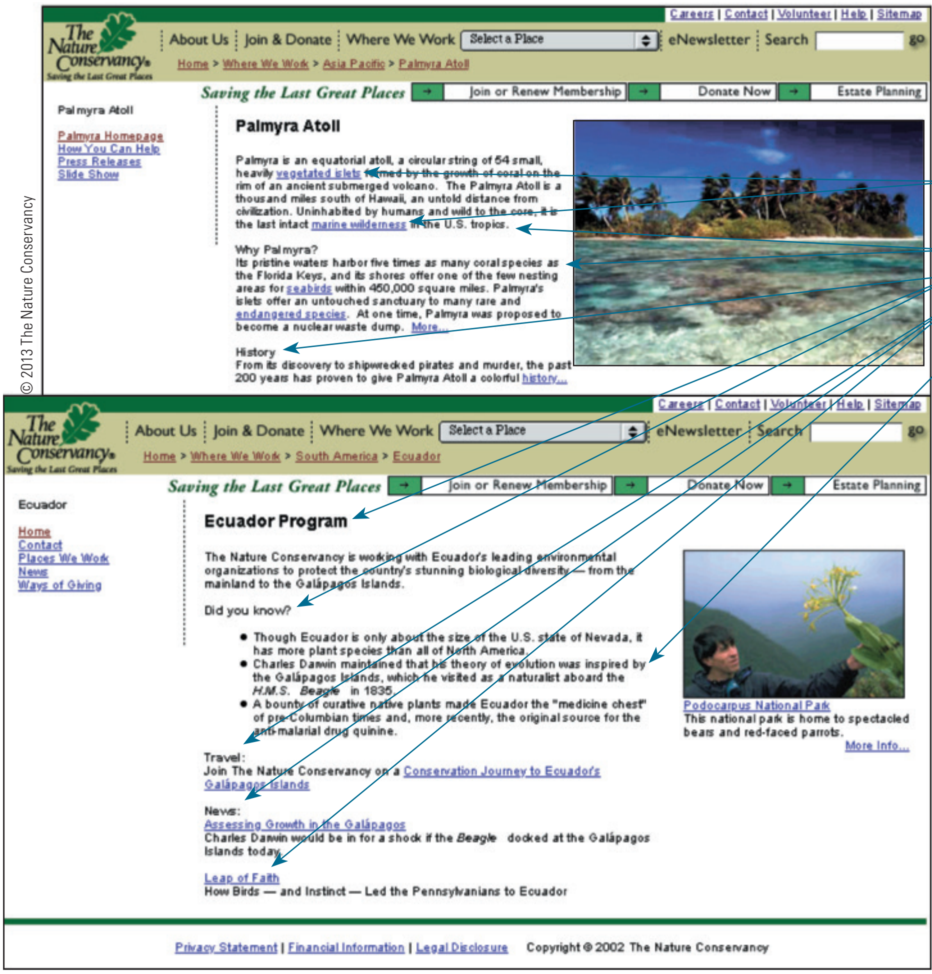
Guideline 2 | Make your text easy to read

A page is useful only if readers can easily read its contents. People find it to be more difficult to read communications displayed on screen rather than on paper. Among other things, the resolution of the text on a computer screen is poor and the mechanics of scrolling make it more difficult for a reader's eyes to keep their place in a text. The following strategies will help you address the special challenges of creating legible web pages. Figure 22.5 highlights the use of these strategies on effective web pages.

MAKING WEB PAGES EASY TO READ

- **Use typefaces that are easy to read on screen.**
- **Make sure your text is legible.**
  - **Use dark letters against a light background (or vice versa) to produce a strong contrast between the two.** White is always a good choice for the background.
  - **Use large enough text for legibility.** Test your type sizes to be sure they will be easy to read by people who set a high screen resolution, which makes text smaller.
  - **Avoid intricate backgrounds that make it difficult to pick out the letters of the text.**
  - **Avoid italics.** These ornate letters can be very difficult to read on screen.

- **Present your information in small, visually distinct chunks.**
  - **Keep paragraphs short.** Break longer paragraphs into smaller ones.
  - **Use white space (blank lines) to separate paragraphs and other blocks of text,** keeping in mind that the "white space" on a web page may actually be any background color. Some sources recommend that only about 30 percent of the page be text.
  - **Edit your text for conciseness.** The fewer words, the better.
  - **Use plenty of headings.** They not only help readers locate information, but also break the screen into meaningful chunks.
- **Limit scrolling (it greatly increases the reading difficulty).**
  - **Avoid vertical scrolling** except on pages where users will be looking for in-depth information.
  - **Avoid horizontal scrolling altogether.**



© 2013 The Nature Conservancy

© 2013 The Nature Conservancy

FIGURE 22.5

Readable Web Pages

In-text links are clear and informative.
- Key words highlighted
- Underlining only for links

Text is chunked.
- Short paragraphs
- Many headings
- White space separating blocks of text
- Use of a list

Text is legible.
- Dark letters against a light background
- Text large enough to be readable
- No italics

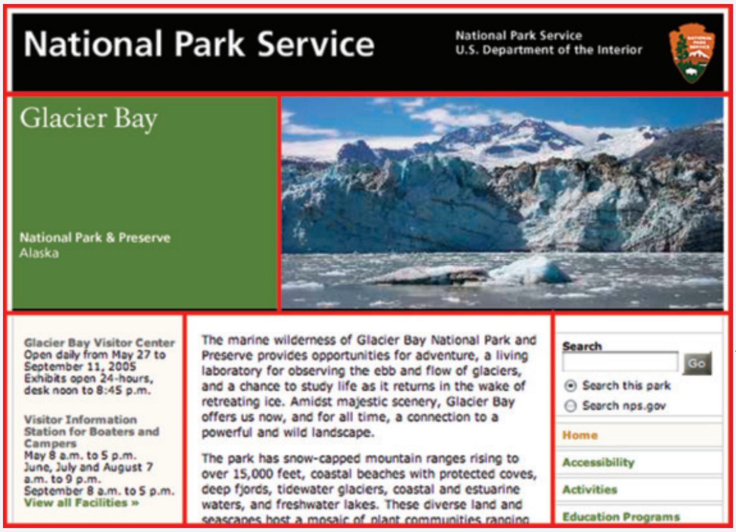
Writing is clear and concise.

No scrolling required.

DESIGNING GRID PATTERNS FOR WEB PAGES

BASIC DESIGNS

National Park Service



National Park Service, Department of the Interior

The National Park Service designed a grid with three horizontal areas.

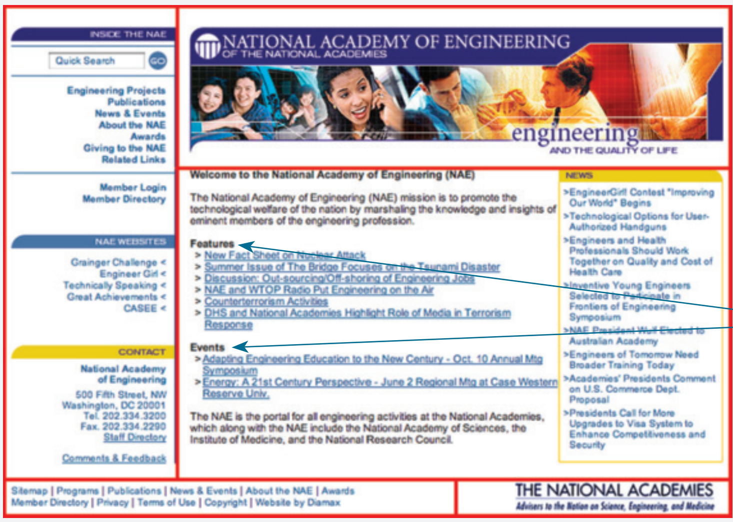
Top: Undivided

Middle: Divided into two sides

Bottom: Divided into three parts

The design includes a very large area for the photograph to emphasize the beauty of Glacier Bay National Park.

National Academy of Engineering



By devoting a small area for the photographic collage, the National Academy of Engineering created a grid that provides a great deal of space for links to the information readers want.

The headings that group related links also help readers find information quickly.

IBM Japan

For its Japanese website, IBM created a design whose central area (white) has five columns. Two of the grid lines from that area continue into the bottom area to divide its three cells.

© IBM Corporation, 2012.

Elaborate Designs
National Aquarium in Baltimore

Where Do Angles and Curves Come From?

If all web pages are constructed from rectangular table cells (see page 450), how do designers make pages with angles and curves? Using specialized graphics programs, they create the overall image, and then cut it into rectangles. The three images above are among the twenty rectangles used to build the upper right-hand part of the National Aquarium in Baltimore website.


© 2012 National Aquarium

© 2012 National Aquarium

Guideline 3 | Give your pages order, harmony, and proportion

You can create *order* by following the advice already given for signaling the organization of a page: If it appears organized to a reader, it will also appear orderly.

To achieve *harmony*, focus on the colors you use. Avoid colors that clash. Some word processing programs help you do this by providing palettes of harmonious colors. In some versions of Microsoft Word, choose Theme from the Format menu. Scroll through the Color Scheme option possibilities.

To review a web page for *proportion*, maximize it in a browser window, step back from your screen and determine whether some element is so much larger than others that it dominates the page. Most often, images and headings are the culprits. Headings don't need to be very large to do their job, and images don't need to be very big to communicate their information.

Guideline 4 | Unify your website verbally and visually

Visual and verbal unity among a website's pages helps readers use the site efficiently, and it makes the site more appealing to them.

We've all had the experience of going to a website for the first time and needing to take more time than seems reasonable to find the search box or a link we want. When designers fail to use the same overall framework throughout their sites, they require their readers to repeat that hunt each time they click to a new page. By using a consistent design, you save your readers from that time-consuming and frustrating work.

Consistent page design also creates a visual harmony that people find attractive. The positive impact of consistency is especially great in the workplace, where it communicates that the organization, team, or individual who created the site is capable of producing polished and professional work.

TRY THIS In the Writer's Tutorial for creating a website using tables, the directions for creating section pages (page 451) shows one possible design for the section pages that use the home page's grid pattern. Can you create another design for the section pages that uses the home page's grid pattern?

Figure 22.6 shows how one company uses the same page design, colors, and typefaces to make its website both functional and attractive. Note, however, that having a consistent framework doesn't mean that every page is exactly the same. In their details, the two pages shown in Figure 22.1 vary considerably, as do the pages shown in Figure 22.5.

Because you create each page in a website separately, it is easy to change the writing style unintentionally as you move from topic to topic. The change might appear in the way information is presented or in the phrasing of links and headings. You can avoid such shifts by planning the style you want to achieve before you begin drafting. You can check changes that have slipped in by making consistency of style one of the features to be examined when you and others review your site.

HOW TO DESIGN YOUR WEBSITE FOR DIVERSE READERS

A truly reader-centered website can be used by every reader who wants the information it provides, including people from any culture and people with disabilities. Using a small number of simple strategies, you can greatly increase your website's ability to serve all readers.

© IBM Corporation, 2012

© IBM Corporation, 2012

© IBM Corporation, 2012

FIGURE 22.6

Pages from a Visually Unified Website

IBM creates visual unity among these pages by using the same grid, placement of information, and colors for all of them.

The banner spans the full width on all pages.

On all pages, the area below the banner is three columns wide, with the middle column twice as wide as the others.

On all pages, the dominant colors are black, white, gray, and two shades of blue.

IBM uses the same banner on all three pages and gives each page's title the same placement and appearance.

The large photograph on all pages has the same dimensions.

The paragraphs below the photographs are about the same length on each page.

Below the introductory paragraph, each page has a heading followed by text in two columns.

The left-hand navigation links are divided into two groups on all pages.

- The first set is dark blue on light blue.
- The second is black against the white background.

Similarly, the right-hand column uses the same design on all pages.

Guideline 1 | Ethics Guideline: Construct your website for use by readers with disabilities.

Countries as diverse as Canada, Japan, Philippines, and Spain have established guidelines for making websites more accessible and easier to use for people with disabilities. In 2001, the United States government mandated that all federal agencies and federally affiliated institutions (including almost all U.S. colleges and universities) make their websites and other electronic and information technology accessible to persons with disabilities (Roach, 2002). The following strategies are among the most important ones you can use to make your site more inclusive.

Some persons with a visual impairment supplement a regular keyboard for typing with another that enables them to rapidly navigate the web page as the computer interprets into Braille the headings, text, links, and image tags.

Hendrik Schmidt/dpa/picture-alliance/Newscom

HELPING READERS WITH DISABILITIES USE YOUR SITE

- **Readers with visual impairment.** Use relative sizes, not point sizes, to designate how big your text will be. If you use relative sizes, readers with poor vision can use their browser settings to enlarge the text on your pages.

  Many people who can't see well use screen readers, which convert text to speech. To create a reader-centered site for these persons, include an <alt> tag with all images. This tag enables you to provide a text description of the image that can be synthesized into speech by screen readers. Also, when you create in-text links, highlight significant, descriptive words, not such phrases as "Click here." For example, instead of writing, "To obtain more information about our newest products, click here," write, "You can obtain more information about our newest products." Screen readers aid visually impaired readers by pulling out all the links on a page and placing them in a list. A list in which every link says "Click here" will be useless. In addition, use each HTML tag only for its intended purpose. For instance, don't use the heading tags <H1>, <H2>, and so on to change type size. Some screen readers use a louder volume to signal that text is a heading.

  For readers with color blindness, supplement all information conveyed in color with that same information in text. For example, when you present a warning in bold red text, also include the word "Warning." In addition, because most color blindness is red-green, avoid using this combination of colors to distinguish content.

  When you include movies or animations, use a program such as QuickTime Pro to add captions for visually impaired readers.

  If these and similar strategies don't succeed in making your site fully accessible to visually impaired readers, create a separate text-only version. Update it whenever you update the visual version of your site.

- **Readers with limited mobility.** Some readers have difficulty controlling a mouse precisely. Make all clickable areas as large as possible.

- **Readers with hearing impairments.** If you include videos with sound, provide a volume control and captions. Also, provide concurrent captions with movies and other items that have sound. Supplement sound that gives verbal feedback by providing visual information of the same sort. For instance, if your site provides a verbal "Thank you," also include a pop-up window with that message.

WEB For more on creating websites for readers with disabilities and for links to websites where you can test the usability of your web pages for readers with disabilities, go to Chapter your English CourseMate at *www.cengagebrain.com.*

Several websites will test the accessibility of your web pages for free. For links, go to your English CourseMate at www.cengagebrain.com.

Guideline 2 | Global Guideline: Design your website to serve international and multicultural readers

Although some websites are designed for specific groups of users located in only one nation or culture, others aim to serve readers in any of the world's nations and cultures. The following strategies will help you create a site that will be easily read by persons for whom English is a second or third language and by the computer programs that international readers can use to automatically translate your text into their language. If your employer decides to make a second version of your site in another language, these strategies will also ease that work.

DESIGNING PAGES FOR INTERNATIONAL AND MULTICULTURAL READERS

- **Text.** Write simply. Avoid slang, colloquial expressions, and metaphors that refer to sports, occupations, or other things specific to your nation. Also, as advised in Chapters 5, 8, and 10, consider your readers' cultural background when drafting your text. Check your draft with persons knowledgeable about the cultures of your likely readers.
- **Images.** As Chapter 14 explains, images that are meaningful to persons in your culture may be incomprehensible—even offensive—to readers in other cultures. Follow that chapter's advice when selecting your photographs, drawings, icons, and other images. Also, avoid including words in your images. Computerized translators cannot read images. And don't forget that persons creating a version of your site in another language will need to remake all images, including buttons in menus that have words.
- **Page design.** Many English words are translated into much longer words in other languages. Similarly, the same statement may take as many as 30 percent more words in other languages. If you expect your site to be translated into other languages, design the size of your buttons, menus, and text areas to accommodate these differences.

WEB For links to websites that provide additional advice about creating websites for international and multicultural readers, go to your English CourseMate at *www.cengagebrain.com.*

HOW TO FOLLOW ETHICAL AND LEGAL PRACTICES CONCERNING YOUR WEBSITE'S CONTENT

When you are creating a website, you encounter two sorts of ethical issues concerning its content: those involved with what you borrow from other people when making your site, and those concerning what you offer visitors to your site.

Guideline 1 | Observe copyright law and acknowledge your sources

It's very easy to download images and text from someone else's website for incorporation into your own site. Some items available on the web fall into the public domain, meaning that no one has a copyright on them. You can use them freely without permission.

WEB For links to websites that provide detailed advice about copyright, intellectual property, and the web, go to your English CourseMate at *www.cengagebrain.com.*

However, much of what's on the web is copyrighted. This includes not only text but also technical drawings, photographs, and frames from your favorite comic strip. Many sound files, animations, and videos available on the web are also copyrighted. When you are thinking of using images from another site, check to see whether the site includes a copyright notice.

Whenever you are unsure about whether permission is needed to use something, check with your instructor or other knowledgeable person—or simply request the permission.

Even when permission isn't needed, acknowledge your source when you use something that clearly represents someone else's intellectual or creative effort. Appendix A tells how to cite web sources.

Guideline 2 | Treat your readers and your website's stakeholders ethically

When you post something on the web, keep in mind that your readers rely on your expertise and integrity. Be sure that you have checked your facts and that your information is up to date. Remember also that all the other ethical considerations discussed in this book apply to web communications just as much as to print communications. Don't post anything that will harm other people.

Ethics and Digital Portfolios

In a digital portfolio, as in your résumé and job application letter, represent your work ethically by following the advice given in Chapter 2's discussion of ethical issues in the job search (page 52). If you are including group projects, indicate clearly what you contributed. Ability to work effectively in groups is, by itself, an important qualification to employers.

WRITER'S GUIDE AND OTHER RESOURCES

Figure 22.7 presents a Writer's Guide for creating Websites that you can use in your course and on the job. At the website for the book, you can obtain a copy of the planning guide that you can download.

FIGURE 22.7

Writer's Guide for Creating Websites

To download a copy of this Writer's Guide, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
CREATING WEBSITES

Planning Your Site's Content

1. Determine what your readers need in order to perform their tasks.
2. Identify content that will influence their attitudes and actions in the ways you desire.

Helping Your Readers Find What They Want Quickly and Easily

1. Build a reader-centered, three-click hierarchy.
2. Use intuitive categories when building your hierarchy.
3. Include the main menu and link to the home page on every page.
4. On each page, include a menu for the page's category.
5. Put navigational aids in the same location on every page.
6. Use clear, intuitive, informative links.
7. Include a site map.

Designing Easy-To-Read, Attractive Pages

1. Follow Chapter 16's guidelines for page design.
2. Use legible text.
3. Present your information in small, visually distinct chunks.
4. Use plenty of headings.
5. Limit scrolling.

Designing Your Site for Diverse Readers

1. Create your text, images, and page design for international and multicultural readers.
2. Include features that make your site useful for readers with disabilities.

Following Ethical and Legal Practices with Your Website's Content

1. Observe copyright law and acknowledge your sources.
2. Treat your readers and your website's stakeholders ethically.

© Cengage Learning

USE WHAT YOU'VE LEARNED

Instructors: For a website assignment, consider the Informational Website assignment provided in Appendix B. Other projects that involve websites are included at the book's website.

EXERCISE YOUR EXPERTISE

Visit a website, perhaps one related to your major or to a project you are preparing in this course. Begin by identifying the site's target readers and its usefulness and persuasive objectives. Next, evaluate one of the site's pages in terms of this chapter's guidelines for designing effective web pages. Finally, evaluate the site's overall design in terms of this chapter's guidelines for building effective websites. Report the results of your analysis in a memo to your instructor.

EXPLORE ONLINE

1. Using a search engine, locate four websites that provide advice for designing websites. Compare their advice to the advice given in this chapter. Report your results in a memo to your instructor.
2. At the website of an international corporation (e.g., Sony), link to the organization's sites in three other languages. Discuss four ways in which these sites differ from the corporation's site for your country.
3. Evaluate the website for your university (or another site identified by your instructor) in light of this chapter's strategies for creating sites that can be used by people with disabilities.
4. Create your own website, following the guidelines given in the website assignment in Appendix B.

COLLABORATE WITH YOUR CLASSMATES

Working with two or three other students, evaluate the usability and persuasiveness of your school's website from a web page for use by students in your major at your school that provides links to information on ethical issues that are relevant to them. Include links to your school's policies concerning academic integrity, plagiarism, and related issues as well as information from professional organizations. Make the page visually appealing, informative, and easy to use.

donvictorio/Shutterstock.com

PART IX

SUPERSTRUCTURES

donvictorio/Shutterstock.com

23 | Writing Reader-Centered Letters, Memos, E-mails, and Digital Exchanges

In the workplace, people transact much of their business using short forms of communication that many of us use outside of work almost every day: e-mail, instant messages, blog entries, letters, and so on. At work people usually write these forms in much different ways than they (or we) do in our social and personal lives. The goal of this chapter is to reintroduce you to the forms that are already familiar to you and to tell you about the workplace customs for those that are new to you.

WEB To see more sample letters, memos, e-mails, instant messages, and blog entries, go to your English CourseMate at *www .cengagebrain.com.*

Of course, the fundamental strategy for using any of these forms is to take a reader-centered approach. When defining your communication's goals and selecting its content, follow all the advice you've read elsewhere in this book. This chapter will help you learn the additional, special set of reader-centered strategies for writing these forms of correspondence. As you read the chapter and discuss it with your instructor, focus on learning how to do the following while working on the current project your instructor has assigned.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Use the appropriate level of formality.
2. Take a reader-centered "you attitude."
3. Help your readers find what they want quickly.
4. Give your readers the background information they need.
5. Learn the customs of your readers' culture.
6. Follow format conventions and other customs.

In addition to describing strategies related to each of these objectives, this chapter describes important specific advice for writing the following forms: letters, memos, e-mails, instant messages, and blog entries.

HOW TO USE THE APPROPRIATE LEVEL OF FORMALITY

To your readers, the various short forms of correspondence that you write at work will usually feel very much like direct, personal statements from you, especially in comparison with the longer documents, such as proposals and reports, they receive from you or others. Consequently, the emotional impact of the short forms can be much greater.

To elicit a favorable reaction, tune your style to match your readers' expectations and preferences. This would be a simple task if only all workplace readers desired the same level of formality. However, they don't. In some organizations, employees fill their instant messages and e-mails with such abbreviations as *u* and instead of *you* and *B4* rather than *before*. Other organizations forbid instant messages at work, and e-mails are written in full, formal sentences without abbreviations.

Preferences also vary among individuals in the same organization—just as they do among college instructors, some of whom want to be addressed in a formal manner, while others feel comfortable receiving e-mails that begin, "Hey Prof."

LEARN MORE For additional advice about using the appropriate level of formality, turn to page 231 in Chapter 10.

Therefore, the most crucial step in achieving the appropriate level of formality is to find out what your readers want. Pay attention to the level used in the communications others have written to your readers, look over communications written by your readers, and ask co-workers or even the readers themselves.

Sometimes, though, you have to guess. In these cases, it's almost always best to lean heavily toward formality, especially if you are writing to people who work for a different employer. When your readers respond, you can see how formal their writing is and match your style to theirs. It's also helpful to know that letters are usually more formal than memos, which are usually more formal that e-mails—although the degrees of difference can be very small or very large, depending on the organization. Communications written to managers and persons in other parts of the organization are often more formal than ones addressed to co-workers with whom the writer interacts daily.

HOW TO TAKE A READER-CENTERED "YOU ATTITUDE"

You can also significantly increase their positive emotional response to your messages by adopting what specialists in business correspondence call the "you attitude." This strategy involves focusing your sentences on your readers' needs, desires, and situation rather than on you or your subject matter. By crafting sentences in this reader-centered way, you reinforce all of the other reader-centered work you perform when planning and drafting your letter or memo. The following examples show how to rephrase sentences to convey the "you attitude," not the self-centered "me attitude."

TRY THIS Find a letter or memo from an office or instructor at your school, or from a company or organization, that is written in an impersonal or writer-centered way. Create a new version using the "you attitude."

- Focus your sentences on your reader, not yourself. Sentences that use *I* as the grammatical subject appear to show that the writer is more concerned with himself or herself than with the reader.

Lacks you-attitude

> I have arranged to have equipment needed for your fieldwork delivered to the Boise office.

Has you-attitude

> You can pick up the equipment needed for your fieldwork at the Boise office.

- Phrase sentences so they create positive feelings in the reader. For instance, where the message is positive, use *you*.

Lacks you-attitude

> We will reimburse you fully for the expenses resulting from this error.

Has you-attitude

> You will receive full reimbursement for your expenses resulting from this error.

- Phrase sentences so they avoid creating negative feelings in the reader. For instance, avoid *you* when conveying criticism and other negative messages.

Lacks you-attitude

> Your conclusions are inaccurate because you failed to account for all variables.

Has you-attitude

> Because all variables were not accounted for, the conclusions are inaccurate.

HELP YOUR READERS FIND WHAT THEY WANT QUICKLY

When reading short communications, readers seem to be especially motivated to find quickly the information they want. The following guidelines describe ways you can help them locate it.

Guideline 1 | State your main point up front—unless you expect your readers to react negatively

What readers usually want most from a short communication is your main point. Do you have recommendations to make? Questions to ask? Important news to convey? Tell them right at the start.

By doing so, you not only satisfy your readers' desire but also help them understand the rest of your communication more quickly. When they learn your main point at the beginning, they can see more easily how the other parts of the communication fit together to form a coherent message.

LEARN MORE For more on the way that the direct pattern enhances usefulness and persuasiveness, go to pages 93–94 and 119–121.

When you lead off with your main point, you are using the direct pattern of organization. Knowing how much this pattern contributes to usefulness and persuasiveness, some writers even include the heart of their message in the subject line of their memos: "Recommendation for Replacing the Afterburner," "Phoenix Site Is the Best Location for Building Our New Factory."

At times, however, you increase your chances of writing successfully by employing a different pattern of organization, for example, when you expect the reader to have an immediate negative response to your main point, as might happen when you are refusing a request or communicating some other decision or action that will not please the reader. In the vast majority of working situations, you can serve your readers best by stating your main point at the beginning of your letters and memos.

Guideline 2 | Keep it short

Few things are as effective as brevity at helping readers find what they want. Without cutting substance, shorten your message in the following ways.

STRATEGIES FOR KEEPING CORRESPONDENCE SHORT

- **Delete unnecessary words.** You will find strategies for finding and deleting unnecessary words in Chapter 10's advice for simplifying sentences (pages 237–238).
- **Stick to the point.** No matter how interesting a fact is to you or how proud you are of some accomplishment, don't mention it unless your readers will find the information useful or persuasive.
- **Provide only as much detail as your readers need.** Offer to give them more information if they want it, but in your correspondence include only what readers really need.

Guideline 3 | Use headings and lists

Headings and bulleted lists, which enable readers to quickly grasp the organization and main points of long documents, are as helpful in short messages, including e-mail, as they are in long communications.

LEARN MORE For advice on using headings and bullets, turn to pages 189–194.

GIVE YOUR READERS THE BACKGROUND INFORMATION THEY NEED

No matter which form of correspondence you use, your readers always want to know what your communication has to do with them. They want to be able to place it in the context of their job, their goals, and their areas of responsibility. There's no shortcut for determining what background information you need to include in order to give this reader-centered context to your reader. However, it can be helpful to ask what part of a conversation your communication most closely resembles. If you are introducing a new topic, your communication will resemble the beginning of a conversation. Start by indicating how your message relates to your reader's job, goals, and concerns. For instance, if you are making a recommendation, begin by stating the reader's goal that it addresses: "To solve the quality control problem at the Charleston factory, I recommend . . ."

In contrast, if you are making a blog entry or sending an instant message, your communication may be like the middle of a conversation where you are responding to something the other person just said. No background will be needed: "Sorry that didn't work. You might try . . ."

Much correspondence resembles a third situation, a conversation in which you want to return to a topic that was discussed a while ago. In this case, say something that brings your reader back to the issue you are writing about: "In response to your request, . . ." or "I have another idea about . . ."

As you write, think also about the information or explanation your reader will need to understand and act on your message. Various companies such as Microsoft

LEARN MORE To learn how to identify background information your readers may need, turn to page 261.

and Apple have blogs called community forums where users of their products can post questions that other users or company employees can answer. One of the most frequent responses to questions is, "Please provide more details about what happened and what you did." No matter what you are writing, it's best to give your readers what they need at the start.

GLOBAL GUIDELINE: LEARN THE CUSTOMS OF YOUR READERS' CULTURE

Customs concerning correspondence vary from culture to culture—including not only regional and ethnic cultures, but also organizational cultures. With respect to organizations, the differences can be relatively minor, though you should still learn and follow your employer's conventions. For example, in most companies, employees initial memos by their names in the "From" line, while in others they sign at the bottom of the memo.

Some regional and ethnic differences are much more substantial. In Japan, letters customarily begin with a reference to the season. In some Spanish-speaking cultures, letters begin with statements that seem florid by the more straightforward conventions—for instance, in the United States.

Even paper sizes for letters differ from region to region. Word processing programs let you choose between preparing documents for printing on 8½″ × 11″ paper or the longer and narrower A4 paper. With the exceptions of the United States and Canada, A4 is the standard for letters around the world.

Some customs, though known, are better avoided because they hinder good communication. For example, at some workplaces writers are in the habit of peppering their correspondence with a variety of wordy and inelegant expressions that they do not use in conversation or other kinds of writing. Here are some examples of these correspondence clichés.

Replacing correspondence clichés with plain language

CORRESPONDENCE CLICHÉ	PLAIN LANGUAGE
As per your request	As you requested
Prior to completion	Before completing
Contingent on	Depending on
Pursuant to	According to
In lieu of	Instead of
It has come to our attention	We learned
Enclosed please find	We've enclosed; Here is
Please be aware that	Please note that

FOLLOW FORMAT CONVENTIONS AND OTHER CUSTOMS

One characteristic of reader-centered writing is that it conforms to the conventions with which your readers are familiar. You gain credibility by doing so because you demonstrate to your readers that you know "how things are done here," that you belong. By following the conventions you also benefit from the many writers and readers in the past who have found that these conventions promote effective communication from the perspective of both groups.

Here, for instance, are three conventions that letters and memos share. All three also promote easy reading.

- Use single spacing.
- Separate paragraphs by a blank line.
- Use short paragraphs.

There are, of course, additional conventions specific to each of these forms of correspondence. Some concern format and some concern conventional ways to present your message within the formats. The rest of this chapter describes these conventions and highlights special considerations for each type of correspondence.

WRITING READER-CENTERED LETTERS

At work, you will usually use letters when writing relatively short messages to readers outside of your employer's organization. These readers may include customers, clients, suppliers, and government agencies, among others.

Conventional Format for Letters

Conventional formats for letters are described in the Writer's Tutorial on pages 476–477.

Special Considerations for Writing Letters

The following considerations supplement the general guidelines for writing reader-centered correspondence given earlier in this chapter.

- Follow the conventions for opening and closing a letter. As noted on page 474, conventions about the opening of letters vary considerably among cultures. In the United States and Canada, letters are generally more formal than memos and e-mails. Avoid slang and jargon. Choose a formal vocabulary—but avoid the correspondence clichés and bureaucratese described on page 474.
  - The *introductory paragraph* typically indicates the letter's topic, explains its purpose, and indicates, perhaps implicitly, its relevance to the reader. Often an introductory paragraph expresses gratitude or appreciation of the reader—for instance by thanking the reader for a letter to which the writer is responding.
  - *Closing paragraphs* often make a social gesture—for example by expressing pleasure in working with the reader, offering to assist the reader, and the like.
- **Use a formal greeting in the salutation.** Consistent with the relative formality of letters, it is customary to use the reader's last name in the salutation: "Dear Mr. Takjeki:" "Dear Dr. Reynolds:" However, if you call the person by his or her first name in conversation or if the reader has signed a letter to you with only a first name, then it is acceptable (and expected) that you will use the person's first name in the salutation.
- **Create a formal signature block.** At the end of the letter, writers usually end with a formal phrase, such as "Sincerely" or "Cordially," and identify

WRITER'S TUTORIAL

WRITING LETTERS

Letterhead (preprinted on the paper)

Superior Fabrication Company
176 Lafayette Court
Baton Rouge, Louisiana 70816
517-235-9008

Date

October 17, 2013

Inside address

Mr. Anthony Fazio
Capra Consultants, Incorporated
9223 Taft Street
Grand Rapids, Michigan 49507

> Address the reader formally (e.g., "Mr. Fazio") unless the reader has invited you to use his or her first name.

> Include a subject line if it would be helpful to readers.

Subject line (optional)

Subject: Request for Proposal

> Use a colon in the salutation if you are addressing the reader by his or her last name, a comma if by his or her first name.

Salutation (If you don't have a person's name, use the name of the department or company: "Dear Capra Consultants.")

Dear Mr. Fazio:

We invite you to submit a proposal for the design and implementation of an inventory control system.

We manufacture conduit used to run electrical and computer cabling through walls, floors, and ceilings; some is used in outdoor applications, such as lighting systems in athletic stadiums. Our product inventory includes over 8,000 items. We use over 200 different materials. We wish to acquire a new inventory system because we too often discover that we don't have materials needed to fill rush orders. Since our suppliers make most items specifically for us, we sometimes have to wait up to 30 days to obtain more if we have run out of a needed item.

We want the inventory system to tell us when to reorder commonly used materials. We also want it to help us determine how many of our most frequently requested products to keep on hand.

The enclosed documents describe our current inventory system. If you are interested in submitting a proposal, please call so I can send you additional information.

Complimentary closing

Sincerely,

Francis V. Sullivan

Signature

Francis V. Sullivan

> Sign your name neatly. Readers can draw conclusions about writers based on handwriting.

Writer's name

Francis V. Sullivan

Writer's title

Project Engineer

Enclosure notation

Enclosures (2)

> If it's important to have a record of the items you enclosed, list them instead of giving the number of them.

Distribution list

c. T. L. Klain

Writer's and typist's identification

FVS/tm

> If someone else typed your letter, include your initials followed by the typist's initials in lower case.

© Cengage Learning

TIPS

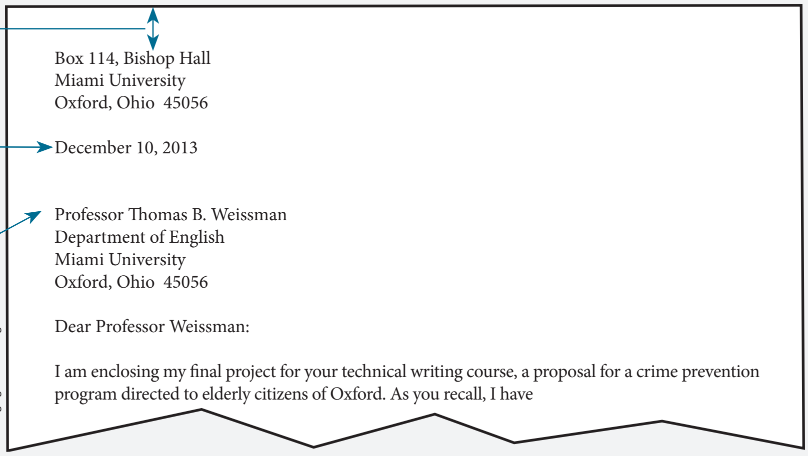
- For letters that don't fill the page, place the content so its middle is slightly above the middle of the page.
- On letterhead paper, type your message with the same margins that the letterhead uses. Keep the same margins on subsequent pages.

Letter Printed on Plain Paper (Not Letterhead)

Place the return address 1 inch below the top on either the right or left of the page.

Type the date one return below the inside address.

Start the inside address at least two returns below the date.



Box 114, Bishop Hall
Miami University
Oxford, Ohio 45056

December 10, 2013

Professor Thomas B. Weissman
Department of English
Miami University
Oxford, Ohio 45056

Dear Professor Weissman:

I am enclosing my final project for your technical writing course, a proposal for a crime prevention program directed to elderly citizens of Oxford. As you recall, I have

© Cengage Learning

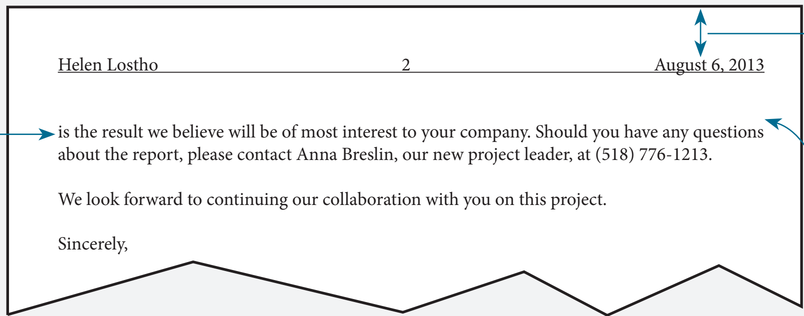
LEARN MORE For additional important advice about writing letters, go to pages 475 and 478.

WEB To see the full text of this letter, go to your English CourseMate at *www.cengagebrain.com.*

Heading for Second and Subsequent Pages

Print second and subsequent pages on blank paper.

If a paragraph continues from one page to the next, leave at least two lines on each page.



Helen Lostho 2 August 6, 2013

is the result we believe will be of most interest to your company. Should you have any questions about the report, please contact Anna Breslin, our new project leader, at (518) 776-1213.

We look forward to continuing our collaboration with you on this project.

Sincerely,

© Cengage Learning

Place the header 1 inch from the top of the page.

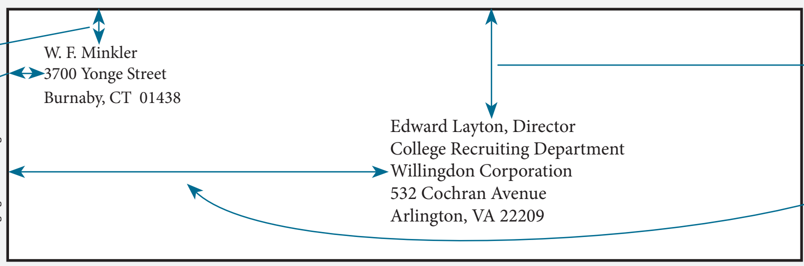
Include the name of the reader, page number, and date.

Place two returns between the heading and the first line of text.

Envelopes

Return address:
down 1/2 inch

over 1/2 inch



W. F. Minkler
3700 Yonge Street
Burnaby, CT 01438

Edward Layton, Director
College Recruiting Department
Willingdon Corporation
532 Cochran Avenue
Arlington, VA 22209

© Cengage Learning

Address:
down 2 inches

over 5 inches

Learn More at the Website

To see additional sample letters, go to your English CourseMate at www.cengagebrain.com.
Also, go to pages 49, 76, 116, and 440.

themselves by typing their full names and their title. Between these formalities, they sign their name in ink.

Sincerely,	Complimentary close
Ibrahim Ettouney	Writer's signature
lbrahim Ettouney	Writer's name
Process Engineer	Writer's title

- **Sign neatly. Readers draw inferences about writers based on their handwriting.** Usually writers sign their full name when first addressing a reader. Afterwards, they may sign only their first name to signal that they would be comfortable being addressed by their first name in the future.
- **List the people to whom you are sending copies.** As a courtesy to your readers, let them know who else will be reading your letter. Sometimes the list assures readers that the writer has conveyed the letter's information to all who should have it. It also lets the reader know who might ask them about the letter's contents.

WRITING READER-CENTERED MEMOS

Like letters and e-mails, memos are used for almost any workplace purpose that can be accomplished in a relatively short space, generally between a few sentences and a few pages. Unlike letters, though, memos are usually addressed to people inside the writer's organization.

Memo Format

The conventional format for memos is described in the Writer's Tutorial on page 480. The memo's distinguishing feature is the heading, which looks like a form with slots for the writer's name, reader's name, date, and the memo's subject. Memos don't include return addresses because none is needed for correspondence sent within the same company or agency.

Special Considerations for Writing Memos

The following considerations supplement the general guidelines for writing reader-centered correspondence given earlier in this chapter.

- **Provide a specific, informative subject line.** A heading that says "Results" doesn't tell the reader what the results are from. One that says "Gallagher Project" doesn't communicate whether the memo asks questions, provides answers, makes a proposal, or reports progress. Much more informative for current readers and future readers looking for information about the completed project is "Results of Turbulence Tests for Gallagher Project."
- **State the purpose and main point in the opening sentences.** Memos usually get off to a faster start than letters. Use the direct pattern of organization, as described on page 472 of this chapter—unless you have a very strong reason for using the indirect pattern.

LEARN MORE For more on the direct and indirect patterns of organization, Turn to pages 93–94 and 119–121.

- **Initial the memo.** In most organizations, a writer's initials substitute for a full signature. Put your initials by your name in the "From" line.
- **List the people to whom you are sending copies.** As in a letter, you are treating your readers courteously when you let them know who else will be reading your letter. You assure your readers that you have given the letter's information to all who should have it. You have also alerted them to the possibility of receiving questions about your memo from the individuals listed.

WRITING READER-CENTERED E-MAIL

Even more than for letters and memos, customs for e-mail vary widely. In many organizations, e-mail is written in a formal manner—much like a formal memo that appears on screen rather than on paper. The Writer's Tutorial on page 481 provides advice about writing this type of e-mail effectively. In other organizations, e-mail content can be very informal—more like a long tweet.

Brevity is important in online correspondence because so many of these communications are read on very small screens.

hfng/Shutterstock.com

In the workplace, people also reply to e-mail in a variety of ways. Many click on "Reply" and then type their response at the top of the message they received. Others integrate their message into the original one, for instance by inserting comments at the end of each paragraph of the original message. In a variation of that method, some writers copy parts of the original message into their own, and they follow the copied parts with their comments. To help readers distinguish their comments from the original message, they change the color of what they've copied or of their comments or they put their comments in all capital letters.

No matter how you construct your e-mails, provide informative subject lines. Many readers use subject lines to determine whether to even open messages in their overstuffed in-boxes. Your subject line can also help your reader find your earlier e-mails that they now want to review.

E-mail also has limitations. When you and another person exchange several messages on a topic, the relevant information may be scattered in multiple e-mails. When you and three or more people are corresponding, the exchanges can become very confusing.

WRITING READER-CENTERED INSTANT MESSAGES

As fast as e-mail can be, instant messaging can be even faster. To read an e-mail, people must open their e-mail programs, pick the e-mail out from the other messages in their in-boxes, and then open the message itself. This process can create a long delay between sending a message and readers reading it. In contrast, instant messages appear instantly on the computer, cell phone, or other screen of the intended reader. Consequently, they are noticed immediately and may receive an immediate reply. The exchange of instant messages can be so rapid that IM communication is called a *chat*.

Instant messages resemble the middle of a conversation, as described earlier in this chapter. As a result, very little introductory information is needed—often none at all. On the other hand, be careful that the speed of the interchange doesn't cause you to omit needed details that your reader will have to take time to request.

WRITING MEMOS

The heading and these words are printed on the company's memo paper.

Natalie provides a very specific subject line.

Her opening states the major finding of the tests.

Natalie provides background information she knows her reader will desire.

Natalie provides specific data from the tests, together with other information needed to interpret the results.

Natalie answers the major question she anticipates her reader will have after reading the test results: "What should we do?"

Rentscheller Company
Interoffice Memorandum

If your employer's memo paper doesn't include a space for a subject line, help your readers by typing in the subject yourself.

To Dwight Levy
From Natalie Sebastian NS
Date June 17, 2013

Subject Results of Radon Testing at Worthington Warehouse

I've completed the radon testing in our Worthington warehouse. Results show slightly elevated, but not dangerous radon concentrations.

Test Results
Radon is a naturally occurring radioactive gas that is present throughout the environment. It can accumulate, sometimes to dangerous concentrations, in enclosed places, such as the basements of houses and other underground structures. The normal, or "background," level of radon in our region is 0.40 ± 0.13 pCi/L (picocuries per liter of air). On all four above-ground floors of the warehouse, radon concentrations were within this range. However, our tests showed somewhat elevated concentrations on the two underground floors. On Floor A, the readings were 0.63 pCi/L, and on Floor B, they were 0.70 pCi/L.

Recommendation
Although the levels on Floors A and B are well below the levels considered dangerous, it does seem advisable to reduce them, especially since radon concentrations can vary and may be higher at other times of the year. The easiest way to reduce radon concentrations on these floors is to increase the volume of outside air that circulates through them. We can detach the ventilation ducts for these two floors from the ventilation system used for the rest of the building. We can then reroute the ducts to two new, high-capacity blowers.

I can prepare cost estimates, if you wish.

© Cengage Learning

LEARN MORE For additional important advice about writing memos, go to pages 478–479.

Writers initial memos in most organizations.

Memos always begin one or two returns below the subject line, regardless of how much blank space is left at the bottom of the page.

Headings help readers even in a short memo.

Natalie's closing suggests a next step but leaves the decision to her reader.

SECOND AND SUBSEQUENT PAGES

Place the header 1 inch from the top of the page.

Include the name of the reader, page number, and date.

Place two returns between the heading and the first line of text.

Hasim K. Lederer 2 November 15, 2013

with many benefits for our company and our customers. These improvements can be made with minimal disruption to our employees, suppliers, and technical sales force if we schedule the transition carefully. The most important factors will be notifying our

© Cengage Learning

Print second and subsequent pages on blank paper.

If a paragraph continues from one page to the next, leave at least two lines on each page.

Learn More at the Website
To see additional sample memos, go to your English CourseMate at www.cengagebrain.com. Also, go to pages 11, 120, 190, 278, 499, and 547.

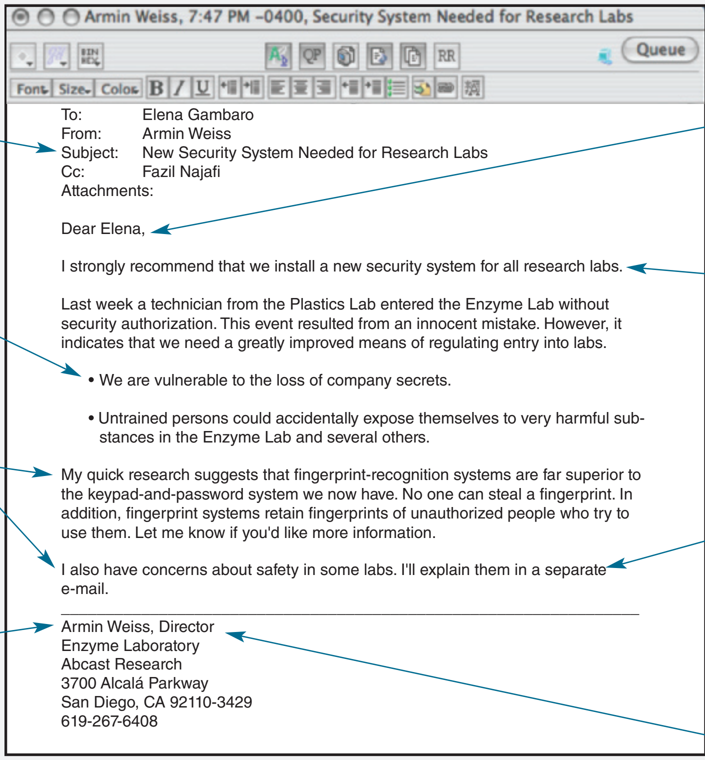
WRITING E-MAIL

Provide an informative, specific subject line. Readers use this line to decide whether to open an e-mail and to find e-mails they want to review after reading them the first time.

Highlight main points and make reading easier by using bullets.

Use short paragraphs and place blank lines between them to promote reading ease.

Tell readers how to contact you by using your e-mail system's "signature" feature.



Armin Weiss, 7:47 PM -0400, Security System Needed for Research Labs

To: Elena Gambaro
From: Armin Weiss
Subject: New Security System Needed for Research Labs
Cc: Fazil Najafi
Attachments:

Dear Elena,

I strongly recommend that we install a new security system for all research labs.

Last week a technician from the Plastics Lab entered the Enzyme Lab without security authorization. This event resulted from an innocent mistake. However, it indicates that we need a greatly improved means of regulating entry into labs.

- We are vulnerable to the loss of company secrets.
- Untrained persons could accidentally expose themselves to very harmful substances in the Enzyme Lab and several others.

My quick research suggests that fingerprint-recognition systems are far superior to the keypad-and-password system we now have. No one can steal a fingerprint. In addition, fingerprint systems retain fingerprints of unauthorized people who try to use them. Let me know if you'd like more information.

I also have concerns about safety in some labs. I'll explain them in a separate e-mail.

Armin Weiss, Director
Enzyme Laboratory
Abcast Research
3700 Alcalá Parkway
San Diego, CA 92110-3429
619-267-6408

Text, © Cengage Learning; image © 2012 Microsoft

In some organizations, writers include a greeting inside the e-mail. In others, writers don't. Observe the custom where you work.

State your topic in the first sentence. If you have a recommendation, state it there as well, just as Armin does in this example.

Keep your e-mail to one topic. If you have a second topic, present it in a second e-mail.

Even as a student, create a signature that is business-like when contacting employers.

TIPS

- For headings, use all caps and underlining. Otherwise they may not stand out in your reader's e-mail program.
- Don't use all caps for an entire sentence or paragraph. All caps are difficult to read when they are used for more than several words together.
- The more briefly you write, the more forcefully your points will come across to your readers.

WRITING READER-CENTERED BLOG ENTRIES

A blog is a website that can be updated continuously. Its main feature is a list of messages organized with the most recent one at the top. Blogs are most familiar as personal online journals, social networking sites such as Facebook, or websites where readers can add their comments to ongoing discussions of politics, sports, science, knitting, and just about anything else. Messages may be accompanied by pictures, links, documents, and other digital items. Many blog websites have several lists of messages organized around different topics, all with the most recent message appearing at the top. Because the messages are posted at the website, they are all open at once, enabling people to read the original message, read other people's responses to the original message, and send their own responses much more efficiently than with e-mail, where people must open messages one by one.

Although blogs are extensively used for personal and social purposes, they were originally created for workplace use by teams of web designers and software engineers who wanted a way to keep track of their work in a single, easily accessible, online location (Starke-Meyerring, 2007). When blogs are used for workplace correspondence, access is usually restricted to a specific group of people who share a common goal. Because blogs are designed to be updated continuously, they are ideal ways for working teams to brainstorm, share progress, raise questions, and gather information related to their projects. Companies such as Dell Computer, Best Buy, and General Electric use blogs. For some workplace needs, miniblogs, which allow only very short messages, provide a convenient means of corresponding. Twitter, which limits messages to 140 characters, is an example of a miniblog.

TRY THIS Create a blog that you and a few classmates can use to work on a collaborative homework assignment or project. Go to www.blogspot.com, www.wordpress.com, or your English CourseMate at *www.cengagebrain.com.*

Like all the technologies described in this chapter, blogs and miniblogs are easy for you to set up for free and use for group projects or other purposes at school.

24 | Writing Reader-Centered Proposals

In a proposal, you make an offer and try to persuade your readers to accept it. You say that, in exchange for money or time or some other consideration, you will give your readers something they want, create something they desire, or do something they wish to have done.

Throughout your career, you will have many occasions to make such offers. You may think up a new product you could develop—if your employer will give you the time and funds to do so. Or you may devise a plan for increasing your employer's profits—if your employer will authorize you to put the plan into effect. You may even join one of the many companies that sell their products and services by means of proposals (rather than through advertising) so that *your* proposals are the means by which your employer generates income.

HOW TO GET THE MOST VALUE FROM THIS CHAPTER

Almost certainly, you are reading this chapter because your instructor asked you to. It's likely that your instructor also asked you to write a proposal. To get the most from reading this chapter, think of the two assignments together: As you read each piece of advice, focus on planning ways to apply it to your proposal. In particular, concentrate on the points that will help you do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Describe the two major goals of a proposal.
2. Describe the major questions asked by proposal readers.
3. Describe the superstructure for proposals, including the ways its parts correspond with the readers' questions.
4. Adapt the reader-centered writing process to the special goals of proposals.
5. Write a cohesive and persuasive proposal.

THE TWO GOALS OF A PROPOSAL

When one of your proposals has been accepted by your readers, it serves metaphorically—and, often, legally—as a contract. You and your readers are both obligated to provide what your proposal says you will each provide. Consequently, when writing a proposal, you have two goals:

- **To persuade.** If you don't persuade your readers, you won't get the money, time, or other things you want.
- **To protect.** You must avoid writing in a way that offers, or seems to offer, more than you can provide or wish to provide. If you write vaguely or make overly ambitious promises, your proposal can cost your organization huge sums of money because your employer may be willing to perform the extra work rather than displease a client. In the extreme, your employer can be sued for failing to fulfill the contractual obligations made in your proposal.

WEB For additional examples and advice for writing propvosals, go to your English CourseMate at *www.cengagebrain.com.*

Because proposals must both protect and persuade, expertise in writing them requires a dual vision. On one hand, you must determine how to present your offer in as appealing a way as possible. On the other hand, you must carefully define the limits of your offer so that no one thinks you are promising more than you can provide for the money, time, or other compensation you request from your readers. This chapter's discussion of the conventional superstructure for proposals will help you develop this expertise.

THE VARIETY OF PROPOSAL-WRITING SITUATIONS

You may be called on to write proposals in a wide variety of situations:

- You may write to employees in your own organization or in other organizations.
- You may write to readers who have invited you to submit a proposal, or you may submit it on your own initiative.
- Your proposal may be in competition against others, or it may stand or fall on its own merits.
- You may have to obtain approval from people in your organization before you submit it to your readers, or you may be authorized to submit it directly yourself.

- You may have to follow regulations governing the content, structure, and format of your proposal, or you may be free to write your proposal as you think best.
- After you have delivered your proposal, your readers may follow any of a wide variety of methods for evaluating it.

To illustrate these variables in actual proposal-writing situations, the following paragraphs describe the circumstances in which two successful proposals were written. The information provided here will be useful to you later in this chapter, where several pieces of advice are explained through the examples of these proposals.

Example Situation 1

Helen wanted permission to develop a customized computer program that employees at her company could use to reserve conference rooms. On several occasions, she had arrived at a conference room she had reserved only to find that someone else had reserved it also. Because she is employed to write computer programs, she is well qualified to write this one. However, she cannot work on this special project without permission from her manager and her manager's boss. She wrote her proposal to gain that permission.

Helen's proposal-writing situation was uncomplicated. She had two internal readers. Because her employer had no guidelines for the way internal proposals should be written, she could use the content, structure, and format she thought most effective. She did not need anyone's approval to submit her proposal to her managers, and she did not have to worry about competition from other proposals. Hers would be evaluated strictly on its own merits.

Example Situation 2

The second proposal was written under very different circumstances. To begin with, it was written by three people, not just one. The writers were a producer, a scriptwriter, and a business manager at a public television station that seeks funds from nonprofit corporations and from the federal government to produce television programs. The writers had learned that the U.S. Department of Education was interested in sponsoring programs about environmental concerns. To learn more about what the department wanted, the writers obtained copies of its "request for proposals" (RFP). After studying the RFP, they decided to propose to develop a program that high school teachers and community leaders could use to teach about hazardous wastes.

In their proposal, the writers addressed an audience very different from Helen's. The Department of Education receives about four proposals for every one it can fund. To evaluate these proposals, the department follows a procedure widely used by government agencies and other organizations. It sends the proposals to experts around the country. These experts, called *reviewers*, rate and comment on each proposal. Every proposal is seen by several reviewers. Then the reviews for each proposal are gathered and interpreted by staff members at the department. The proposals that have received the best reviews are funded.

Proposals for many kinds of projects are evaluated by experts in the area of research or other activity for which funds are available. Sometimes the reviewers from various parts of a country are flown to a central location to read and discuss the proposals. They determine which proposals will be funded.

© Tom McCarthy/PhotoEdit

To secure funding, the writers of the environmental proposal needed to persuade their reviewers that their proposed project came closer to meeting the objectives of the Department of Education than did at least three-quarters of the other proposed projects.

Moreover, before the writers could even mail their proposal to the department, they had to obtain approval for it from several administrators at the television station. That's because the proposal, if accepted, would become a contract between the station and the Department of Education.

FEATURES OF PROPOSALS THAT HELP YOU

Two features of proposals can be very helpful to you. First, when decision makers read proposals on almost any topic, they tend to ask the same set of questions. Second, proposals are prepared so often in the workplace that a set of conventions has developed concerning their content and organization. These conventions have proven successful in helping writers provide the information their readers want in a structure the readers find easy to use. The conventions constitute the *superstructure* or *genre* of the proposal. As you research, plan, and write proposals in college and during your career, you will be helped immensely by your knowledge of the readers' typical questions and the superstructure for answering them. The next two sections describe the questions and superstructure.

LEARN MORE For a detailed explanation of superstructures, turn to page 487.

THE QUESTIONS READERS ASK MOST OFTEN

Proposal readers ask the same set of questions because they all approach proposals the same way: as investors. In a proposal, you ask your readers to invest some resource, such as time or money, so you can work on the project you're proposing. No matter how much they like the project, your readers have limited resources, which they must invest carefully. Supporting any project leaves them with fewer resources for other activities and initiatives. To grant Helen two weeks to create a new scheduling program, her readers had to agree that she would not spend that time on other work. To support the television team's environmental project, the Department of Education had to turn down other proposals seeking the same dollars.

Proposal readers are investors.

When deciding whether to invest resources in a project, decision makers ask questions on the following topics:

- **Problem.** Your readers will want to know why you are making your proposal and why they should be interested in it. What problem, need, or goal does your proposal address—and why is that problem, need, or goal important to them?
- **Solution.** Your readers will want to know exactly what you propose to make or do and how it relates to the problem you describe. They will ask, "What results will your proposed solution produce or what capabilities will it have?" and "How do you propose to do those things?" They will examine your responses carefully, trying to determine whether your overall strategy and your specific plans are likely to work.

- **Costs.** Your readers will want to know what it will cost to implement your proposal and whether the cost will be worth it to them.

In addition, if you are proposing to perform some work (rather than supplying a product), your readers will want an answer to this question:

- **Capability.** If your readers pay or authorize you to perform the work, how will they know whether they can depend on you to deliver what you promise?

SUPERSTRUCTURE FOR PROPOSALS

The conventional superstructure for proposals provides a framework you can use to answer those questions. It has ten topics. In some proposals, you may need to include information on all ten, but in others you will need to cover only some of them. Even in the briefest proposals, however, you will probably need to treat four: introduction, problem, solution, and costs.

As you can see, the ten topics of a proposal cover a lot of territory. In addition to discussing each in a thorough, reader-centered way, you need to coordinate

SUPERSTRUCTURE FOR PROPOSALS

TOPICS	READERS' QUESTIONS	YOUR PERSUASIVE POINTS
***Introduction**	What is this communication about?	Briefly, I propose to do the following.
***Problem**	Why is the proposed project needed? What will we gain that is important to us if we invest in it?	The proposed project addresses a problem, need, or goal that is important to you.
Objectives	What features will a solution to the problem need in order to be successful?	A successful solution can be achieved if it has these features.
***Solution**	What will your proposed solution look like?	Here's what I plan to produce, and it has the features necessary for success.
Method **Resources** **Schedule** **Qualifications** **Management**	Are you going to be able to deliver what you describe here?	Yes, because I have a good plan of action (method); the necessary facilities, equipment, and other resources; a workable schedule; appropriate qualifications; and a sound management plan.
***Costs**	What will it cost?	The cost is reasonable.

*Topics marked with an asterisk are important in almost every proposal, whereas the others are needed only in certain ones.

your discussions of these diverse topics so they flow together in a single, smooth, and cohesive whole. To achieve this cohesion, imagine that your proposal will lead your readers through the following sequence of thoughts. Each step answers one or more of your readers' questions.

Ideal sequence of readers' thoughts while reading a proposal

1. The readers learn generally what you want to do. (Introduction)
2. The readers are persuaded that you want to help them solve a problem, satisfy a need, or achieve a goal that is important to them. (Problem)
3. The readers are persuaded that the action you propose will be effective in solving the problem, meeting the need, or achieving the goal that they now agree is important. (Objectives, Solution)
4. The readers are persuaded that you are capable of planning and managing the proposed solution. (Method, Resources, Schedule, Qualifications, Management)
5. The readers are persuaded that the cost of the proposed solution is reasonable in light of the benefits the action will bring. (Costs)

There is no guarantee, of course, that your readers will read your proposal from front to back or concentrate on every word. Long proposals usually include a summary or abstract at the beginning. Instead of reading the proposal straight through, many readers will read the summary, perhaps the first few pages of the body, and then skim through the other sections.

In fact, in some competitive situations, readers are prohibited from reading the entire proposal. For instance, companies competing for huge contracts to build satellites for the National Aeronautics and Space Administration (NASA) submit their proposals in three volumes: one explaining the problem and their proposed solution, one detailing their management plan, and one analyzing their costs. Each volume (sometimes thousands of pages long) is evaluated by a separate set of experts: technical experts for the first volume, management experts for the second, and budget experts for the third.

Even when readers do not read your proposal straight through—and even when your proposal is only a page or two long—the account just given of the relationships among the parts will help you write a tightly focused proposal in which all the parts support one another.

GUIDING YOU THROUGH THE PROCESS OF WRITING PROPOSALS

When you write a proposal, you engage in the same process as when preparing any other workplace communication: defining the communication's goals, conducting research, drafting, and revising. Yet, proposal writing also involves special challenges of its own. The following suggestions will help you address these challenges efficiently and effectively.

Defining Your Proposal's Goals

When defining a proposal's goals, begin by thinking about the proposal from your *readers*' perspective—not what you want, but what *they* want from it. At work, people read proposals in order to make decisions: Should we support this proposed action or not? Your communication's first goal is to help your readers make that decision, to be *useful* to your readers by providing all the information they believe to be relevant and by evaluating the alternatives according to *their* criteria. To persuade your readers that the best course of action is the one you propose, you must present your facts, evidence, and arguments within the framework of your readers' decision-making task. For help in working out the details of a proposal's goals, use The Writer's Guide for Defining Your Communication's Goals (page 62).

LEARN MORE For detailed advice about defining your proposal's goals, see Chapter 3.

Defining Your Proposed Project's Goals

When preparing proposals, you have a second set of goals to define, the goals of the project you are proposing. From your perspective, the project's goals will be obvious: to achieve some goal that is important to you. As explained on page 486, however, proposal readers are investors. You cannot hope to win support for a project unless you persuade the readers that it addresses a problem, need, or goal that is important to them.

For many proposals, a crucial goal is persuading readers that the project you are proposing addresses a problem, need, or goal that is important to them.

Sometimes readers will make it very easy for you to persuade them that your project addresses their needs and desires. They will tell you what they want and ask for a proposal from you. They may share this information informally, for instance in a meeting or e-mail. Or they may convey it in a Request for Proposal (RFP), such as the one to which the educational television group responded with its proposal.

LEARN MORE To learn more about RFPs, go to your English CourseMate at ***www.cengagebrain.com.***

In other situations, you will need to employ your creativity to persuade readers that your proposed project will help them achieve one of their goals or solve one of their problems. Helen wrote her proposal on her own, without receiving an invitation for it. She developed the idea of writing a program for scheduling conference rooms in response to the personal frustration she experienced repeatedly when arriving at rooms she had reserved, only to find that they had been double-booked. No matter how intense her frustration, her managers were not likely to approve her project simply to make her feel better. For her proposal to win their approval, Helen had to persuade them that the program would satisfy a need or goal of their own.

In some situations, you will have to persuade your readers that your communication addresses a problem, need, or goal of theirs.

The educational television group also had to use creativity—plus research—to persuade readers that their project would meet the readers' goals. The Department of Education had issued an RFP, but it gave only a general sense of what the department wanted: "educational resources that could be used to teach about the relation of the natural and artificial environments to the total human environment." The team's proposal had to persuade the Department of Education's reviewers that its educational program was the kind of resource the department wanted.

Later in this chapter, you will find suggestions for ways to persuade readers that your projects will produce something they want (see the advice for defining the problem your proposed action will solve, page 492). The key point here is that when you are describing your project's goals, you must focus on what it has to offer them.

TRY THIS Think of an actual or fanciful project that would produce an outcome you would like. Whose support would you need in order to conduct that project? How would you argue that the project would address a goal, need, or desire of that person or group?

Conducting Research

It may seem that you can skip research when you are preparing a proposal. After all, you know what you want to propose. But be cautious. Knowing what you want to do does not necessarily mean that you are prepared to answer all of your readers' questions. Conduct any research needed to assure that you are prepared to write a proposal in which you do the following.

- **Demonstrate that you fully understand your readers' goals.** As individuals, proposal readers often have more goals and concerns than are evident at first. In addition, many proposals are reviewed by readers from a variety of backgrounds who will ask questions from a diversity of perspectives. Unless you are confident that you are fully prepared to satisfy all of these readers, talk with as many readers as possible.
- **Describe in detail the outcomes of your project.** The public television team had expertise in producing high-quality educational programs. They didn't need to conduct research related to that aspect of their proposed project. However, they did need to learn how to develop effective instructors' guides that would help teachers use the programs effectively in their classes. Your ability to describe in detail what you will give your readers and how you will produce these items will greatly increase your proposal's persuasiveness.
- **Explain persuasively how your project is superior to the alternatives.** In competitive proposal-writing situations, your readers will want to know why your project is better than those of your competitors. Conduct any research required so you can provide persuasive evidence on this point. Even when you are writing noncompetitive proposals, readers may still wonder why they can't reach their goal in some other, better way than you are proposing. For example, Helen realized her managers would want to know whether they could achieve the same goal by buying a commercially available scheduling program. To address this question in her proposal, Helen had to do research into the capabilities of commercial programs.

LEARN MORE For detailed advice about conducting research, see Chapter 6, Conducting Reader-Centered Research: Gathering, Analyzing, and Thinking Critically About Information, and Chapter 7, Using Five Reader-Centered Research Methods.

Planning

Sometimes the order of elements in the superstructure provides an effective organizational pattern.

The conventions concerning the content and organization of proposals are strong. For most situations, you can organize your proposal effectively by picking the elements from the superstructure shown on page 487 that are relevant to your situation and presenting them in the order shown there. However, combining some elements and reordering them will sometimes make your proposal more persuasive and easier for your readers to use. Take the reader-centered approach of adapting the superstructure to suit your readers and situation.

Drafting and Revising

When you are drafting and revising a proposal, three pieces of advice from Chapter 5's discussion of persuasion deserve special attention.

- **Create a tight fit among the parts.** There's a tight fit between the proposal's problem and solution when the solution described addresses every aspect of the problem. Nothing is missed. Similarly, the solution and costs have a tight fit if there is a cost for every component of the solution—and no costs that aren't attached to the solution. Create such obvious, direct connections among all the elements you include from the superstructure. As described earlier in this chapter, being careful investors, proposal readers check for

LEARN MORE For more on creating a tight fit among the parts of a proposal turn to page 122.

this kind of correspondence among parts to assure themselves that the proposed project is carefully planned.

- **Provide sufficient, reliable evidence to support all of your persuasive claims.** As discussed in Chapter 5, page 111, the amount and kinds of information readers find to be sufficient and reliable vary from one reader to another and one situation to another. The insights you gather about your specific readers while defining your proposal's objectives will help you determine what they will want. At the very least, give specific details rather than general statements. Chapter 10's discussion of using concrete, specific words will also help you persuade your readers that there is good reason to trust your proposal.

LEARN MORE For more on providing sufficient, reliable evidence, turn to page 111.

- **Address likely counterarguments.** Being careful investors, proposal readers also look for counterarguments to the various claims you make in your proposal, such as the claim that your method will succeed in producing the solution you've described. Conduct research that will help you predict what these counterarguments might be. Even if you are proposing a project for which research won't help, consider your claims and assumptions with the same critical eye your readers will cast on them. Then address the counterarguments your readers are likely to raise.

LEARN MORE For more on addressing counterarguments, turn to pages 113–114.

CRAFTING THE MAJOR ELEMENTS OF A PROPOSAL

All of the detailed advice that Chapters 8 through 16 provide about drafting workplace communications applies to proposals. The following sections explain ways you can use some of this advice most productively when writing proposals. As you read, keep in mind that the conventional superstructure is only a general plan. You must use your imagination and creativity to adapt it to particular situations.

In addition, as you plan and write your proposal, remember that the ten topics identify the kinds of information you need to provide, not necessarily the titles of the sections you include. In brief proposals, some parts may take only a sentence or a paragraph, or several sections may be grouped together. For instance, writers often combine their introduction, their discussion of the problem, and their explanation of their objectives under a single heading, which might be "Introduction," "Problem," or "Need."

LEARN MORE Remember that a superstructure is not an outline. You may combine the elements in many ways to achieve your communication's goals. For general advice on using superstructures, turn to page 487.

Introduction

At the beginning of a proposal, you want to do the same thing that you do at the beginning of anything else you write on the job: Tell your readers what you are writing about. In a proposal, this means announcing what you are proposing.

How long and detailed should the introduction be? In proposals, introductions are almost always rather brief. By custom, writers postpone the full description of what they are proposing until later, after they have discussed the problem their proposal will help solve.

You may be able to introduce your proposal in a single sentence, as Helen did:

> I request permission to spend two weeks writing, testing, and implementing a program for scheduling conference rooms in the plant.

Helen's introduction

When you are proposing something more complex, your introduction will probably be longer. You may want to provide background information to help your readers understand what you have in mind. Here, for example, is the introduction from the proposal written by the employees of the public television station to the Department of Education:

Introduction to the television writers' proposal

> Chemicals are used to protect, prolong, and enhance our lives in numerous ways. Recently, however, society has discovered that some chemicals also present serious hazards to human health and the environment. In the coming years, citizens will have to make many difficult decisions to solve the problems created by these hazardous substances and to prevent future problems from occurring.
>
> To provide citizens with the information and skills they will need to decide wisely, WPET Television proposes to develop an educational package entitled "Hazardous Substances: Handle with Care!" This package, designed for high school students, will include five 15-minute video programs and a thorough teacher's guide.

LEARN MORE For more ideas on writing introductions, see Chapter 11, Beginning a Communication.

Problem

Once you've announced the project you are proposing, you must persuade your readers that it addresses some problem, need, or goal that is significant to them. As explained earlier in this chapter (page 484), you cannot hope to win approval for your project unless you persuade your readers they want the outcome your project will produce.

Often this requires considerable creativity and research. The following paragraphs offer advice that applies to each of three situations you are likely to encounter on the job: when your readers define the problem for you, when your readers provide you with a general statement of the problem, and when you must define the problem yourself.

When Your Readers Define the Problem for You

When your readers have told you in detail, perhaps in an RFP, what they want, your task is to persuade them that you understand their desire in the same way they do. In your problem or goal section, describe the problem in a way that corresponds with and builds on the readers' description, but doesn't merely repeat it. You can also build confidence in your understanding of the problem by using, with precision, the technical or specialized terms the readers use.

When Your Readers Provide a General Statement of the Problem

At times, your readers may describe the problem only vaguely. This happened to the television team that submitted the environmental education proposal. In its RFP, the Department of Education provided only the general statement that it perceived a need for "educational resources that could be used to teach about the relation of the natural and artificial environments to the total human environment." Each group that wished to submit a proposal had to identify a more specific problem that the Department would find important.

Finding a problem that someone else thinks is important can be difficult. Often, it will require you to hunt for clues to your readers' values, attitudes, concerns, and opinions. You may have to interview people (including your target readers, where possible), visit the library, or search the web. The television team found its major clue in the following statement, which appeared elsewhere in the RFP: "Thus, environmental education should be multifaceted, multidisciplinary, and issue-oriented." This statement suggested to the writers that they should define the problem as the need experienced by some group of people to gain the multifaceted, multidisciplinary knowledge that would enable them to make good decisions about a practical environmental issue.

But who would that group be? And what is the environmental issue this group needs to address? First, the television writers selected an issue faced by many communities: how to handle and regulate hazardous substances that are produced or stored within their boundaries. This issue seemed ideal because citizens can make good decisions about hazardous substances only if they possess "multifaceted, multidisciplinary" knowledge from such fields as health, economics, and technology. Next, the writers also decided to target their project to high school students. These students seemed like a perfect group to address because they soon would be eligible to vote on questions involving hazardous substances in their communities. Finally, through research, the writers determined that, in fact, no such educational materials were available for classroom use. They really were needed.

Thus, by working creatively from the Department of Education's vague statement, the television writers identified a specific problem that their proposed project would help to solve: the lack of educational materials that high school teachers can use to provide their students with the multifaceted, multidisciplinary knowledge the students need in order to make wise decisions, as voters, on the hazardous substance issues facing their communities.

WEB For more information on RFPs, go to your English CourseMate at *www.cengagebrain.com.*

When You Must Define the Problem Yourself

In other situations, you may not have the aid of explicit statements from your readers to help you formulate the problem. This is most likely to happen when you are preparing a proposal on your own initiative, without being asked by someone else to submit it. Describing the problem in such situations can be particularly challenging because the arguments that will be persuasive to your readers might be entirely distinct from your own reasons for writing the proposal.

The reasons you offer your readers for supporting your proposal may be different from your reasons for writing it.

Try this approach: Learn about or review your readers' overall goals, looking for ones you can link to your project. What goals or responsibilities do your readers have that your proposal will help them with? What concerns do they typically express that your proposal could help them address?

You can also gain ideas about ways to link your proposed project to your readers' needs and desires by speaking with the readers. This conversation can have two advantages. First, it will let you know whether your proposal has at least some chance of succeeding. If it doesn't, it's best to find out before you invest time writing it. Second, by talking with people who will be readers of your proposal, you can find out how they view the problem you are thinking of describing in your proposal.

When Helen spoke to her boss, she learned something she hadn't thought of before: Sometimes the rooms are used for meetings with customers. When customers see confusion arising over something as simple as meeting rooms, they may wonder whether the company has similar problems that would affect its products and services.

Objectives

When using the conventional superstructure for proposals, writers usually state the objectives of their proposed solution after describing the problem they are proposing.

Your statement of objectives plays a crucial role in the logical development of your proposal: It links your proposed action to the problem by telling how the action will solve the problem. To make that link tight, you must formulate each of your objectives so that it grows directly out of some aspect of the problem you describe. Here, for example, are three of the objectives that the writers devised for their proposed environmental education program. To help you see how these objectives grew out of the writers' statement of the problem, each objective is followed by the point from their problem statement that serves as the basis for it. (The writers did not include the bracketed sentences in the objectives section of their proposal.)

Objectives of the environmental education proposal

1. To teach high school students the definitions, facts, and concepts necessary to understand both the benefits and risks of society's heavy reliance upon hazardous substances. [This objective is based on the evidence presented in the problem section that high school students do not have that knowledge.]
2. To employ an interdisciplinary approach that will allow students to use the information, concepts, and skills from their science, economics, government, and other courses to understand the complex issues involved with our use of hazardous substances. [This objective is based on the writers' argument in the problem section that people need to understand the use of hazardous substances from many points of view to be able to make wise decisions about them.]
3. To teach a technique for identifying and weighing the risks and benefits of various uses of hazardous substances. [This objective is based on the writers' argument in the problem section that people must be able to weigh the risks and benefits of the use of hazardous substances if they are to make sound decisions about that use.]

The writers created similar lists of objectives for the other parts of their proposed project, each based on a specific point made in their discussion of the problem.

Like the writers at the television station, Helen built her objectives squarely on her description of the problem. She also took into account something she learned through her research: Even with a computerized system, managers wanted a single person in each department to coordinate room reservations. They didn't want each individual employee to be able to enter changes into the system.

Similarly, you will need to consider the concerns of your readers when framing the objectives for your proposals. Here are two of Helen's objectives:

Helen's objectives

1. To provide a single, up-to-date room reservation schedule that can be viewed by the entire company. [This objective corresponds to her argument that the problem arises partly because there is no convenient way for people to find out what reservations have been made.]
2. To allow a designated person in each department to add, change, or cancel reservations with a minimum of effort. [This objective relates to Helen's discovery that the managers want a single person to handle room reservations in each department.]

In proposals, writers usually describe the objectives of their proposed solution without describing the solution itself at all. The television writers, for example, wrote their objectives so that their readers could imagine achieving them through the creation of a textbook, an educational movie, a series of lectures, or a website—as well as through the creation of the video programs that the instructors proposed.

Similarly, Helen described objectives that might be achieved by many kinds of computer programs. She withheld her ideas about the design of her program until the next section of her proposal.

The purpose of separating the objectives from the solution is not to keep readers in suspense. Rather, this separation enables readers to evaluate the aims of the project separately from the writers' particular strategies for achieving those aims.

Proposal writers usually present their objectives in a list or state them very briefly. For instance, Helen used only one paragraph to present her objectives. The members of the television group presented all their objectives in three pages of their 98-page proposal.

Solution

When you describe your solution, you describe your plan for achieving the objectives you have listed. For example, Helen described the various parts of the computer program she would write, explaining how they would be created and used. The television writers described each of the four components of their environmental educational package. Scientists seeking money for cancer research would describe the experiments they wish to conduct.

When describing your solution, you must persuade your readers of two things:

- **That your solution will successfully address each of the objectives.** For instance, to be sure that the description of their proposed educational program matched their objectives, the writers included detailed descriptions of the following: the definitions, facts, and concepts that their video programs would teach (Objective 1); the strategy they would use to help students take an interdisciplinary approach to the question of hazardous waste (Objective 2); and the technique for identifying and weighing risks and benefits that they would help students learn (Objective 3).
- **That your solution offers a particularly desirable way of achieving the objectives.** For example, the television writers planned to use a case study approach in their materials, and in their proposal offered this explanation of the advantages of the case study approach they planned to use:

> Because case studies represent real-world problems and solutions, they are effective tools for illustrating the way that politics, economics, and social and environmental interests all play parts in hazardous substance problems. In addition, they can show the outcome of the ways that various problems have been solved—successfully or unsuccessfully—in the past. In this way, case studies provide students and communities with an opportunity to learn from past mistakes and successes.

Television writers' argument for the special desirability of their solution

Of course, you should include such statements only where they won't be perfectly obvious to your readers. In her proposal, Helen did not include any because she planned to use standard practices whose advantages would be perfectly evident to her readers, both of whom had several years' experience doing her kind of work.

The description of your proposed solution is one of the places where you must be very careful to protect yourself and your organization from seeming to promise more than you can deliver. The surest protection is to be very precise. For instance, Helen included specific details about the capabilities of her program. It would

LEARN MORE When describing your solution, you may find it helpful to use the strategies for describing an object or process (pages 214 and 215).

support the scheduling of six conference rooms (not more), it would provide reservation capabilities up to six months in advance (not longer), and it would operate on an NT server (not necessarily other servers). If you want to identify things you might be able to do, explicitly identify them as possibilities, time and opportunity permitting, not as promises.

Method

Readers of proposals sometimes need to be assured that you can, in fact, produce the results that you promise. That happens especially in situations where you are proposing to do something that takes special expertise.

To assure themselves that you can deliver what you promise, your readers will look for information about several aspects of your project: your method or plan of action for producing the result; the facilities, equipment, and other resources you plan to use; your schedule; your qualifications; and your plan for managing the project. This section is about method; the other topics are discussed in the sections that follow.

To determine how to explain your proposed method, imagine that your readers have asked you, "How will you bring about the result you have described?"

In some cases, you will not need to answer that question. For example, Helen did not talk at all about the programming techniques she planned to use because her readers were already familiar with them. On the other hand, they did not know how she planned to train people to use her program. Therefore, in her proposal she explained her plans for training.

In contrast, the television writers needed to describe their method in detail in order to persuade their readers that they would produce effective educational materials. An important part of their method, for instance, was to use three review teams: a team of scientists to assess the accuracy of the materials they drafted, a team of filmmakers to advise about plans for making the videos, and a team of specialists in high school education to advise about the effectiveness of the script. In their proposal, they described these review teams in great detail, emphasizing the way each would enhance the effectiveness of the programs the writers were proposing to produce.

LEARN MORE When describing your method, you may find it helpful to use the strategies for describing a process (pages 215–218).

In addition, the writers described each phase of their project to show that they would conduct all phases in a way that would lead to success. These phases include research, scripting, review, revision, production, field testing, revision, final production, and distribution. As they described each step, they explained how their plans for conducting it would contribute to a successful outcome.

Resources

By describing the facilities, equipment, and other resources to be used for your proposed project, you assure your readers that you will use whatever special equipment is required to do the job properly. If part of your proposal is to request that equipment, tell your readers what you need to acquire and why.

If no special resources are needed, you do not need to include a section on resources. Helen did not include one. In contrast, the television writers needed many kinds of resources. In their proposal, they described the excellent library facilities that were available for their research. Similarly, to persuade their readers that they could produce high-quality programs, they described the video editing software they would use.

Schedule

Proposal readers have several reasons for wanting to know what your schedule will be. First, they want to know when they can enjoy the final result. Second, they want to know how you will structure the work so they can be sure that the schedule is reasonable and sound. In addition, they may want to plan other work around the project: When will your project have to coordinate with others? When will it take people's attention from other work? When will other work be disrupted and for how long? Finally, proposal readers want a schedule so they can determine if the project is proceeding according to plan.

The most common way to provide a schedule is to use a schedule chart, which is sometimes accompanied by a prose explanation of its important points.

LEARN MORE For information on creating a schedule chart, turn to page 333.

In many projects, your ability to complete your work on time depends on your getting timely responses and cooperation from other people, including the client or other person or organization who approved your proposal. When discussing your schedule, be sure to include the dates when you will need something from your client, such as approvals of your drafts and information you must have in order to proceed with your work.

Qualifications

When they are thinking about investing in a project, proposal readers want to be sure that the proposers have the experience and capabilities required to carry it out successfully. For that reason, a discussion of the qualifications of the personnel involved with a project is a standard part of most proposals. For example, the television writers discussed their qualifications in two places. First, in a section entitled "Qualifications," they presented the qualifications of each of the eight key people who would be working on the project. In addition, they included a detailed résumé for each participant in an appendix.

In other situations, much less information might be needed. For instance, Helen's qualifications as a programmer were known to her readers because they were employing her as one. If that experience alone were enough to persuade her readers that she could carry out the project successfully, Helen would not have needed to include any section on qualifications. However, her readers might have wondered whether she was qualified to undertake the particular program she proposed because different kinds of programs require specialized knowledge and skills. Therefore, Helen wrote the following:

> As you know, I am thoroughly familiar with the kind of database design that would be used in the reservation system. I recently completed an evening course in interactive media where I learned how to program dynamic web pages that can be used to request a database search and display the results. In addition, as an undergraduate I took a course in scheduling and transportation problems, which will help me here.

Helen's statement of her qualifications

In some situations, your readers will want to know not only the qualifications of the people who will work on the proposed project, but also the qualifications of the organization for which they work.

To protect yourself and your organization, guard against implying that you and those working with you have more qualifications than you really have. Time spent learning new programs, gaining new knowledge, or otherwise gaining background needed to complete a project adds to the time (and money) required for completion.

Management

When you propose a project that will involve more than about four people, you can make your proposal more persuasive by describing the management structure of your group. Proposal readers realize that on complex projects even the most highly qualified people can coordinate their work effectively only if a well-designed project management plan is in place. In projects with relatively few people, you can describe the management structure by first identifying the person or persons who will have management responsibilities and then telling what their duties will be. In larger projects, you might need to provide an organizational chart for the project and a detailed description of the management techniques and tools that will be used.

LEARN MORE For information on creating an organizational chart, turn to page 332.

Because her project involved only one person, Helen did not establish or describe any special management structure. However, the television writers did. Because they had a complex project involving many parts and several workers, they set up a project planning and development committee to oversee the activities of the principal workers. In their proposal they described the makeup and functions of this committee, and in the section on qualifications they described the credentials of the committee members.

Costs

As emphasized throughout this chapter, when you propose something, you are asking your readers to invest resources—usually money and time. Naturally, then, you need to tell them how much your proposed project will cost.

LEARN MORE To create a budget, follow the guidelines for creating a table. See page 316.

One way to discuss costs is to include a budget statement. Sometimes, a budget statement needs to be accompanied by a prose explanation of any unusual expenses and the method used to calculate costs.

In proposals where dollars are not involved, information about the costs of required resources may be provided elsewhere. For instance, in her discussion of the schedule for her project, Helen explained the number of hours she would spend, the time that others would spend, and so on.

In some proposals, you may demonstrate that the costs are reasonable by also calculating the savings that will result from your project.

SAMPLE PROPOSALS

It is much easier to understand writing advice if you can see how another person has successfully applied it. Take a moment to look at two sample proposals and the marginal notes that point out some of their writers' major strategies. Figure 24.1 shows Helen's proposal, so you can see how she made all the parts fit together. You will find another sample proposal, this one written by students, on pages 440–443. For additional samples, go to your English CourseMate at www.cengagebrain.com.

WRITER’S GUIDES AND OTHER RESOURCES

Figure 24.2 (pages 504–506) presents a Writer's Guide for Revising Proposals that you can use in your course and on the job. At this book's website, you can download a copy of this Writer's Guide as well as one for planning proposals. The website also includes other resources that will help you write effective proposals.

WEB To download Writer's Guides for planning and revising proposals, go to your English CourseMate at *www.cengagebrain.com.*

Note to the Instructor For a proposal-writing assignment, consider the “Formal Report or Proposal” project provided in Appendix B. Other projects and cases that involve report writing are included at the book’s website.

FIGURE 24.1

Sample Proposal in the Memo Format

PARKER MANUFACTURING COMPANY

Memorandum

TO: Floyd Mohr and Marcia Valdez
FROM: Helen Constantino
DATE: July 15, 2013
RE: Proposal to Write a Program for Scheduling Conference Rooms

I request permission to spend two weeks writing, testing, and implementing a program for scheduling the buliding’s conference rooms in the plant. This program will eliminate several problems with conference room schedules that have become acute in the last three months.

In the introduction, Helen tells what she is proposing and what it will cost.

Present System

At present, the chief means of coordinating room reservations is the monthly “Reservations Calendar” distributed by Peter Svenson of the Personnel Department. Throughout each month, Peter collects notes and phone messages from people who plan to use one of the conference rooms sometime in the next month. He stores these notes in a folder until the fourth week of the month, when he takes them out to create the next month’s calendar. If he notices two meetings scheduled for the same room, he contacts the people who made the reservations so they can decide which of them will use one of the other seven conference rooms in the new and old buildings. He then e-mails the calendar to the heads of all seventeen departments. The department heads usually give the calendars to their administrative assistants.

Because her introduction includes much background information, Helen makes a separate section for it; she labels the section “Present System” rather than “Background” to provide her readers with a more precise heading.

Someone who wants to schedule a meeting during the current month usually checks with the department’s administrative assistant to see whether a particular room has been reserved on the monthly calendar. If not, the person asks the assistant to note his or her reservation on the department’s copy of the calendar. The assistant is supposed to call the reservation in to Peter, who will see whether anyone else has called about using that room at that time.

(continued)

FIGURE 24.1

(*continued*)

For her problem section, Helen also uses a more precise heading.

Helen pinpoints the problem.

Helen describes the consequences of the problem that are important to her readers.

Helen ties the objectives of her proposed project directly to the points she raised when describing the problem.

Problems with the Present System

The present system worked adequately until about four months ago, when two important changes occurred:

- The new building was opened, bringing nine departments here from the old Knoll Boulevard plant.
- The Marketing Department began using a new sales strategy of bringing major customers here to the plant.

These two changes have greatly complicated the work of scheduling rooms. With the greatly increased use of the conference rooms, employees often schedule more than one meeting for the same time in the same room. If one of the meetings involves customers brought here by the Marketing Department, we end up giving a bad impression of our ability to manage our business.

Objectives

To solve our room scheduling problems, we need a reservation system that will do the following:

- Provide a single, up-to-date room reservation schedule that can be viewed by the entire company, thereby ending the confusion caused by having a combination of departmental and central calendars
- Allow a designated person in each department to add, change, or cancel reservations with a minimum of effort
- Show the reservation priority of each meeting so that people scheduling meetings with higher priority (such as those with potential customers) will be able to see which scheduled meetings they can ask to move to free up a room

2

FIGURE 24.1

(*continued*)

Proposed Solution

I propose to solve our room-scheduling problems by creating a web-based system for reserving our six conference rooms up to six months in advance. A designated person in each department will be able to enter, alter, or cancel reservations quickly and easily through his or her web browser. Located on an NT server, the program will automatically revise the reservation list every time someone makes an addition or other change so people anywhere in the company can view a completely updated schedule at any time. When they enter a reservation, people will include information about the priority of their meeting, so that other individuals will be able to view this information if they are having trouble finding a place for their own meeting. The program will also be able to handle reservations for projection equipment, thereby ending problems in that area. This web-based program will have the added advantage of freeing Peter Svenson from the time-consuming task of manually maintaining the monthly reservations calendar.

After stating the general nature of her proposed project, Helen links the features of her product to the objectives she identified earlier.

Helen protects herself from misinterpretations of what she will produce by precisely describing the capabilities of her proposed program.

Method for Developing the Program

I propose to create and implement the program in three steps: writing it, testing it, and training people in its use.

Helen provides an overview of her method, then explains each step in a way that shows how each will contribute to a successful outcome.

Writing the Program

The program will have three features. The first will display the reservations that have been made. When users access the program, the system will prompt them to tell which day's schedule they want to see and whether they want to see the schedule organized by room or by the hour. The calendar will display a name for the meeting, the name of the person responsible for organizing it, and the projection equipment needed.

The second feature will handle entries and modifications to the schedule. When users call up this program, they will be asked for their company identification number. To prevent tampering with the calendar, only people whose identification number is on a list given to the computer will be able to proceed. To make, change, or cancel reservations, users will simply follow prompts given by the system.

3

(*continued*)

FIGURE 24.1

(*continued*)

Once a user completes his or her request, the system will instantly update the calendar that everyone can view. In this way, the calendar will always be absolutely up to date.

Third, when a higher priority meeting displaces one already scheduled, the program will automatically e-mail all persons listed as planning to attend the lower-priority meeting. This is among the features of my program that are not available on commercially available, free-standing scheduling programs.

Testing the Program

Helen has already planned the testing.

I will test the program by having the administrative assistants in four departments use it to create an imaginary schedule for one month. The assistants will be told to schedule more meetings than they usually do to be sure that conflicts arise. They will then be asked to reschedule some meetings and cancel some others.

Training

Training in the use of the program will involve preparing a brief user's guide and conducting training sessions. I will write the user's guide, and I will work with Joseph Raab in the Personnel Department to design and conduct the first training session. After that, he will conduct the remaining training sessions on his own.

Resources Needed

Helen tells what resources she already has (people's time, in this case).

She protects herself by identifying the resources her readers must provide (again, people's time).

To write this program, I will need the cooperation of several people. I have already contacted four people to test the program, and Vicki Truman, head of the Personnel Department, has said that Joseph Raab can work on it because that department is so eager to see Peter relieved of the work he is now having to do under the current system. I will also need your authorization to use a total of about four hours of our server administrator's time.

4

FIGURE 24.1

(*continued*)

Schedule

I can write, test, and train in eight 8-hour days, beginning August 15.

In her schedule, Helen also tells the cost (in hours of work). She protects herself by identifying all the costs.

Task	Hours
Designing Program	12
Coding	24
Testing	8
Writing User's Manual	12
Training First Group of Users	8
Total	64

The eight hours estimated for training include the time needed both to prepare the session and to conduct it one time.

Qualifications

As you know, I am thoroughly familiar with the kind of database design that would be used in the reservation system. I recently completed an evening course in interactive media where I learned how to program dynamic web pages that can be used to request a database search and display the results. In addition, as an undergraduate I took a course in scheduling and transportation problems, which will help me here.

Helen focuses on her qualifications that relate directly to the project she is proposing.

Conclusion

I am enthusiastic about the possibility of creating this much-needed program for scheduling conference rooms and hope that you are able to let me work on it.

5

FIGURE 24.2

Writer's Guide for Revising Proposals

To download a copy of this Writer's Guide as well as another guide for Planning Proposals, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
REVISING PROPOSALS

Does your draft include each of the elements needed to create a proposal that your readers will find to be useful and persuasive? Remember that you may organize the elements in various ways to increase your proposal's usefulness and persuasiveness. Also, some elements may not be needed to achieve your specific purpose with your specific readers.

Introduction

- ☐ Tells clearly what you propose to do
- ☐ Provides background information the readers will need or want
- ☐ Forecasts the rest of your proposal, if this would help your readers

Problem

- ☐ Explains the problem, need, or goal of your proposed action
- ☐ Persuades your readers that the problem, need, or goal is important to them

Objectives

- ☐ Relates your objectives directly to the problem, need, or goal you described
- ☐ Presents your objectives *without* naming your solution

Solution (often the longest section of a proposal)

- ☐ Describes your solution in a way that assures your readers can understand it
- ☐ Persuades that your solution will achieve each of the objectives you described
- ☐ Persuades that your solution offers an especially desirable way of achieving the objectives
- ☐ Protects you and your employer by clearly promising only what you and your employer want to deliver to your readers

Method

- ☐ Describes clearly the steps you will follow in preparing the solution
- ☐ Persuades that the method you plan to use for creating the solution will work

Resources

- ☐ Persuades that you have or can obtain the needed resources
- ☐ Protects you and your employer by clearly identifying any resources your readers must supply

Schedule

- ☐ Tells when your project will be completed
- ☐ Persuades that you have scheduled your work reasonably and soundly

FIGURE 24.2

(*continued*)

Writer's Guide
REVISING PROPOSALS
(continued)

- ☐ Protects yourself and your employer by clearly stating what your readers must do in order for you to be able to meet your deadlines
- ☐ Includes a schedule chart, if one would make your proposal more helpful and persuasive

Qualifications

- ☐ If necessary, persuades that you have the ability to complete the project successfully

Management

- ☐ If your project is large, persuades that you will organize the people working on it effectively
- ☐ Includes an organizational chart, if one would make your proposal more useful and persuasive

Costs

- ☐ Persuades that you have presented all the costs
- ☐ Persuades that the costs are reasonable
- ☐ Protects you and your employer by including all your costs in your budget
- ☐ Includes a budget table, if one would make your proposal more useful and persuasive

Conclusion

- ☐ Summarizes your key points
- ☐ Concludes the proposal on a positive note that builds confidence in your ability to do a good job

Reasoning (See Chapter 5)

- ☐ States your claims and conclusions clearly
- ☐ Provides sufficient evidence, from the readers' viewpoint
- ☐ Provides evidence your readers will find to be reliable
- ☐ Explains, if necessary, the line of reasoning that links your facts and your claims
- ☐ Addresses any counterarguments or objections that your readers are likely to raise at any point in your report
- ☐ Avoids making false assumptions and overgeneralizing
- ☐ Achieves a tight fit among its parts

Prose (See Chapters 4, 5, 8, and 10)

- ☐ Presents information in a clear, useful, and persuasive manner
- ☐ Uses a variety of sentence structures and lengths
- ☐ Flows in a way that is interesting and easy to follow
- ☐ Uses correct spelling, grammar, and punctuation

(*continued*)

FIGURE 24.2

(*continued*)

Writer's Guide
REVISING PROPOSALS
(continued)

Graphics (See Chapter 14)

- ☐ Included wherever readers would find them helpful or persuasive
- ☐ Looks neat, attractive, and easy to read
- ☐ Referred to at the appropriate points in the prose
- ☐ Located where your readers can find them easily

Page Design (See Chapter 16)

- ☐ Looks neat and attractive
- ☐ Helps readers find specific information quickly

Ethics

- ☐ Treats all the report's stakeholders ethically
- ☐ Presents all information accurately and fairly

25 | Writing Reader-Centered Empirical Research Reports

In empirical research, investigators gather information through carefully planned, systematic observations or measurements. When scientists send a satellite to investigate the atmosphere of a distant planet, when engineers test jet engine parts made of various alloys, and when pollsters ask older citizens what kinds of outdoor recreation they participate in, they all are conducting empirical research. In your career, you will almost certainly perform empirical research—and report on it in writing. This chapter guides you through the process of writing an empirical research report.

HOW TO GET THE MOST VALUE FROM THIS CHAPTER

Almost certainly, you are reading this chapter because your instructor asked you to. It's likely that your instructor also has asked you to write an empirical research report. To get the most from reading this chapter, think of the two assignments together: As you read each piece of advice, focus on planning ways to apply it to your report. In particular, concentrate on the points that will help you do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Describe the typical situations in which empirical research reports are written (see page 508).
2. Describe the major questions asked by readers of empirical research reports.

3. Describe the superstructure for empirical research reports, including the ways its parts correspond with the readers' questions.
4. Adapt the reader-centered writing process to the special goals of empirical research reports.
5. Write an effective empirical research report.

Christopher Halloran/Shutterstock.com

McCarthy's PhotoWorks/Shutterstock.com

Radu Razvan/Shutterstock.com

Empirical research reports propel advances in engineering, science, and medicine.

TYPICAL WRITING SITUATIONS

Empirical research has two distinct purposes. Most aims to help people make practical decisions. The engineers who test jet engine parts are trying to help designers determine which alloy to use in a new engine. Similarly, the researchers who study older persons' recreational activities are trying to help decision makers in the state park system determine what sorts of services and facilities to provide for senior citizens.

A smaller portion of empirical research aims not to support practical decisions, but rather to extend human knowledge. Here, researchers set out to learn how fish remember, what the molten core of the earth is like, or why people fall in love. Such research is usually reported in scholarly journals, such as the *Journal of Chemical Thermodynamics*, the *Journal of Cell Biology*, and the *Journal of Social Psychology*, whose readers are concerned not so much with making practical business decisions as with extending the frontiers of human understanding.

These two aims of research sometimes overlap. Some organizations sponsor basic research in the hope that what is learned can later have practical applications. Likewise, some practice-based research produces results that help explain something basic about the world in general.

FEATURES OF EMPIRICAL RESEARCH REPORTS THAT HELP YOU

Two features of empirical research reports can be very helpful to you. First, whether the reports aim to support practical decisions, extend human knowledge, or achieve some combination of these two purposes, their readers want the same kinds of information from them. Second, empirical research reports are prepared so often in the workplace that a set of conventions has developed concerning their content and organization. These conventions have proven successful in helping writers provide the information their readers want in a structure the readers find easy to use. The conventions constitute the *superstructure* or *genre* of the empirical research report. As you research, plan, and write empirical research reports in college and in your career, you will be helped immensely by your knowledge of the readers' typical questions and the superstructure for answering them. The next two sections describe the questions and superstructure.

LEARN MORE For a detailed explanation of superstructures, turn to page 487.

THE QUESTIONS READERS ASK MOST OFTEN

The following seven questions describe the kinds of information readers seek when reading empirical research reports:

- **Why is your research important to us?** Readers concerned with solving specific practical problems want to know what problems your research will help them address. Readers concerned with extending human knowledge want to know what your research contributes to that pursuit.
- **What were you trying to find out?** A well-designed empirical research project is based on carefully formulated research questions that the project will try to answer. Readers want to know what those questions are so they can determine whether they are significant.
- **Was your research method sound?** Unless your method is appropriate to your research questions and unless it is intellectually sound, your readers will not place any faith in your results or in your conclusions and recommendations.
- **What results did your research produce?** Naturally, your readers want to learn what results you obtained.
- **How do you interpret those results?** Your readers want you to interpret your results in ways that are meaningful to them.
- **What is the significance of those results?** How do your results relate to the problems your research was to help solve or to the area of knowledge it was meant to expand?
- **What do you think we should do?** Readers concerned with practical problems want to know what you advise them to do. Readers concerned with extending human knowledge want to know what you think your results imply for future research.

SUPERSTRUCTURE FOR EMPIRICAL RESEARCH REPORTS

The superstructure for empirical research reports contains seven elements. Each element responds to one of the decision makers' seven basic questions.

SUPERSTRUCTURE FOR EMPIRICAL RESEARCH REPORTS

REPORT ELEMENT	READERS' QUESTION
Introduction	Why is your research important to us?
Objectives of the research	What were you trying to find out?
Method	Was your research method sound?
Results	What results did your research produce?
Discussion	How do you interpret those results?
Conclusions	What is the significance of those results?
Recommendations	What do you think we should do?

GUIDING YOU THROUGH THE PROCESS OF PREPARING EMPIRICAL RESEARCH REPORTS

When creating empirical research reports, writers perform the same activities as when they are preparing any workplace communication: defining the communication's goals, conducting research, planning, drafting, and revising. The following sections tell how you can perform each activity in ways especially suited to this special kind of communication.

Defining Your Report's Goals

Readers read empirical research reports to learn something of value or interest to them. If the research being reported on is intended to help them make a practical decision, they want help with the decision. If the report is intended to extend human knowledge, they want to learn something related to their professional interests. From the readers' desires flow the goals that all empirical research reports share. The usefulness goal is to present the information in a way that makes it easy for the reader to find and understand all the information related to the research that interests them. The persuasive goal arises from the cautious nature of workplace readers, who want to feel confident that the information is valid. Thus, the persuasive objective is to persuade readers that the information presented is accurate, relevant, and reliable.

The Writer's Guide for Defining Your Communication's Goals (page 62) will help you identify the additional information about your report's purpose, readers, and context that is needed to fully define its objectives.

LEARN MORE For detailed advice about defining your report's goals, see Chapter 3.

LEARN MORE For detailed advice about defining research questions and methods of information gathering, see Chapter 6, Conducting Reader-Centered Research: Gathering, Analyzing, and Thinking Critically About Information, and Chapter 7, Using Five Reader-Centered Research Methods.

TRY THIS Think of a topic you might like to research. It could concern your classes, community, or another aspect of your life. What would be your research question? What methods would you use to gather relevant information or data? Would you need to change your methods if you also needed to persuade others that your results were reliable?

Conducting Research

The key to writing a report your readers will find persuasive is to conduct research in a way they will consider to be credible. No skill with words will make up for a research design that readers don't respect. Think of it this way: Writing is not the last step in research; research is one of the first steps in writing. Here are three ways to increase the credibility of your empirical research and, therefore, your reports about it.

- **Understand the context in which your readers will view your research.** Your report will seem interesting and helpful to your readers only if it directly addresses their goals and concerns. If you are trying to answer a practical question, gain a full sense of the problem, situation, or desire that prompted your readers to ask you for your help. If your goal is to extend knowledge, understand what is already known about your topic so you can determine what will make your research interesting or significant in your readers' eyes.
- **Define your research questions precisely, linking them to your reader's interests.** The more sharply you define the question you are trying to answer, the better able you will be to produce results that will be interesting and useful to your readers.
- **Use methods your reader will find credible to gather information, facts, and data.** Whether you are conducting a survey, running a scientific experiment, or

testing an engineering product, some methods of data gathering are considered more credible than others. Pick methods your readers respect.

- **Analyze the information, facts, and data using techniques your readers will find credible.** Picking the wrong statistical tool or using faulty logic undermines otherwise good research.

LEARN MORE For advice on analyzing research results, see Chapter 6.

Planning

You can plan an effective organization for many empirical research reports by adapting the superstructure for these reports as your outline. Readers are accustomed to reading empirical research reports that take up its seven topics in the order in which the superstructure lists them, though some topics may be combined. For example, the introduction and research question are often combined, as are the results and discussion.

However, don't use the superstructure for your pattern if another organization will be more helpful to your readers. For example, if your research uses several distinct research methods, each producing its own results, you can probably create a more useful report by organizing around the research question each method is designed to address.

LEARN MORE Remember that a superstructure is not rigid; you may combine the elements of a superstructure in many ways to serve your readers' needs. See the discussions of superstructures on pages 487 and 488.

Drafting and Revising

Some people mistakenly think that drafting a report could or should wait until all the research has been completed. There are advantages, however, to drafting parts as soon as you are able. By drafting your criteria as you begin your research, you sharpen your sense of what you need to find. Likewise, drafting your methods section as you are designing your research enables you to step back to review and possibly refine your research plan. Drafting as you go can also help you avoid the all-too-common situation in which writers leave so much drafting until right before the deadline that they don't have time to revise and polish their reports.

CRAFTING THE MAJOR ELEMENTS OF AN EMPIRICAL RESEARCH REPORT

All of the detailed advice that Chapters 8 through 16 provide about drafting workplace communications applies to empirical research reports. The following sections tell how you can apply some of this advice most productively when writing this type of report. Much of the advice is illustrated through the use of two sample reports. The first is presented in full on pages 518–534. Its aim is practical. It was written by engineers who were developing a satellite communication system that will permit companies with large fleets of trucks to communicate directly with their drivers at any time. In their report, the writers tell decision makers and other engineers in their organization about the first operational test of the system, in which they sought to answer several practical engineering questions.

The aim of the second sample report is to extend human knowledge: a famous study by Robert B. Hays (1985) of the ways people develop friendships. Selected passages from this report, which appeared in the *Journal of Personality and Social Psychology*, are quoted throughout this section.

Introduction

LEARN MORE For additional advice on writing an introduction, see Chapter 11, "Beginning a Communication."

In the introduction to an empirical research report, you should seek to answer the readers' question, "Why is this research important to us?" Typically, writers answer that question in two steps: They announce the topic of their research and then explain the importance of the topic to their readers.

Announcing the Topic

You can often announce the topic of your research simply by including it as the key phrase in your opening sentence. For example, here is the first sentence of the report on the satellite communication system:

Topic of report

> For the past eighteen months, the Satellite Products Laboratory has been developing a system that will permit companies with large, nationwide fleets of trucks to communicate directly to their drivers through a satellite link.

Here is the first sentence of the report on the way people develop friendships:

Topic of report

> Social psychologists know very little about the way real friendships develop in their natural settings.

Explaining the Importance of the Research

To explain the importance of your research to your readers, you can use either or both of the following methods: Tell how your research is relevant to your organization's goals or tell how it expands existing knowledge on the subject.

- **Relevance to organizational goals.** In reports written to readers in organizations (whether your own or a client's), you can explain the relevance of your research by relating it to some organizational goal or problem. Sometimes, in fact, the importance of your research to the organization's needs will be so obvious to your readers that merely naming your topic will be sufficient. At other times, you will need to discuss at length the relevance of your research to the organization. In the first paragraph of the satellite report, for instance, the writers mention the potential market for the satellite communication system they are developing. That is, they explain the importance of their research by saying that it can lead to a profit. For detailed advice about how to explain the importance of your research to readers in organizations, see page 254 in Chapter 11, "Beginning a Communication."
- **Expansion of existing knowledge.** A second way to establish the importance of your research is to show the gap in current knowledge that it will fill. The following passage from the opening of the report on the friendship study illustrates this strategy.

The writer tells what is known about his topic.

The writer identifies the gaps in knowledge that his research will fill.

> A great deal of research in social psychology has focused on variables influencing an individual's attraction to another at an initial encounter, usually in laboratory settings (Bergscheid & Walster, 1978; Bryne, 1971; Huston & Levinger, 1978), yet very little data exist on the processes by which individuals in the real world move beyond initial attraction to develop a friendship; even less is known about the way developing friendships are maintained and how they evolve over time (Huston & Burgess, 1979; Levinger, 1980).

The writer continues this discussion of published research for three paragraphs. Each follows the same pattern: It identifies an area of research, tells what is known about that area, and identifies gaps in the knowledge—gaps that will be filled by the research the writer has conducted. These paragraphs serve an important additional function performed by many literature reviews: They introduce the established facts and theories that are relevant to the writer's work and necessary to an understanding of the report.

Objectives of the Research

Every empirical research project has carefully constructed objectives. These objectives define the focus of your project, influence the choice of research method, and shape the way you interpret your results. Readers of empirical research reports want and need to know what the objectives are.

The following example from the satellite report shows one way you can inform your readers about your objectives.

> In particular, we wanted to test whether we could achieve accurate data transmissions and good-quality voice transmissions in the variety of terrains typically encountered in long-haul trucking. We wanted also to see what factors might affect the quality of transmissions.

Statement of research objectives

When reporting research that employs statistics, you can usually state your objectives by stating the hypotheses you tested. Where appropriate, you can explain these hypotheses in terms of existing theory, again citing previous publications on the subject. In the following passage, the writer who studied friendship explains some of his hypotheses. Notice that he begins by stating the research's overall goal.

> The goal of the study was to identify characteristic behavioral and attitudinal changes that occurred within interpersonal relationships as they progressed from initial acquaintance to close friendship. With regard to relationship benefits and costs, it was predicted that both benefits and costs would increase as the friendship developed, and that the ratings of both costs and benefits would be positively correlated with ratings of friendship intensity. In addition, the types of benefits listed by the subjects were expected to change as the friendships developed. In accord with Levinger and Snoek's (1972) model of dyadic relatedness, benefits listed at initial stages of friendship were hypothesized to be more activity centered and to reflect individual self-interest (e.g., companionship, information) than benefits at later stages, which were expected to be more personal and reciprocal (e.g., emotional support, self-esteem).

Overall goal

First objective (hypothesis)

Second objective (hypothesis)

Third objective (hypothesis)

Method

Readers of your empirical research reports will look for precise details concerning your method. Those details serve three purposes. First, they let your readers assess the soundness of your research design and its appropriateness for the problems you are investigating. Second, the details enable your readers to determine the limitations that your method might place on the conclusions you draw. Third, they provide information that will help your readers repeat your experiment if they wish to verify your results or conduct similar research projects of their own.

The nature of the information you should provide about your method depends on the nature of your research. The writers of the satellite report provided three paragraphs and two tables explaining their equipment (truck radios and satellite), two paragraphs and one map describing the eleven-state region covered by the trucks, and two paragraphs describing their data analysis.

The friendship study's writer began his method discussion this way.

> At the beginning of their first term at the university, first-year students selected two individuals whom they had just met and completed a series of questionnaires regarding their relationships with those individuals at 3-week intervals through the school term.

LEARN MORE Often a description of empirical research methods uses the pattern for organizing a description of a process (see pages 215–218).

In the rest of that paragraph, the writer explains that the questionnaires asked the students to describe such matters as their attitudes toward each of the other two individuals and the specific things they did with each of them. However, that paragraph is just a small part of the researcher's account of his method. He then provides a 1,200-word discussion of the students he studied and procedures he used.

How can you decide which details to include? The most obvious way is to follow the general reporting practices in your field. Find some research reports that use a method similar to yours and see what they report. Depending on the needs of your readers, you may need to include some or all of the following:

- Every procedural decision you made while planning your research.
- Every aspect of your method that your readers might ask about.
- Any aspect of your method that might limit the conclusions you can draw from your results.
- Every procedure that other researchers would need to understand in order to design a similar study.

Results

LEARN MORE For information on using tables and other graphics for reporting numerical data, see pages 292–314.

The results of empirical research are the data you obtain. Although the results are the heart of any empirical research report, they may take up a very small portion of it. Generally, results are presented in one of two ways:

- **Tables and graphs.** The satellite report, for instance, uses two tables. The report on friendship uses four tables and eleven graphs.
- **Sentences.** When placed in sentences, results are often woven into a discussion that combines data and interpretation, as the next paragraphs explain.

Discussion

Sometimes writers briefly present all their results in one section and then discuss them in a separate section. Sometimes they combine the two in a single, integrated section. Whichever method you use, your discussion must link your interpretative comments with the specific results you are interpreting.

One way of making that link is to refer to the key results shown in a table or other graphic and then comment on them, as appropriate. The following passage shows how the writers of the satellite report did that with some of the results they presented in one of their tables:

Writers emphasize a key result shown in a table.

Writers draw attention to other important results.

> As Table 3 shows, 91% of the data transmissions were successful. These data are reported according to the region in which the trucks were driving at the time of transmission. The most important difference to note is the one between the rate of successful transmissions in the Southern Piedmont region and the rates in all the other regions. In the Southern

> Piedmont area, we had the truck drive slightly outside the ATS-6 footprint so that we could see if successful transmissions could be made there. When the truck left the footprint, the percentage of successful data transmissions dropped abruptly to 43%.

Writers interpret those results.

When you present your results in prose only (rather than in tables and graphs), you can weave them into your discussion by beginning your paragraphs with general statements that serve as interpretations of your data. Then you can cite the relevant results as evidence in support of the interpretations. Here is an example from the friendship report.

> Intercorrelations among the subjects' friendship intensity ratings at the various assessment points showed that friendship attitudes became increasingly stable over time. For example, the correlation between friendship intensity ratings at 3 weeks and 6 weeks was .55; between 6 weeks and 9 weeks, .78; between 9 weeks and 12 weeks, .88 (all $p < .001$).

General interpretation

Specific results presented as support for the interpretation

In a single report, you may use both of these methods of combining the presentation and discussion of your results.

CONCLUSIONS

Besides interpreting the results of your research, you need to explain what those results mean in terms of the original research questions and the general problem you set out to investigate. Your explanations of these matters are your conclusions.

For example, if your research project is focused on a single hypothesis, your conclusion can be brief, perhaps only a restatement of your chief results. However, if your research is more complex, your conclusion should draw all the strands together.

In either case, the presentation of your conclusions should correspond very closely to the objectives you identified toward the beginning of your report. Consider, for instance, the correspondence between objectives and conclusions in the satellite study. The first objective was to determine whether accurate data transmissions and good-quality voice transmissions could be obtained in the variety of terrains typically encountered in long-haul trucking. The first of the conclusions addresses that objective.

> The Satellite Products Laboratory's system produces good-quality data and voice transmissions throughout the eleven-state region covered by the satellite's broadcast footprint.

Conclusions from the satellite report

The second objective was to determine what factors affect the quality of transmissions, and the second and third conclusions relate to it.

> The most important factor limiting the success of transmissions is movement outside the satellite's broadcast footprint, which accurately defines the satellite's area of effective coverage.

> The system is sensitive to interference from certain kinds of objects in the line of sight between the satellite and the truck. These include trees, mountains and hills, overpasses, and buildings.

The satellite research concerns a practical question. Hence its objectives and conclusions address practical concerns of particular individuals—in this case, the engineers and managers in the company that is developing the satellite system. In contrast, research that aims primarily to extend human knowledge often has objectives and conclusions that focus on theoretical issues.

For example, at the beginning of the friendship report, the researcher identifies several questions that his research investigated, and he states what answers he predicted his research would produce. In his conclusion, then, he systematically addresses those same questions in terms of the results his research produced. Here is a summary of some of his objectives and conclusions. (Notice how he uses the technical terminology commonly employed by his readers.)

Conclusions from the friendship report

OBJECTIVE	**CONCLUSION**
As they develop friendships, do people follow the kind of pattern theorized by Guttman, in which initial contacts are relatively superficial and later contacts are more intimate?	Yes. "The initial interactions of friends . . . correspond to a Guttman-like progression from superficial interaction to increasingly intimate levels of behavior."
Do *both* the costs (or unpleasant aspects) and the benefits of personal relationships increase as friendships develop?	Yes. "The findings show that personal dissatisfactions are inescapable aspects of personal relationships and so, to some degree, may become immaterial. The critical factor in friendships appears to be the amount of benefits received. If a relationship offers enough desirable benefits, individuals seem willing to put up with the accompanying costs."
Are there substantial differences between friendships women develop with one another and the kind men develop with one another?	Apparently not. "These findings suggest that—at least for this sample of friendships—the sex differences were more stylistic than substantial. The bonds of male friendship and female friendship may be equally strong, but the sexes may differ in their manner of expressing that bond. Females may be more inclined to express close friendships through physical or verbal affection; males may express their closeness through the types of companionate activities they share with their friends."

Typically, in presenting the conclusions of an empirical research project directed at extending human knowledge, writers discuss the relationship of their findings to the findings of other researchers and to various theories that have been advanced concerning their subject. The writer of the article on friendship did that. The table above presents only a few snippets from his overall discussion, which is several thousand words long and is full of thoughts about the relationship of his results to the results and theories of others.

In the discussion section of their empirical research reports, writers sometimes discuss any flaws in their research method or limitations on the generalizability of their conclusions. For example, the writer on friendship points out that his subjects all were college students and that most lived in dormitories. It is possible, he cautions, that what he found while studying this group may not be true for other groups.

Recommendations

The readers of some empirical research reports, especially those directed at solving a practical problem, want to know what, based on the research, the writer thinks should be done. Consequently, such reports usually include recommendations.

For example, the satellite report contains three. The first is the general recommendation that work on the project be continued. The other two involve specific actions that the writers think should be taken: design a special antenna for the trucks, and develop a plan that tells what satellites would be needed to provide coverage throughout the forty-eight contiguous states, Alaska, and southern Canada. As is common in research addressed to readers in organizations, these recommendations concern practical business and engineering decisions.

Even in reports designed to extend human knowledge, writers sometimes include recommendations. These usually convey ideas about future studies that should be made, adjustments in methodology that seem to be called for, and the like. At the end of the friendship report, for instance, the writer suggests that researchers study different groups (not just students) in different settings (not just college) to establish a more comprehensive understanding of how friendships develop.

SAMPLE EMPIRICAL RESEARCH REPORTS

It is much easier to understand writing advice if you see sample communications that follow that advice. Take a moment to look at the sample in Figure 25.1 (page 518–534) and the marginal notes that point out some of the writer's major strategies. This figure shows the full report on the truck-and-satellite communication system, which is addressed to readers within the writers' own organization. For additional examples, see the book's website. To see examples of empirical research reports presented as journal articles, consult journals in your field.

WRITER'S GUIDES AND OTHER RESOURCES

Figure 25.2 (pages 535–536) presents a Writer's Guide for Revising Empirical Research Reports that you can use in your course and on the job. At this book's website you can download a copy of this Writer's Guide as well as one for planning empirical research reports. The website also includes other resources to help you write effective reports.

Note to the Instructor For an assignment involving an empirical research report, you can ask students to write on research they are conducting in their majors, or you can adapt the "Formal Report or Proposal" project given in Appendix B. You could also use Appendix B's User Test and Report project. Other projects and cases that involve report writing are included at the book's website. To tailor the Writer's Guide to your course, download them from the website.

WEB To download Writer's Guides for planning and revising empirical research reports, go to your English CourseMate at *www.cengagebrain.com.*

FIGURE 25.1

Empirical Research Report

This report was written by four engineers who conducted a research project. On the cover, the team placed the items their employer requires on the covers of all research reports. The company also specifies the layout of the covers. Each requirement is intended to help readers work efficiently.

The company uses colored type for report titles so that readers can easily spot the titles when searching through company files.

The company requires that a report's date be placed on the cover to help future readers know how old the report is.

The company places report numbers on the cover to make finding copies easy. Reports are filed and cited by this number.

The cover does not have a page number.

LEARN MORE For more information on creating reader-centered report covers, see page 278.

ELECTRONICS CORPORATION OF AMERICA

Truck-to-Satellite Communication System: First Operational Test

September 30, 2013

Internal Technical Report

Number TR-SPL-0931

ELECTRONICS CORPORATION OF AMERICA

Truck-to-Satellite Communication System:
First Operational Test

September 30, 2013

Research Team

Margaret C. Barnett

Erin Sanderson

L. Victor Sorrentino

Raymond E. Wu

Internal Technical Report
Number TR-SPL-0931

Read and Approved:

Beverly Fisher   September 30, 2013

Date

FIGURE 25.1

(*continued*)

Like the cover, the title page contains exactly the information specified by the company for all research reports.

As is typical in many organizations, the title page includes more information than the cover does.

This company permits the researchers to be named. In some companies, a report's writers are not named.

The company requires that all research reports be reviewed and approved by the laboratory director. She examines drafts carefully and usually requires changes before giving approval.

LEARN MORE For more information on review processes, see pages 365–371.

(*continued*)

FIGURE 25.1

(*continued*)

The researchers provide a brief executive summary in order to help their readers quickly understand the report's main points. The summary also enables readers to determine whether they could meet their practical needs by reading the entire report.

Every piece of information the researchers include in the summary is also in the body of the report.

In the first sentence, the researchers identify the topic of their report.

In one sentence, the researchers summarize their research method, providing specific details about the data, the satellite used, the number of trucks, and region covered.

In precise, succinct statements, the researchers detail the results that are most relevant to their readers' major question: "Does the prototype design work?"

Their conclusion is the answer to their readers' question: "Yes, the design does work."

LEARN MORE For more information on executive summaries, go to page 281.

EXECUTIVE SUMMARY

For the past eighteen months, the Satellite Products Laboratory has been developing a system that will permit companies with large, nationwide fleets of trucks to communicate directly to their drivers at any time through a satellite link. Costs would be lower than for cell phones, and a GPS system mounted in each truck would enable a company to determine the exact location of all its vehicles at one time. During the week of May 20, we tested our concepts for the first time, using the ATS-6 satellite and five trucks that were driven over an eleven-state region with our prototype mobile radios.

More than 91% of the 2500 data transmissions were successful and more than 91% of the voice transmissions were judged to be of commercial quality. The most important factor limiting the success of transmissions was movement outside the satellite's broadcast footprint. Other factors include the obstruction of the line of sight between the truck and the satellite by highway overpasses, mountains and hills, trees, and buildings.

Overall, the test demonstrated the soundness of the prototype design. Work on it should continue as rapidly as possible. We recommend the following actions:

- Develop a new antenna designed specifically for use in communications between satellites and mobile radios.
- Explore the configuration of satellites needed to provide thorough footprint coverage for the 48 contiguous states, Alaska, and Southern Canada at an elevation of 25° or more.

The researchers use a bulleted list to highlight their two major recommendations for continued work on the satellite project.

TABLE OF CONTENTS

1. Introduction	1
2. Method	2
Equipment	2
Region Covered	2
Data Analysis	6
3. Results and Discussion	7
Data Transmissions	7
Voice Transmissions	7
Factors Affecting the Quality of Transmissions	10
4. Conclusions	12
5. Recommendations	13

ii

© Cengage Learning

FIGURE 25.1

(*continued*)

In addition to telling readers where they can find particular kinds of information, the table of contents also provides them with an outline of the report.

The researchers include the major headings within their sections.

They align the page numbers on the right-hand side.

They number the front matter with Roman numerals. They begin using Arabic numerals on the first page of the report's body.

LEARN MORE For more information on writing the front matter of a report, go to Chapter 13, Writing Reader-Centered Front and Back Matter.

(*continued*)

FIGURE 25.1

(*continued*)

The researchers begin the body of their report by stating its topic.

They immediately tell their readers the significance of their research to the company.

The researchers describe the overall objectives of their test.

LEARN MORE For advice about presenting the objectives of empirical research, see page 513.

They tell their readers their main finding ("the bottom line") at the very beginning of their report.

LEARN MORE For advice about writing the introduction to an empirical research report, see page 512. In addition, see Chapter 11's guidelines for writing the beginning of a communication.

Section 1

INTRODUCTION

For the past eighteen months, the Satellite Products Laboratory has been developing a system that will permit companies with large, nationwide fleets of trucks to communicate directly to their drivers at any time through a satellite link. Costs would be lower than for cell phones, and a GPS system mounted in each truck would enable a company to determine the exact location of all its vehicles at one time. Several trucking lines and supermarket chains have expressed an interest in such a service. At present, they can communicate with their long-distance drivers only when the drivers pull off the road to phone in, meaning that all contacts are originated by the drivers, not the central dispatching service. The potential market for such a satellite service also includes many other companies and government agencies (such as the National Forest Service) that desire to communicate with trucks, cars, boats, or trains that regularly operate outside the very limited range of urban cellular telephone systems.

This report describes the first operational test of the system we have developed. Such tests were particularly important to conduct before continuing further with the development of this system because our system is much different from those currently being used with commercial satellites. Specifically, our system will transmit to mobile ground stations by using the short antennas and the low power provided by conventional terrestrial broadcasting systems.

In particular, we wanted to test whether we could achieve accurate data transmissions and good-quality voice transmissions in the variety of terrains typically encountered in long-haul trucking. We wanted also to see what factors might affect the quality of transmissions.

The test results indicate that our design is basically sound, although a new mobile antenna needs to be designed and the satellite configuration needs to be examined.

1

FIGURE 25.1

(*continued*)

Section 2

METHOD

In this experiment, we tested a full-scale system in which five trailer trucks communicated with an earth ground station via a satellite in geostationary orbit 23,200 miles above the earth. This section describes the equipment we used, the area covered by the test, and the data analyses we performed.

Equipment

The five trucks, operated by Smithson Moving Company, were each equipped with a prototype of our newly developed 806 megahertz (MHz) two-way mobile radio equipment. Each radio had a speaker and microphone for voice communications, along with a ten-key keyboard and digital display for data communications. Equipped with dipole antennas, the radios broadcast at 1650 MHz with 12 to 15 watts of power. They received signals at 1550 MHz and had an equivalent antenna temperature of 800°K, including feedline losses. Technical specifications for the receivers and transmitters of these radios are given in Table 1.

The satellite used for this test was the ATS-6, which has a larger antenna than most commercial communication satellites, making it more sensitive to the low-power signals sent from the mobile stations. Technical specifications for its receiver and transmitter are given in Table 2.

Through the ATS-6 satellite, the five trucks communicated with the Earth Ground Station in King of Prussia, Pennsylvania. This facility is a relatively large station, but not larger than is planned for a fully operational commercial system.

Region Covered

The five trucks drove throughout the region covered by the "footprint" of ATS-6. The footprint is shown as the area within the oval in Figure 1. It is defined as the area in which the broadcast signals received are within at least 3 dB of the signal received at the center of the beam. In all, the trucks covered eleven states: Georgia, South Carolina, North Carolina, Tennessee, Virginia, West Virginia, Ohio, Indiana, Illinois, Iowa, and Nebraska.

2

The researchers' major goal in the methods section is to persuade their readers that they used sound procedures. They know that their readers will not trust the researchers' results unless they are persuaded that the research method was solid.

Their second goal in the methods section is to provide details that will enable the readers to interpret the results.

The researchers begin with a one-sentence overview of their method.

In their next sentence, they forecast the organization of their methods section.

The researchers organize this paragraph (and many others) so that it flows from general ideas to particular ones.

They provide precise details about the equipment they used.

In this sentence the researchers refer readers to the technical data in Table 1.

Anticipating a possible question from their readers, the researchers explain their justification for using the large ground station at King of Prussia.

LEARN MORE For advice about writing the methods section of an empirical research report, turn to page 513.

LEARN MORE For advice about integrating graphics and text, turn to page 292.

LEARN MORE For guidelines on organizing sections and paragraphs in a reader-centered way, see Chapter 8, page 183.

(*continued*)

FIGURE 25.1

(*continued*)

With this table, the writers provide detailed data in a highly useful manner.

The researchers give their table a title that briefly but precisely tells their readers what the table shows.

Because the table contains text rather than numbers, the researchers have aligned the contents of their columns on the left.

Table 1

Specifications for Satellite-Aided Mobile Radio

Transmitter

Frequency	1655.050 MHz
Power Output	16 watts nominal 12 watts minimum
Frequency Stability	±0.0002% (– 30° to +60°C)
Modulation	$16F_3$ Adjustable from 0 to ±5 kHz swing FM with instantaneous modulation limiting
Audio Frequency Response	Within +1 dB and – 3 dB of a 6 dB/octave pre-emphasis from 300 to 3000 HZ per EIA standards
Duty Cycle	EIA 20% Intermittent
Maximum Frequency Spread	±6 MHz with center tuning
RF Output Impedance	50 ohms

Receiver

Frequency	1552.000 MHz
Frequency Stability	±0.0002% (–30° to +60°C)
Noise Figure	2.6 dB referenced to transceiver antenna jack
Equivalent Receiver Noise Temperature	238° Kelvin
Selectivity	–75 dB by EIA Two-Signal Method
Audio Output	5 watts at less than 5% distortion
Frequency Response	Within +1 and –8 dB of a standard 6 dB per octave deemphasis curve from 300 to 3000 Hz
Modulation Acceptance	±7 kHz
RF Input Impedance	50 ohms

3

LEARN MORE Pages 316–317. provide guidelines for creating reader-centered tables.

FIGURE 25.1

(*continued*)

Table 2

Performance of ATS-6 Spacecraft L-Band Frequency Translation Mode

Receive

Receiver Noise Figure (dB)	6.5
Equivalent Receiver Noise Temperature (°K)	1005
Antenna Temperature Pointed at Earth (°K)	290
Receiver System Temperature (°K)	1295
Antenna Gain, peak (dB)	38.4
Spacecraft G/T, peak (dB/°K)	7.3
Half Power Beamwidth (degrees)	1.3
Gain over Field of View (dB)	35.4
Spacecraft G/T over Field of View (dB/°K)	4.3

Transmit

Transmit Power (dBw)	15.3
Antenna Gain, peak (dB)	37.7
Effective Radiated Power, peak (dBw)	53.0
Half Power Beamwidth (degrees)	1.4
Gain over Field of View (dB)	34.8
Effective Radiated Power over Field of View (dBw)	50.1

4

(*continued*)

FIGURE 25.1

(*continued*)

With this map, the researchers describe the area covered by the satellite beam much more clearly than they could with sentences.

Figure 1. ATS-6P Footprint. (Oval is −3dB Contour Relative to Beam Center.)

5

Within this region, the trucks drove through the kinds of terrain usually encountered in long-haul trucking, including both urban and rural areas in open plains, foothills, and mountains.

Data Analysis

All test transmissions were recorded at the earth station on a high-quality reel-to-reel tape recorder. The strength of the signals received from the trucks via the satellite was recorded on a chart recorder that had a frequency response of approximately 100 hertz. In addition, observers in the trucks recorded all data signals received and all data codes sent. They also recorded information about the terrain during all data and voice transmissions.

We analyzed the data collected in several ways:

- To determine the accuracy of the data transmissions, we compared the information recorded by the observers with the signals recorded on the tapes of all transmissions.
- To determine the quality of the voice transmissions, we had an evaluator listen to the tape using high-quality earphones. For each transmission, the evaluator rated the signal quality on the standard scale for the subjective evaluation of broadcast quality. On it, Q5 is excellent and Q1 is unintelligible.
- To determine what factors influenced the quality of the transmissions, we examined the descriptions of the terrain that the observers recorded for all data transmissions that were inaccurate and all the voice communications that were rated 3 or less by the evaluator. We also looked for relationships between the accuracy and quality of the transmissions and the distance of the trucks from the edge of the broadcast footprint of the ATS-6 satellite.

6

FIGURE 25.1

(*continued*)

The researchers describe their method of analysis to persuade their readers of the soundness of their study. They know that their readers will want this information because the study results would be incorrect if a wrong or flawed method of analysis had been used.

The research team used three methods for analyzing data. Each method corresponds to one of their research objectives, which they describe in the report's introduction.

To help their readers see the correspondence between their analysis methods and their research objectives, the team describes their three analysis methods in the same order they used when naming their research objectives in the introduction.

(*continued*)

FIGURE 25.1

(*continued*)

The research team begins this section with general information.

The researchers tell their readers the key result first.

They then present other important results.

Immediately after presenting their results, the researchers interpret the results. This interpretation is one of the discussion parts of their results and discussion section.

Again, the researchers begin with the key result. In this sentence they also tell their readers the main point to draw from Table 4.

As soon as they have presented the results, the researchers interpret the results from the point of view of their readers' main question: Does the system work enough for commercial application?

The team summarizes the data and voice transmission results, emphasizing the main points of interest to their readers.

LEARN MORE For advice on writing the results and discussion sections of empirical research reports, see page 514. For advice about integrating graphics and text, turn to page 292.

Section 3

RESULTS AND DISCUSSION

In total, the test transmissions took 603 hours of satellite time. They included 690 data communications and 5351 seconds of voice communications. This section reports and discusses the results of these transmissions and examines the factors that influence transmission quality.

Data Transmissions

As Table 3 shows, 91% of the data transmissions were successful. These data are reported according to the region in which the trucks were driving at the time of transmission. The most important difference to note is the one between the rate of successful transmissions in the Southern Piedmont region and the rates in all the other regions. In the Southern Piedmont area, we had the truck drive slightly outside the ATS-6 footprint so that we could see if successful transmissions could be made there. When the truck left the footprint, the percentage of successful data transmissions dropped abruptly to 43%. If transmissions in that area are eliminated from the calculations, 95% of all data transmissions were successful.

Voice Transmissions

The success rate for the voice transmissions was also very high. As the two left-hand columns of Table 4 show, 91% of the communications were rated as Q4 or Q5. That is a very good rating because Q3 is usually considered adequate to provide useful commercial communications. As with data communications, the rate of successful transmissions drops off sharply in the Southern Piedmont area, where the truck involved left the ATS-6 footprint. If the transmissions made in the South Piedmont area are eliminated from the calculations, the system produced voice communications rated a Q4 or Q5 96% of the time.

Thus, within the footprint of the satellite, 95% or more of the transmissions of both data and voice were of commercial quality. That success rate is very good: the specifications for the mobile radio systems used by police and fire departments usually require only 90% effectiveness for the area covered.

7

FIGURE 25.1

(*continued*)

Table 3

Success in Decoding DTMF Automatic Transmitter

REGION	STATES	ATS TRANSMISSIONS		ELEVATION
		Sent by Vehicle	Received and Decoded Correctly	Angle to Satellite (°)
Open Plains	Indiana Ohio Nebraska Illinois Iowa	284	283 (100%)	17–26
Western Appalachian Foothills	Ohio Tennessee	55	53 (96%)	15–19
Appalachian Mountains	West Virginia	112	93 (83%)	15–17
Piedmont	Virginia North Carolina	190	178 (97%)	11–16
Southern Piedmont	Georgia South Carolina	49	21 (43%)	17–18
TOTAL		690	628 (91%)	

8

(continued)

FIGURE 25.1

(*continued*)

To help their readers use this table without confusion, the research team placed vertical lines between the columns, which are very close together. Such lines are not needed in the other tables, where the space between the columns is greater.

Table 4

Quality of Voice Communication Signal[1]

Area	Transmission Time (Secs)	No Blockage Time (Secs)		Trees			Mountains and Hills			Overpasses (Momentary Dropouts)			Buildings		
		Q5	Q4	Q3	Q2	Q1	Q3	Q2	Q1	Q3	Q2	Q1	Q3	Q2	Q1
Open Plains	2481	2334	73	1	1	0	4	1	3	13	2	20	15	10	4
Western Foothills	344	322	2	0	0	0	6	12	13	0	0	0	0	0	0
Appalachian Mountains	1037	614	267	42	17	0	20	31	37	0	2	7	0	0	0
Piedmont	1219	481	623	5	15	19	25	16	10	4	1	4	8	4	1
Southern Piedmont	270	0	149	109	3	12	0	0	0	0	0	2	0	0	0
TOTAL TIME (seconds)	5351	3751	1114	157	36	31	55	60	63	17	5	33	23	14	5

[1]Total times in seconds for each quality of received signals. Q5 is excellent; Q1 is unintelligible.

9

FIGURE 25.1

(*continued*)

Factors Affecting the Quality of Transmissions

The factor having the largest effect on transmission quality is the location of the truck within the footprint of ATS-6. The quality of transmissions is even and uniformly good throughout the footprint, but almost immediately outside of it the quality drops well below acceptable levels.

In this section, too, the researchers begin with the most important point.

Several factors were found to disrupt transmissions even when the trucks were in the satellite's footprint. Table 4 shows what these factors are for the 4% of the transmissions in the footprint that were not of commercial quality. In all cases the cause is some object passing in the line of sight between the satellite and the truck.

The team refers to Table 4 again. This time, however, they want their readers to notice something different—and they tell the readers what that is.

Trees caused 45% of the disruptions, more than any other source. At the frequencies used for broadcasting in this system, trees and other foliage have a high and very sharp absorption. Of course, the tree must be immediately beside the road and also tall enough to intrude between the truck and the satellite, which is at an average elevation of 17° above the horizon. And the disruption caused by a single tree will create only a very brief and usually insignificant dropout of one second or less. Only driving past a group of trees will cause a significant loss of signal. Yet this happened often in the terrain of the Appalachian Mountains and the South Piedmont.

The researchers continue to present the information that is most important to their readers before the information that is less important to them. In this section, they start with the factor that causes the most disruptions: trees.

We believe we could eliminate many of the disruptions caused by trees if we developed an antenna specifically for use in communications between satellites and mobile radios. In the test, we used a standard dipole antenna. Instead, we might devise a Wheeler-type antenna that is omnidirectional in azimuth and with gain in the vertical direction to minimize ground reflections.

The researchers devote this paragraph to answering the question they imagine their readers will ask: "What can be done about the trees?"

Mountains and hills caused 36% of the disruptions. That happened mostly in areas where the satellite's elevation above the horizon was very low. Otherwise a hill or mountain would have to be very steep to block out a signal. For example, if a satellite were only 17° above the horizon, the hill would have to rise over 1500 feet per mile to interfere with a transmission—and the elevation would have to be precisely in a line between the truck and the satellite.

10

(*continued*)

FIGURE 25.1

(*continued*)

Most of the disruptions caused by mountains and hills can be eliminated by using satellites that have an elevation of at least 25°. That would place them above all but the very steepest slopes.

Highway overpasses accounted for 11% of the disruptions, but these disruptions had little effect on the overall quality of the broadcasts. As one of the test trucks drove on an open stretch of interstate highway, the signal was strong and steady, with fading less than 2 decibels peak-to-peak. About two seconds before the truck entered the overpass, there was detectable but not severe multipath interference. The only serious disruption was a one-second dropout while the truck was directly under the overpass. This one-second dropout was so brief that it did not cause a significant loss of intelligibility in voice communications. Only a series of overpasses, such as those found where interstate highways pass through some cities, cause a significant problem.

Finally, buildings and similar structures accounted for about 8% of the disruptions. These were experienced mainly in large cities, and isolated buildings usually caused only brief disruptions. However, when the trucks were driving down city streets lined with tall buildings, they were unable to obtain satisfactory communications until they were driven to other streets.

In the format used for this report, each section begins on its own page. Therefore, the last page of a section will have blank space if there isn't enough text to fill it.

11

FIGURE 25.1

(*continued*)

Section 4

CONCLUSIONS

This test supports three important conclusions:

- The Satellite Products Laboratory's system produces good-quality data and voice transmissions through the eleven-state region covered by the satellite's broadcast footprint.
- The most important factor limiting the success of transmissions is movement outside the satellite's broadcast footprint, which accurately defines the satellite's area of effective coverage.
- The system is sensitive to interference from certain kinds of objects in the line of sight between the satellite and the truck. These include trees, mountains and hills, overpasses, and buildings.

12

The researchers present their conclusions in an easy-to-read bulleted list.

Each conclusion corresponds to one of the research objectives that the team named in the introduction.

LEARN MORE For advice on writing the conclusions section of an empirical research report, see page 515. In addition, see Chapter 12, Ending a Communication.

(*continued*)

FIGURE 25.1

(*continued*)

The researchers present their overall recommendation first: Work on the project should continue.

They use bold type to highlight each of their other recommendations.

They then add the details that answer their readers' question: What would be involved in the work you recommend?

After making their last recommendation, the research team ends its report.

LEARN MORE For advice on writing the recommendations in an empirical research report, see page 517. In addition, see Chapter 12's guidelines for various ways to end a communication plus ways to select among these alternatives.

Section 5

RECOMMENDATIONS

Based on this test, we believe that work should proceed as rapidly as possible to complete an operational system. In that work, the Satellite Products Laboratory should do the following things:

1. **Develop a new antenna designed specifically for use in communications between satellites and mobile radios.** Such an antenna would probably eliminate many of the disruptions caused by trees, the most common cause of poor transmissions.

2. **Define the configuration of satellites needed to provide service throughout our planned service area.** We are now ready to determine the number and placement in orbit of the satellites we will need to launch in order to provide service to our planned service area (48 contiguous states, Alaska, Southern Canada). Because locations outside of the broadcast footprint of a satellite probably cannot be given satisfactory service, our satellites will have to provide thorough footprint coverage throughout all of this territory. Also, we should plan the satellites so that each will be at least 25° above the horizon throughout the area it serves; in that way we can almost entirely eliminate poor transmissions due to interference from mountains and hills.

13

FIGURE 25.2

Writer's Guide for Revising Empirical Research Reports

To download a copy of this Writer's Guide as well as a Writer's Guide for Planning Empirical Research Reports, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
REVISING EMPIRICAL RESEARCH REPORTS

Does your draft include each of the elements needed to create a report that your readers will find to be useful and persuasive? Remember that some elements of the superstructure may be unnecessary for your specific readers and purpose and that the elements may be organized in various ways.

Introduction

- ❑ Announces the topic of research presented in the report
- ❑ Persuades readers that this research is important to them
- ❑ Explains the relevance of the research to the organization's goals and, if appropriate, existing knowledge on the topic
- ❑ States briefly your main conclusions and recommendations, if the readers would welcome or expect them at the beginning of the report
- ❑ Provides background information the readers will need or want
- ❑ Forecasts the rest of your report, if this would help your readers

Objectives of Research

- ❑ Describes precisely what you were trying to find out through your research

Method

- ❑ Tells the things your readers want to know about the way you obtained the facts and ideas presented in the report
- ❑ Persuades the readers that this method would produce reliable results

Results

- ❑ Presents in clear and specific terms the things you found out
- ❑ Includes material that is relevant to your readers, and excludes material that isn't

Discussion (often presented along with the results)

- ❑ Interprets your results in a way that is useful to your readers

Conclusions (often presented along with the discussion)

- ❑ Explains the significance—from your readers' viewpoint—of your results and generalizations about them
- ❑ States the conclusions plainly

FIGURE 25.2

(*Continued*)

Writer's Guide
REVISING EMPIRICAL RESEARCH REPORTS
(*Continued*)

Recommendations

- ❑ Tells what you think the readers should do
- ❑ Makes the recommendations stand out prominently (for instance, by presenting them in a numbered list)
- ❑ Indicates how your recommendations are related to your conclusions and to your readers' goals
- ❑ Suggests some specific steps your readers might take to act on each of your recommendations, unless the steps will be obvious to the readers

Reasoning (See Chapter 5)

- ❑ States your claims and conclusions clearly
- ❑ Provides sufficient evidence, from the readers' viewpoint
- ❑ Explains, if necessary, the line of reasoning that links your facts and your claims
- ❑ Addresses any counterarguments or objections that your readers are likely to raise at any point in your report
- ❑ Avoids making false assumptions and overgeneralizing

Prose (See Chapters 4, 5, 8, and 10)

- ❑ Presents information in a clear, useful, and persuasive manner
- ❑ Uses a variety of sentence structures and lengths
- ❑ Flows in a way that is interesting and easy to follow
- ❑ Uses correct spelling, grammar, and punctuation

Graphics (See Chapter 14)

- ❑ Included wherever readers would find them helpful or persuasive
- ❑ Looks neat, attractive, and easy to read
- ❑ Referred to at the appropriate points in the prose
- ❑ Located where your readers can find them easily

Page Design (See Chapter 16)

- ❑ Looks neat and attractive
- ❑ Helps readers find specific information quickly

Ethics

- ❑ Treats all the report's stakeholders ethically
- ❑ Presents all information accurately and fairly

26 | Writing Reader-Centered Feasibility Reports

The workplace buzzes with decisions about future action. Among the more common are decisions about whether to do something new or in a new way. Although some of these decisions are easily made, others involve substantial changes. A company that manufactures wind turbines might want to know whether it should build a second factory several states away from its original location. A hospital might want to know whether it should replace its conventional telephone system with the Internet-based technology known as Voice Over Internet Protocol (VOIP) that works through computers and computer lines rather than telephone switchboards and wiring.

To determine whether such large changes are practical and desirable, decision makers usually ask consultants or some of their own employees to conduct extensive research. This research is typically called a *feasibility study*. The study's results are presented in a *feasibility report*. Whether on a large or small scale, you are likely to be asked to prepare a feasibility report many times in your career. This chapter guides you through the process.

HOW TO GET THE MOST VALUE FROM THIS CHAPTER

Almost certainly, you are reading this chapter because your instructor asked you to. It's likely that your instructor also asked you to write a feasibility report. To get the most out of reading this chapter, think of the two assignments together: As you read each piece of advice, focus on planning ways to apply it to your report.

Your instructor will help you in many ways, but you'll learn most if you take the lead with your reading.

As a guide to the general points on which you can focus, concentrate on developing your abilities to do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Describe the major goals of a feasibility report.
2. Describe the superstructure for feasibility reports and the ways its elements correspond with the readers' questions.
3. Adapt the reader-centered writing process to the special goals of feasibility reports.
4. Write an effective feasibility report.

FEATURES OF FEASIBILITY REPORTS THAT HELP YOU

Two features of feasibility reports can be very helpful to you. First, as decision makers consider their alternatives, they tend to ask the same set of general questions. These questions can guide your research and writing. Second, feasibility reports are prepared so often in the workplace that a set of conventions have developed concerning their content and organization. These conventions have proven successful in helping writers provide the information their readers want in a structure the readers find easy to use. These conventions constitute the *superstructure*, or *genre*, of the feasibility report. As you research, plan, and write feasibility reports in college and in your career, you will be helped immensely by your knowledge of the readers' typical questions and the superstructure for answering them. The next two sections describe the questions and superstructure.

LEARN MORE For a detailed explanation of superstructures, turn to page 487.

THE QUESTIONS READERS ASK MOST OFTEN

As decision makers think about the choices they must make, they ask many questions. From situation to situation, their basic questions remain the same, and the superstructure for feasibility reports is a widely used way of providing the answers. Here are the readers' typical questions, the ones you need to answer in your feasibility reports.

- **Why is it important for us to consider these alternatives?** In some cases, you need to tell decision makers why they have to make a choice in the first place. They may need a detailed explanation of the problem before they can appreciate the urgency of considering alternative courses of action. If they are already familiar with the problem, they may need to be reassured that you understand it in the same way they do.

- **What are the important features of our alternatives?** So that they can understand your detailed discussion of the alternatives, readers want you to highlight the key features of each one.
- **Are your criteria reasonable and appropriate?** To help your readers choose between alternative courses of action, you must evaluate the alternatives in terms of specific criteria. At work, people want these criteria to reflect the needs and aims of their organization.
- **Are your facts reliable?** Evaluating alternatives involves comparing facts about them against the criteria for judging them. Your readers want to know that they can rely on the accuracy of the facts you present.
- **How do the alternatives stack up against your criteria?** The heart of a feasibility study is your evaluation of the alternatives in terms of your criteria. Your readers want to know the results.
- **What overall conclusions do you draw about the alternatives?** Based on your detailed evaluation of the alternatives, you will reach general conclusions about the merits of each. Your readers need to know what your conclusions are because these overall judgments are the basis on which they will make their decision.
- **What do you think we should do?** Because of your expertise on the subject, your readers want you to tell what you recommend. In addition, they may desire suggestions about how to proceed if they decide to follow your recommendation.


ollyy/Shutterstock.com


ownway/Shutterstock.com


© Ronnie Howard/Shutterstock.com

Decisions and actions based on feasibility studies affect every aspect of our lives and environment.

SUPERSTRUCTURE FOR FEASIBILITY REPORTS

The superstructure for feasibility reports contains seven elements. The superstructure is helpful to writers and readers because each element responds to one of the decision makers' seven basic questions.

SUPERSTRUCTURE FOR FEASIBILITY REPORTS

REPORT ELEMENT	READERS' QUESTION
Introduction	Why is it important for us to consider these alternatives?.
Overview of alternatives	What are the important features of the alternatives?
Criteria	Are your criteria reasonable and appropriate?
Method	Are your facts reliable?
Evaluation	How do the alternatives stack up against your criteria?

Conclusions	What overall conclusions do you draw about the alternatives?
Recommendations	What do you think we should do?

GUIDING YOU THROUGH THE PROCESS OF PREPARING FEASIBILITY REPORTS

When creating feasibility reports, writers perform the same activities as when they are preparing any workplace communication: defining the communication's goals, conducting research, planning, drafting, and revising. The following sections tell how you can perform each activity in ways especially suited to this special kind of communication.

Defining Your Communication's Goals

A feasibility report's purpose flows directly from its goal of helping decision-making readers choose between two or more courses of action, one of which is usually to continue doing things as they are now done. The report's usefulness goal is to provide in an easy-to-use form the information and advice its readers need to make this decision. By identifying the specific way your readers will ask the last four questions above, you can define exactly what your report should provide.

The report's persuasive goal is to assure its decision-making readers that it provides a solid basis for decisions they must make. As explained in Chapter 5, decision makers take a cautious, professionally skeptical approach when reading. Your answers to the readers' questions about the research methods and criteria for evaluating the alternatives address their major concerns about the accuracy, completeness, and reliability of the information your report provides.

LEARN MORE For detailed advice about defining your report's goals, see Chapter 3.

The Writer's Guide for Defining Your Communication's Goals (page 62) will help you identify the additional information about your communication's purpose, readers, and context that is needed to fully define its goals.

Conducting Research

When you define the goal of your report, you also define the goal of the research, which has only one purpose: to provide information and advice you need in order to write a useful and persuasive report.

Chapters 6 and 7 provide detailed advice about conducting this research. Here are a few additional points that deserve emphasis when you are preparing a feasibility report.

- **Gain a full understanding of your readers' criteria.** Begin by researching your readers. Learn how they will evaluate the alternatives. This knowledge can guide the rest of your research efforts, assuring that you gather the information your readers want. It also saves you from spending time gathering information that is irrelevant to your readers.
- **Investigate all implications of the alternatives being considered.** In particular, consider the actions that would be required to implement the

alternatives. The hospital thinking of replacing its conventional phone system with Internet technology needs to consider many factors other than the features and cost of the two systems. Can its central computer server support the Internet system? What training in using that system would the doctors, nurses, and other staff members need? Who would provide it? Because the entire hospital couldn't be converted in one day, what needs to happen on the days when some departments have the new system and others have the old system?

- **Consult several kinds of sources.** Different kinds of sources can provide different perspectives and types of information. Chapter 6 suggests that you consult each of these four types (page 135):
  - Persons who would be affected by changing to each of the alternatives
  - Persons who would help to implement the alternatives if they were chosen
  - Other organizations or groups using the alternatives
  - Professional publications that may report on or evaluate the alternatives
- **Avoid bias in your information gathering.** Employees conducting feasibility studies sometimes start out favoring a particular alternative. They may then tend to seek out information that supports that choice, rather than gathering the full range of relevant information.
- **Consider creating tables for analyzing the information you've gathered.** Tables or matrixes can help you examine the alternatives the way your readers want to: point-by-point against the criteria. This approach matches the way your readers will use your report.

TRY THIS Think of a change you would like to see at your school or in your community. Who could decide to bring about that change? If this person or group were to request a feasibility study related to the change, what criteria would the person or group use to evaluate the alternatives?

LEARN MORE For detailed advice about conducting research, see Chapter 6, Conducting Reader-Centered Research: Gathering, Analyzing, and Thinking Critically About Information, and Chapter 7, Using Five Reader-Centered Research Methods.

Planning

When planning a feasibility report, your most important decision is how to organize content between your introduction and your recommendations.

Sometimes the most effective way to organize is to create five middle sections, one for each of the five middle elements of the superstructure. Figure 26.1 shows how Magnus used this organization when reporting on the feasibility of installing a heat-pump system to replace the conventional heating and air-conditioning systems at his employer's building. This organization works best when the readers have only one decision to make and the writer used only a single method to gather the information about the alternatives.

Sometimes the order of elements in the superstructure provides an effective organizational pattern.

A second organization can be more effective for readers who have two or more decisions to make. Megan and Rajiv addressed such readers in their report on the feasibility of switching to an Internet telephone system. Their readers had to consider not only the system's features, but also who might install it, how training could be handled, and so on. To help readers make these separate decisions, you can treat each decision in its own section or chapter that discusses the criteria, methods, results, and evaluation relevant to that decision. Figure 26.2 shows the organization of Megan and Rajiv's report.

If your readers have several decisions to make, they will probably find it easiest to use a report organized around those decisions.

A third organization works well when your readers will make a single decision, but you used a different research method for gathering information relevant to each of the criteria. In such cases, readers find it helpful to have a separate chapter or section devoted to each criterion. Each of the chapters would include

In other cases, organizing around the criteria helps readers.

FIGURE 26.1

Feasibility Report Organized by Devoting One Section to Each of the Seven Elements in the Superstructure for Feasibility Reports

The organization that Magnus created for this report matches the order of the elements in the superstructure for feasibility reports.

Introduction
Magnus created a brief, one-paragraph introduction focused on the background for his feasibility study and report.

Overview of alternatives
To assure that his readers understood each of the alternatives, Magnus provided detailed explanations including schematic diagrams of each alternative.

Criteria
Magnus used only a few sentences to describe the criteria.

Method
He used the same methods for gathering information related to all of the criteria.

Evaluation
In the section for each criterion, Magnus presented the relevant information about all three types of systems.

Conclusions
He stated each of his major conclusions and cited the specific facts discussed in the Evaluation section that supported the conclusion.

Recommendations
Magnus highlighted the main actions he believed his employer should take.

LEARN MORE For information on patterns for organizing comparisons, turn to pages 209–214.

Replacing the Building's Heating and Air-Conditioning System with a Heat-Pump System: A Feasibility Study

I. Introduction

A. The heating and air-conditioning system in our building needs to be replaced
B. I was asked to study the feasibility of changing to a heat-pump system

II. Types of heat pumps for use in office buildings

A. Air source (exchanges heat with air outside the building)
B. Geothermal (exchanges heat with ground)
C. Heat absorption (runs on gas to exchange heat with outside air)

III. Criteria

A. Efficiency in our climate (different systems work better in different climates)
B. Amount of damage installation would cause to our wooded property
C. Cost (installation and operation)

IV. Research methods

A. Consulted credible sources in print and online
   i. U.S. government resources on green technologies
   ii. Engineering journals
B. Interviewed knowledgeable people
   i. Representatives of companies that sell heat-pump systems in our area
   ii. Owners of buildings in the area that use heat pumps

V. Evaluation

A. Effectiveness in our area's climate
B. Amount of damage installation would cause to our property
C. Cost (installation and operation)

VI. Conclusions

A. Over 6 years, total cost for all heat pumps is lower than standard heat and air
B. Geothermal heat pumps are most effective here, though more costly and most potentially damaging to our property

VII. Recommendations

A. Select a geothermal system
B. Use the vertical rather than horizontal installation of the pipes to minimize damage to landscape around the building
C. Next step: Invite proposals from companies that install heat-pump systems

Feasibility of Switching to an Internet Telephone System at Whitney Hospital

I. Introduction

A. Current system provides familiar services satisfactorily
B. Internet system has features that increase efficiency

II. Infrastructure

A. New phone on every desk (alternatives, criteria, method, evaluation)
B. Server to support the system (alternatives, criteria, method, evaluation)
C. Ethernet wiring (alternatives, criteria, method, evaluation)

III. Installation

A. What needs to be done (criteria, method)
B. Alternative 1: Use our IT department (description of this alternative)
C. Alternative 2: Contract with an outside firm (description of this alternative)
D. Evaluation of alternatives

IV. Training

A. What needs to be done (criteria, method)
B. Alternative 1: Use our IT department (description of this alternative)
C. Alternative 2: Contract with an outside firm (description of this alternative)
D. Evaluation of alternatives

V. Management of the Changeover

A. Overview of changeover
B. Alternatives for minimizing disruption to doctors, etc. (criteria, method, evaluation)
C. Alternatives for maintaining full communication while changing (criteria, method, evaluation)

VI. Conclusions and Recommendations

FIGURE 26.2

Feasibility Report Whose Middle Sections Are Organized Around the Decisions the Readers Will Make

Megan and Rajiv investigated the feasibility of installing a new phone system. In the middle of their report, they devote one chapter to each of four major decisions their readers would need to make.

Introduction
They explain the reasons for considering a new phone system and describe the decisions to be made.

Overview of alternatives

Chapters II through V
If the hospital switches, it will need to make decisions in four areas: infrastructure, installation, training, and management of the changeover. Megan and Rajiv write a separate chapter for each of these decisions. In each of these chapters, they include the relevant criteria, methods, alternatives, and evaluation.

Conclusions and recommendations
They combined these two elements in a final chapter that draws together the evaluations from the earlier chapters and recommends specific actions to the readers.

LEARN MORE For information on patterns for organizing comparisons, go to pages 209–214.

the research method, results, and evaluation related to the specific criterion the chapter addresses. Figure 26.3 shows how Allen used this pattern when reporting on the feasibility of using a new ingredient to make paper at one of his employer's paper mills.

To organize in these reader-centered ways, you need to remember that the superstructure for feasibility reports represents the elements of the report, not their outline. The elements may be combined and rearranged in many ways to meet your readers' needs.

LEARN MORE Remember that a superstructure is not an outline; you may combine the elements of a superstructure in many ways to serve your readers' needs. See the discussions of superstructures on pages 487 and 488.

FIGURE 26.3

Feasibility Report Whose Middle Sections Are Organized Around the Criteria the Readers Will Use to Evaluate the Alternatives

In this feasibility report, Allen organizes the central chapters around the criteria his readers will use to decide whether to change the extender in the paper mill where he works.

Introduction

Overview of alternatives

First three criteria
For each of the first three criteria, Allen describes the relevant criterion, method, results, and evaluation.

Fourth and fifth criteria
For the fourth and fifth criteria, the methods of gathering information are obvious, so Allen doesn't report them.

Sixth criterion

Conclusions and recommendation

Because these two elements are so brief, Allen combined them in one chapter.

Feasibility of Using Silicate Extenders for 36-Pound Book Paper

I. Introduction

- A. The cost of TiO2 is rising; some paper mills are using silicate extenders
- B. I evaluated two silicate extenders: Zenolux and Tri-Sil

II. Physical Properties

- A. Retention
  - i. Criterion (named only: the readers need no explanation)
  - ii. Method
  - iii. Evaluation
- B. Opacity
  - i. Criterion (named only; the readers need no explanation)
  - ii. Method
  - iii. Evaluation
- C. Brightness
  - i. Criterion (named only; the readers need no explanation)
  - ii. Method
  - iii. Evaluation

III. Material Handling

- A. Storage
  - i. Criterion
  - ii. Evaluation
- B. Safety
  - i. Criterion
  - ii. Evaluation

IV. Cost

- A. Criteria
- B. Evaluation

V. Conclusions and Recommendation

© Cengage Learning

Methods and Evaluation
Because he used different methods to gather information related to each of the criteria, Allen described the relevant method in the section on that criterion. Likewise, he presented his evaluations in terms of each criterion in the chapter or section that discussed it.

Drafting and Revising

Some people mistakenly think that drafting a report could or should wait until all the research has been completed. There are advantages, however, to drafting parts as soon as you are able. By drafting your criteria as you begin your research, you sharpen your sense of what you need to find. Likewise, drafting your methods section as you are designing your research enables you to step back to review and possibly refine your research plan. Drafting as you go also helps you avoid the all-too-common situation in which writers leave so much drafting until right before the deadline that they don't have time to revise and polish their reports.

CRAFTING THE MAJOR ELEMENTS OF A FEASIBILITY REPORT

All of the detailed advice that Chapters 8 through 16 provide about drafting workplace communications applies to feasibility reports. The following sections tell how you can apply some of this advice most productively when writing this type of report.

Introduction

In the introduction to a feasibility report, you should answer your readers' question, "Why is it important for us to consider these alternatives?" The most persuasive way to answer this question is to identify the problem your feasibility report will help your readers solve or the goal it will help them achieve: to reduce the number of rejected parts, to increase productivity, and so on. Beyond that, your introduction should announce the alternative courses of action you studied and tell generally how you investigated them.

LEARN MORE For additional advice on writing an introduction, see Chapter 11, Beginning a Communication.

Consider, for example, the way Allen, a process engineer in a paper mill, wrote the introduction of a feasibility report he prepared. (Allen's entire report appears in Figure 26.5, pages 552–557.) Allen was asked to study the feasibility of substituting one ingredient for another in the furnish for one of the papers the mill produces (*furnish* is the combination of ingredients used to make the pulp for paper):

> At present we rely on the titanium dioxide (TiO2) in our furnish to provide the high brightness and opacity we desire in our paper. However, the price of TiO2 has been rising steadily and rapidly for several years. We now pay roughly $1400 per ton for TiO2, or about 70¢ per pound.

Problem

> Some mills are now replacing some of the TiO2 in their furnish with silicate extenders. Because the average price for silicate extenders is only $500 per ton, well under half the cost of TiO2, the savings are very great.
>
> To determine whether we could enjoy a similar savings for our 30-pound book paper, I have studied the physical properties, material handling requirements, and cost of two silicate extenders, Tri-Sil 606 and Zenolux 26 T.

Possible solution

What Allen did to investigate the possible solution

Generally, the introduction to a long feasibility report (and most short ones) should also include a preview of the main conclusions and, perhaps, the major recommendations. Allen included his major conclusion:

> I conclude that one of the silicate extenders, Zenolux 26 T, looks promising enough to be tested in a mill run.

Allen's main point

As another example, consider the way Ellen wrote the introduction of a feasibility report she prepared for the board of directors of the bank where she works (see Figure 26.4). Ellen was asked to evaluate the feasibility of opening a new branch in a particular suburban community. She began by announcing the topic of her report:

Ellen's introduction

> This report discusses the feasibility of opening a branch office of Orchard Bank in Rolling Knolls, Tennessee.

Then, after giving a sentence of background information about the source of the bank's interest in exploring this possibility, Ellen emphasized the importance of conducting a feasibility study:

> In the past, Orchard Bank has approached the opening of new branches with great care, which is undoubtedly a major reason that in the twelve years since its founding it has become one of Tennessee's most successful small, privately owned financial institutions.

FIGURE 26.4

How Ellen Used the Superstructure for Feasibility Reports

In her report on the feasibility of opening a new branch of her bank, Ellen mixes in several ways the elements of the superstructure for feasibility reports.

Introduction
Ellen explains the importance of considering the feasibility of opening a new branch.

Overview of alternatives
For Ellen's study there are two alternatives: Open a new branch or don't open it. Because her readers already know what it is like to have no new branch, she describes only what it would be like to open one.

Evaluation of the alternatives
Ellen divides her evaluation of the alternative of opening a new branch into three sections, one for each of her criteria:

- Marketability
- Ability to make a profit
- Costs

Criteria
Ellen identifies each of her criteria at the beginning of the appropriate section. For instance, at the beginning of her section on market analysis, she discusses her criteria related to marketability.

Feasibility of Opening a Branch of Orchard Bank in Rolling Knolls, Tennessee

I. Introduction

A. Orchard Bank has built its success on carefully selecting locations for its offices
B. A new branch office in Rolling Knolls has been suggested
C. This report evaluates the proposed location

II. Proposed Location

A. The branch would serve Rolling Knolls and Pickett
B. The site selected is Lot P1-C in Rolling Knolls

III. Market Analysis

A. This is a prosperous, growing area
B. The population has two distinct groups
   1. Long-time residents of the area
   2. Newcomers, mainly young commuters
C. The competition
   1. Local offices of banks and savings and loans
   2. Nashville banks used by many commuters
D. Potential marketing strategies
   1. A two-pronged strategy for appealing to this two-part market
   2. The strategy would require Orchard to do some things it hasn't done before

IV. Financial Analysis

A. The branch could become profitable after three years if a good marketing plan is established and followed
B. Estimated deposits
C. Estimated income and expenses

V. Fixed Asset Expenditures

VI. Conclusions and Recommendations

A. Rolling Knolls offers opportunity, but also risk
B. Recommendations
   1. Hire marketing firm to help assess the situation more precisely
   2. Take an option on the lot in Rolling Knolls

© Cengage Learning

Method
Ellen explains each of her methods of gathering facts at the beginning of each analysis. For instance, she describes how she learned about the prosperity and growth of the Rolling Knolls area at the beginning of Section II. A.

Conclusions
Recommendations
Ellen combines these two elements of the superstructure in her final section.

Ellen also included her major conclusion:

> Overall, the Rolling Knolls location offers an enticing opportunity, but would present Orchard Bank with some challenges it has not faced before.

She ended her introduction with a brief summary of her major recommendation:

> We should proceed carefully.

The introduction of a feasibility report is often combined with one or more of the other six elements, such as a description of the criteria, a discussion of the method of obtaining facts, or an overview of the alternatives. It may also include the various kinds of background, explanatory, and forecasting information that may be found in the beginning of any technical communication (see Chapter 11).

Criteria

Criteria are the standards that you apply in a feasibility study to evaluate the alternative courses of action you are considering. For instance, to assess the feasibility of opening the new branch office, Ellen used many criteria, including the existence of a large enough market, the possibility of attracting depositors away from competitors, the likelihood that profits on deposits at the branch would exceed the expenses of operating it, and the reasonableness of the financial outlay required to open the office. If she had found that the proposed branch failed to meet any of those criteria, she would have concluded that opening it was not feasible. Likewise, Allen evaluated the two silicate extenders by applying several specific criteria.

Two Ways of Presenting Criteria

There are two common ways of telling your readers what your criteria are:

- **Devote a separate section to identifying and explaining them.** Writers often do this in long reports or in reports in which the criteria themselves require extended explanation.
- **Integrate your presentation of them into other elements of the report.** Allen did this in the following sentence from the third paragraph of his introduction:

  > To determine whether we could enjoy a similar savings for our 30-pound book paper, I have studied the physical properties, material handling requirements, and cost of two silicate extenders, Tri-Sil 606 and Zenolux 26 T.

Allen names his three criteria.

For each of the general criteria named in this sentence, Allen had some more specific criteria, which he described when he discussed his methods and results. For instance, at the beginning of his discussion of the physical properties of the two extenders, he named the three properties he evaluated.

Importance of Presenting Criteria Early

Whether you present your criteria in a separate section or integrate them into other sections, you should introduce them early in your report. There are three good reasons for doing this. First, because your readers know that the validity of your conclusion depends on the criteria you use to evaluate the alternatives, they will want to evaluate the criteria themselves. They will ask, "Did you take into account all the considerations relevant to this decision?" and "Are the standards you are applying reasonable in these circumstances?"

Second, your discussion of the criteria tells readers a great deal about the scope of your report. Did you restrict yourself to technical questions, for instance, or did you also consider relevant organizational issues such as profitability and management strategies?

The third reason for presenting your criteria early is that your discussion of the alternative courses of action will make much more sense to your readers if they know in advance the criteria by which you evaluated the alternatives.

Sources of Your Criteria

You may wonder how to come up with the criteria you will use in your study and report. Often, the person who asks you to undertake a study will tell you what criteria to apply. In other situations, particularly when you are conducting a feasibility study that requires technical knowledge that you have, but your readers don't, your readers may expect you to identify the relevant criteria for them.

You may refine your criteria while you are writing your report.

In either case, you are likely to refine your criteria as you conduct your study. The writing process itself can help you refine your criteria because as you compose you must think in detail about the information you have obtained and decide how best to evaluate it.

Four Common Types of Criteria

As you develop your criteria, you may find it helpful to know that, at work, criteria often address one or more of the following questions:

- **Will this course of action really do what's wanted?** This question is especially common when the problem is a technical one: Will this reorganization of the department really improve the speed with which we can process loan applications? Will the new type of programming really reduce computer time?
- **Can we implement this course of action?** Even though a particular course of action may work technically, it may not be practical. For example, it may require overly extensive changes in operations, equipment, or materials that are not readily available, or special skills that employees do not possess.
- **Can we afford it?** Cost can be treated in several ways. You may seek an alternative that costs less than some fixed amount or one that will save enough to pay for itself in a fixed period (for example, two years). Or you may simply be asked to determine whether the costs are "reasonable."
- **Is it desirable?** Sometimes a solution must be more than effective, implementable, and affordable. Many otherwise feasible courses of action are rejected because they create undesirable side effects. For example, a company might reject a plan for increasing productivity because it would impair employee morale.

Ultimately, your selection of criteria for a particular feasibility study will depend on the problem at hand and on the professional responsibilities, goals, and values of the people who will use your report. In some instances, you will need to deal only with criteria related to the question, "Does it work?" At other times, you might need to deal with all the criteria mentioned above, plus others. No matter what your criteria, however, announce them to your readers before you discuss your evaluation.

Method

By explaining how you obtained your facts, you answer your readers' question, "Are your facts reliable?" That is, by showing that you used reliable methods, you assure your readers that your facts form a sound basis for decision making.

The source of your facts will depend on the nature of your study—library research, calls to manufacturers, interviews, meetings with other experts in your organization, surveys, laboratory research, and the like.

How much detail should you provide about your methods? That depends on your readers and the situation, but in every case your goal is to say enough to satisfy your readers that your information is trustworthy. For example, Ellen used some fairly technical procedures to estimate the amount of deposits that Orchard Bank could expect from a new branch in Rolling Knolls, Tennessee. However, because those procedures are standard in the banking industry and well-known to her readers, she did not need to explain them in detail.

In contrast, Allen provided very specific details about his methods of testing the extenders. Even a small mistake could produce inaccurate results that, in turn, could lead the paper mill to make a very expensive error. He knew, therefore, that his readers would want to review for themselves each step in his test procedure.

The best place for describing your methods depends partly on how many techniques you used. If you used only one or two—say, library research and interviews—you might describe each in a separate paragraph or section near the beginning of your report, perhaps in the introduction. On the other hand, if you used several different techniques, each pertaining to a different part of your analysis, you might describe each of them at the point where you present and discuss the results you obtained.

Of course, if your methods are obvious, you may not need to describe them at all. You must always be sure, however, that your readers know enough about your methods to accept your facts as reliable.

Overview of Alternatives

To understand your detailed evaluation of the alternatives, your readers must first understand what the alternatives are. Often, you can foster this understanding with a short explanation, perhaps only a sentence long. For instance, as a consultant to a chain of convenience stores you would need only a few words to enable your readers to understand whether increasing starting pay would help your company attract and retain skilled store managers.

However, you may sometimes need to explain the alternatives in detail. Although the hospital executives were familiar with what conventional phones could do, they didn't know anything about the capabilities of an Internet telephone system, such as their ability to forward voicemail messages to the e-mail account of the person called. Consequently, Megan and Rajiv described the Internet system in detail, highlighting features conventional telephones don't have that could help doctors, nurses, and other hospital personnel.

Evaluation of the Alternatives

The heart of a feasibility report is your evaluation of the alternatives you examined. As explained earlier in this chapter (page 539), a primary consideration is organizing your evaluation in the way that makes it easiest for your readers to use it as they make their decisions. Two additional strategies can also assist your readers.

Put Your Most Important Points First

LEARN MORE See Chapter 8, page 180.

Chapter 8's advice to begin each segment of your communication with the most important information applies to the segment in which you evaluate the alternatives, as well as to its parts. By presenting the most important information first, you save your readers the trouble of trying to figure out what generalizations they should draw from the details you are presenting. For instance, in her report to the bank, Ellen begins one part of her evaluation of the Rolling Knolls location by saying:

Beginning of Ellen's evaluation

> The proposed Rolling Knolls branch office would be profitable after three years if Orchard Bank successfully develops the type of two-pronged marketing strategy outlined in the preceding section.

Ellen then spends two pages discussing the estimates of deposits, income, and expenses that support her overall assessment.

Similarly, Allen begins one part of his evaluation of the silicate extenders in this way:

Beginning of Allen's evaluation

> With respect to material handling, I found no basis for choosing between Zenolux and Tri-Sil.

Allen then spends two paragraphs reporting the facts he has gathered about the physical handling of the two extenders.

Dismiss Obviously Unsuitable Alternatives

Lengthy discussions of clearly unsuitable alternatives provide no benefit to your readers. They only increase the time required to read your report.

If you discover that an alternative fails to meet one or more of the critical criteria, explain this fact briefly, providing only the details needed to persuade your readers that you were right to drop the alternative from consideration.

Provide this explanation in the introduction (when you are talking about your report's scope) or in the overview of the alternatives. If you delay the explanation to a later section, the mistaken thought that you have missed an important alternative may distract your readers as they read the rest of your report.

Conclusions

Your conclusions constitute your overall assessment of the feasibility of the alternative courses of action you studied. You might present your conclusions in two or three places in your report. You should certainly mention them in summary form near the beginning. If your report is long (say, several pages), you might also remind your readers of your conclusions at the beginning of the evaluation segment.

Finally, you should provide a detailed discussion of your conclusions in a separate section following your evaluation of the alternatives.

Recommendations

It is customary to end a feasibility report by answering the decision makers' question, "What do you think we should do?" Because you have investigated and thought about the alternatives so thoroughly, your readers will place special value on your recommendations. Depending on the situation, you might need to take only a single sentence or many pages to present your recommendations.

Sometimes your recommendations will pertain directly to the course of action you studied: "Do this," or "Don't do this." At other times you may perform a preliminary feasibility study to determine whether a certain course of action is promising enough to warrant a more thorough investigation. Ellen's report about opening a new bank office is of that type. She determined that there was a substantial possibility of making a profit with the new branch, but she felt the need for expert advice before making a final decision. Consequently, she recommended that the bank hire a marketing agency to evaluate the prospects.

Sometimes you may discover that you were unable to gather all the information you needed to make a firm recommendation. Perhaps your deadline was too short or your funds too limited. Perhaps you uncovered an unexpected question that needs further investigation. In such situations, you should point out the limitations of your report and let your readers know what else they should find out so they can make a well-informed decision.

SAMPLE FEASIBILITY REPORT

It is much easier to understand writing advice if you see sample communications that follow that advice. Take a moment to look at a sample and the marginal notes that point out some of the writer's major strategies. Figure 26.5 shows the feasibility report Allen wrote to help his employer decide whether to use a silicate extender at one of its paper mills. Allen's outline for this report is shown in Figure 26.3 (page 544).

WRITER'S GUIDES AND OTHER RESOURCES

Figure 26.6 presents a Writer's Guide for Revising Feasibility Reports that you can use in your course and on the job. At the website for this book, you can download a copy of this Writer's Guide as well as one for planning feasibility reports.

WEB To download Writer's Guides for planning and revising feasibility reports, go to your English CourseMate at *www.cengagebrain.com.*

Note to the Instructor For an assignment involving an empirical research report, you can ask students to write on research they are conducting in their majors, or you can adapt the "Formal Report or Proposal" project given in Appendix B. Other projects and cases that involve report writing are included at the book's website. To tailor the writer's guides to your course, download them from the website.

FIGURE 26.5

Feasibility Report (*Courtesy of Allen J. Hines*)

In this report, Allen reports on the feasibility of replacing one chemical with another in the "furnish" his employer uses to manufacture paper.

Allen includes a precise and informative subject line so his readers know exactly what his report is about.

Allen uses a 125-word summary of the entire report to enable his readers to understand the main points immediately.

In his summary, Allen emphasizes the content that will most interest his readers: his conclusion and recommendation.

In the first sentence of his introduction, Allen presents the background information his readers will need in order to understand why his report is important to them.

Allen identifies the specific problem his report addresses.

REGENCY INTERNATIONAL PAPER COMPANY

MEMORANDUM

FROM: Allen Hines, Process Engineer
TO: Jim Shulmann, Senior Engineer
DATE: December 13, 2013

SUBJECT: FEASIBILITY OF USING SILICATE EXTENDERS FOR 30-POUND BOOK PAPER

Summary

I have investigated the feasibility of using a silicate extender to replace some of the TiO_2 in the furnish for our 30-pound book paper. Because the cost of the extenders is less than half the cost of TiO_2, we could enjoy a considerable savings through such a substitution.

The tests show that either one of the two extenders tested can save us money. In terms of retention, opacity, and brightness, Zenolux is more effective than Tri-Sil. Consequently, it can be used in smaller amounts to achieve a given opacity or brightness. Furthermore, because of its better retention, it will place less of a burden on our water system. With respect to handling and cost, the two extenders are roughly the same.

I recommend a trial run with Zenolux.

Introduction

At present we rely on the titanium dioxide (TiO_2) in our furnish to provide the high brightness and opacity we desire in our paper. However, the price of TiO_2 has been rising steadily and rapidly for several years. We now pay roughly $1400 per ton for TiO_2, or about 70¢ per pound.

Courtesy Allen J. Hines

FIGURE 26.5

(*continued*)

Silicate Extenders Page 2

Some mills are now replacing some of the TiO_2 in their furnish with silicate extenders. Because the average price for silicate extenders is only $500 per ton, well under half the cost of TiO_2, the savings are very great.

To determine whether we could enjoy a similar savings for our 30-pound book paper, I have studied the physical properties, material handling requirements, and cost of two silicate extenders, Tri-Sil 606 and Zenolux 26 T. I conclude that one of the silicate extenders, Zenolux 26 T, looks promising enough to be tested in a mill run.

Tests of Physical Properties

The three physical properties I tested are retention, opacity, and brightness. In all three areas, Zenolux is superior.

Retention

As with any ingredient in our furnish, we must be concerned with the proportion of a silicate extender that will be retained in the paper and the proportion that will be left in the water, where it is wasted and may cause problems in our water system. To test retention of the two silicate extenders, I made two dozen handsheets, each containing the equivalent of 3 grams of oven-dried pulp and 2 grams of oven-dried extender. By weighing the finished handsheets, I determined how much silicate extender had been lost from each.

The results showed that the average retention for Zenolux was 75%, whereas the average retention for Tri-Sil was 51%. Higher retention should result in higher opacity and brightness because more particles remain in the furnish to prevent clumping of the TiO_2.

Opacity

To determine the effectiveness of each extender in preventing light from passing through the paper, I conducted a two-stage test of opacity. First, I investigated the opacity of TiO_2, Tri-Sil, and Zenolux when each is used alone. To do that, I made the following sets of handsheets:

Courtesy Allen J. Hines

Allen tells his readers about a possible solution that other paper mills have used: Replace TiO_2 with a silicate extender.

He describes what he did to investigate the feasibility of the possible solution.

Allen states his major conclusion and recommendation.

He identifies his criteria for evaluating the physical properties of the silicate extenders.

Allen helps his readers find key information by briefly stating the overall result of his tests of physical properties before going into the details of the tests.

Allen explains the importance of testing retention.

To build his readers' confidence in his results, Allen gives precise details about his method for testing retention.

He combines his results with his discussion of them. In this paragraph, he gives exact percentages.

Allen introduces his method for testing opacity.

(*continued*)

FIGURE 26.5

(*continued*)

As in his section on testing physical properties, Allen includes precise information about his testing method in order to persuade his readers that he used a sound method. To making reading easy, he presents some details in a bulleted list.

Allen refers his readers to a graph that presents the results of his test in a more understandable way than sentences would. However, he also states the main point he wants his readers to derive from the graph: Zenolux is superior.

He places the graph at the point in the report when his reader will want to look at it.

Again, Allen describes his method in detail, and again he uses a graph to present the results in a reader-centered way (next page). He also states the main point he wants his readers to see when they look at the graph.

- 8 handsheets containing each of the following loadings of TiO_2: 2%, 4%, 6%, 8%, 10%, 12%, 14%, and 16%.
- 8 handsheets containing each of the same loadings of Tri-Sil.
- 8 handsheets containing each of the same loadings of Zenolux.

I stored the handsheets at the standard conditions of 50% relative humidity and 23°C for 24 hours. Then, I found the TAPPI opacity of each handsheet. The results, given for the average opacity at each loading, are shown in Figure 1. Again, Zenolux is superior to Tri-Sil.

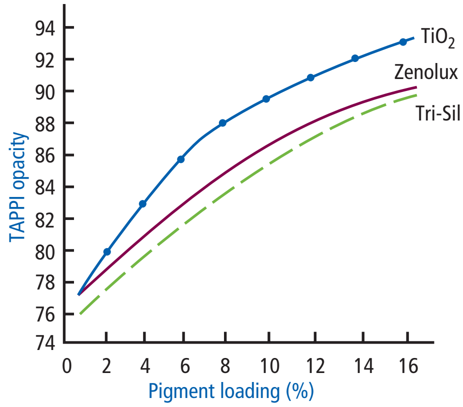


Figure 1. TAPPI Opacity for Various Loadings of TIO_2, Zenolux, and Tri-Sil.

In the second stage of the opacity test, I made two additional sets of handsheets:

- 5 handsheets with each of the following pigment loadings: 100% TiO_2 and 0% Tri-Sil; 75% TiO_2 and 25% Tri-Sil; 50% TiO_2 and 50% Tri-Sil; 25% TiO_2 and 75% Tri-Sil; and 0% TiO_2 and 100% Tri-Sil.
- 5 handsheets with each of the same proportions of TiO_2 and Zenolux.

Courtesy Allen J. Hines

FIGURE 26.5

(*continued*)

Silicate Extenders Page 4

As Figure 2 shows, Zenolux is again superior.

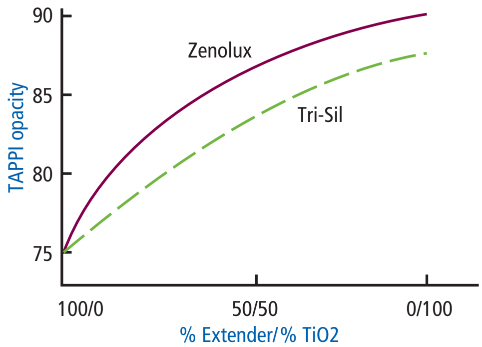


Figure 2. TAPPI Opacity for Various Ratios of Zenolux and Tri-Sil to TiO_2.

Brightness

Using the three sets of handsheets employed in the first-stage opacity tests, I calculated the GE brightness achieved by each of the three pigments. Figure 3 shows the results. Although not as bright as TiO_2, Zenolux is brighter than Tri-Sil.

When describing his tests of brightness, Allen uses the same reader-centered strategies he employed in the section on opacity:

- He briefly, but precisely, describes his method.
- He presents his test results in graphs.
- He states in a sentence the main point readers should take away from each graph.

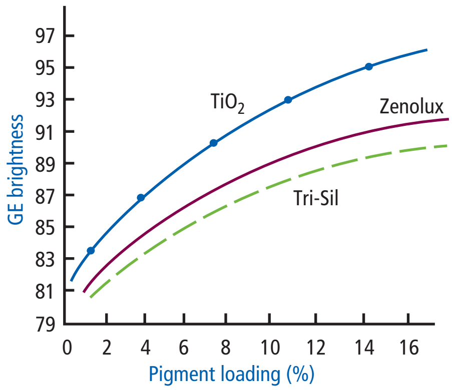


Figure 3. GE Brightness for Various Loadings of TiO_2, Zenolux, and Tri-Sil.

Courtesy Allen J. Hines

LEARN MORE To learn the design guidelines Allen followed to create these reader-centered graphs, see page 318.

(*continued*)

FIGURE 26.5

(*continued*)

Silicate Extenders Page 5

Using the two sets of handsheets employed in the second-stage opacity tests, I examined the brightness of each of the ratios of TiO_2 to the extenders. The results, shown in Figure 4, indicate that, as expected, TiO_2 with Zenolux is brighter than TiO_2 with Tri-Sil.

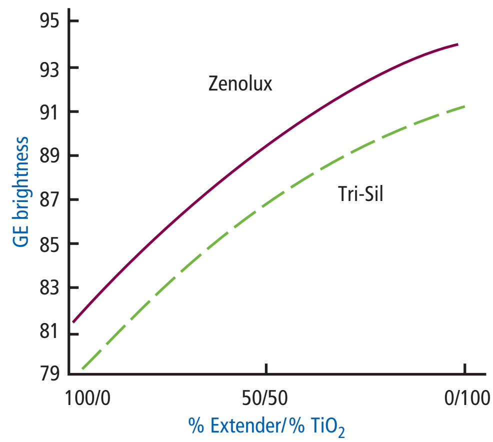


Figure 4. GE Brightness for Various Ratios of Zenolux and Tri-Sil to TiO_2.

In the first sentence of his section on material handling, Allen states his main finding: There are no significant differences among the three extenders he tested.

Allen then provides details about each aspect of material handling that he investigated. In this way, he assures his readers that he didn't overlook any important consideration.

Material Handling

With respect to material handling, I found no basis for choosing between Zenolux and Tri-Sil. Both are available from suppliers in Chicago. Both are available in dry form in bags and as a slurry in bulk hopper cars. Zenolux slurry is also available in 20,000-gallon tank cars, which provide a small savings, but we do not have the storage facility needed to receive it in this way.

Similarly, both silicate extenders are quite safe. Both are 100% pigment and both are chemically stable. Neither poses a hazard of fire or explosion and neither is hazardous when mixed with any other substance, whether liquid, solid, or gas. Both create the same effects in the event of overexposure: dehydration of the respiratory tract, eyes, and skin. These effects can be avoided by purchasing the extenders in slurry rather than dry form.

Silicate Extenders Page 6

Cost

Either silicate extender could save us money, and they both cost about the same: $421 per ton for Zenolux and $391 per ton for Tri-Sil. The $30 difference is only 7% of the cost of Zenolux. This savings may be offset by the larger amounts of Tri-Sil needed to achieve the same brightness and opacity. Thus, based on the information available at this time, it seems that cost is not a factor that would help us choose between the two extenders.

Conclusion and Recommendation

Although the two extenders are comparable in many ways, Zenolux appears to be the better choice for us. Both extenders could save us money and both are about the same in terms of handling and cost. However, Zenolux can be used in smaller amounts to obtain a given brightness and opacity. Furthermore, its higher retention rate will place less of a burden on our aging water system.

I recommend that we test Zenolux on our 30-pound paper machine.

Courtesy Allen J. Hines

FIGURE 26.5

(*continued*)

Allen realized that his readers will want to know how much a conversion to one of the silicate extenders will cost. Therefore, he provides not only the cost per ton of each item, but also considers how much of each the paper mill would need to buy in order to produce good-quality paper. In reaching this conclusion, Allen is building on the results of his tests of opacity and brightness.

Allen ends his report with the following items:

- His conclusion
- The results and explanation that support his conclusion
- His recommendation

FIGURE 26.6

Writer's Guide for Revising Feasibility Reports

To download a copy of this Writer's Guide as well as a Writer's Guide for Planning Feasibility Reports, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
REVISING FEASIBILITY REPORTS

Does your draft include each of the elements needed to create a report that your readers will find to be useful and persuasive? Remember that some elements of the superstructure may be unnecessary for your specific readers and purpose and that the elements may be organized in various ways.

Introduction

- ☐ Identifies the action or alternatives you investigated
- ☐ Tells (or reminds) your readers why you conducted this study
- ☐ Persuades readers that the study is important to them
- ☐ States briefly your main conclusions and recommendations, if the readers would welcome or expect them at the beginning of the report
- ☐ Provides background information the readers will need or want
- ☐ Forecasts the rest of your report, if this would help your readers

Overview of Alternatives

- ☐ Presents a general description of each alternative

Criteria (often included in the introduction)

- ☐ Identifies the standards by which the action or alternatives were evaluated
- ☐ Focuses on criteria that are important to the reader

Method

- ☐ Tells the things your readers want to know about the way you obtained the facts and ideas presented in the report
- ☐ Persuades the readers that this method would produce reliable results

Evaluation (usually the longest part of a feasibility report)

- ☐ Evaluates the action or alternatives in terms of the criteria
- ☐ Presents the facts and evidence that support each evaluative statement

Conclusions (often presented along with the discussion)

- ☐ Explains the significance—from your readers' viewpoint—of your facts and generalizations about them
- ☐ States the conclusions plainly

Recommendations

- ☐ Tells which course of action or alternative you recommend
- ☐ Makes the recommendations stand out prominently (for instance, by presenting them in a numbered list)
- ☐ Indicates how your recommendations are related to your conclusions and to your readers' goals
- ☐ Suggests some specific steps your readers might take to act on each of your recommendations, unless the steps will be obvious to the readers

© Cengage Learning

FIGURE 26.6

(*continued*)

Writer's Guide
Revising Feasibility Reports
(*continued*)

Reasoning (See Chapter 5)

- ☐ States your claims and conclusions clearly
- ☐ Provides sufficient evidence, from the readers' viewpoint
- ☐ Explains, if necessary, the line of reasoning that links your facts and your claims
- ☐ Addresses any counterarguments or objections that your readers are likely to raise at any point in your report
- ☐ Avoids making false assumptions and overgeneralizing

Prose (See Chapters 4, 5, 8, and 10)

- ☐ Presents information in a clear, useful, and persuasive manner
- ☐ Uses a variety of sentence structures and lengths
- ☐ Flows in a way that is interesting and easy to follow
- ☐ Uses correct spelling, grammar, and punctuation

Graphics (See Chapter 14)

- ☐ Included wherever readers would find them helpful or persuasive
- ☐ Looks neat, attractive, and easy to read
- ☐ Referred to at the appropriate points in the prose
- ☐ Located where your readers can find them easily

Page Design (See Chapter 16)

- ☐ Looks neat and attractive
- ☐ Helps readers find specific information

Ethics

- ☐ Treats all the report's stakeholders ethically
- ☐ Presents all information accurately and fairly

donvictorio/Shutterstock.com

27 | Writing Reader-Centered Progress Reports

A progress report is a report on work you have begun but not yet completed. The typical progress report is one of a series submitted at regular intervals, such as every week or month.

TYPICAL WRITING SITUATIONS

Some progress reports concern a single project.

There are two basic types of progress reports. In the first, you tell your readers about your progress on one project. Lee is a geologist assigned to evaluate the site where a city would like to build a civic center, but worries that the land may not be geologically suited for this construction. Every two weeks, Lee submits a progress report to his supervisor and the city engineer. His supervisor reads the report to make sure Lee is working in a technically sound manner. The city engineer uses the report to see that Lee is on schedule. She also looks for indications of the likely outcome of Lee's study. She could accelerate or halt other work as a result of Lee's preliminary findings.

Some progress reports concern all projects worked on during a single period.

In the second type of progress report, you describe your work on all your projects. A chemist, Jacqueline manages a department that develops improved formulas for the laundry detergents her company manufactures—making them clean better, smell better, more economical to produce, and safer for the environment. Every month, she prepares a report that summarizes her department's progress on approximately 12 projects. Her readers include her immediate superiors, who want to be sure that her department's work is proceeding satisfactorily; researchers in other departments, who want to see whether her staff has made discoveries that can be used in other products, such as dishwashing detergents; and corporate planners, who want to anticipate changes in formulas that will require alterations in production lines or advertising.

As the examples of Lee and Jacqueline indicate, progress reports may differ in many ways: They may cover one project or many; they may be addressed to people inside the writer's organization or outside it; and they may be used by people who have a variety of reasons for reading them.

HOW TO GET THE MOST VALUE FROM THIS CHAPTER

Almost certainly, you are reading this chapter because your instructor asked you to. It's likely that your instructor also asked you to write a progress report. To get the most out of reading this chapter, think of the two assignments together: As you read each piece of advice, focus on planning ways to apply it to your report. In particular, concentrate on the points that will help you do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Describe the situations in which progress reports are typically written (see page 560).
2. Describe the major questions asked by readers of progress reports.
3. Describe the superstructure for progress reports, including the ways its parts correspond with the readers' questions.
4. Adapt the reader-centered writing process to the special goals of progress reports.
5. Write an effective progress report.

READERS' CONCERN WITH THE FUTURE

Although progress reports talk about the past, they are used to make decisions about the future.

Despite their diversity, however, almost all progress reports have this in common: Their readers are primarily concerned with the *future*. That is, even though most progress reports talk primarily about what has happened in the past, their readers usually want that information so that they can plan for the future.

For example, from your report they may be trying to learn the things they need to know in order to manage *your* project. They will want to know, for instance, what they should do (if anything) to keep your project going smoothly or to get it back on track. The progress reports written by Lee and Jacqueline are used for this purpose by some of their readers.

Other readers may be reading your progress reports to learn what they need to know in order to manage *other* projects. Almost all projects in an organization are interdependent with other projects. For instance, suppose you are conducting a marketing survey whose results will be used by another group as it designs an advertising campaign. If you have fallen behind your schedule, the other group's schedule may need to be adjusted.

Your readers may also be interested in the preliminary results of your work. Suppose, for instance, that you complete one part of a research project before you complete the others. Your readers may very well be able to use the results of that part immediately. The city engineer who reads Lee's reports about the possible building site wishes to use each of Lee's results as soon as it is available.

FEATURES OF PROGRESS REPORTS THAT HELP YOU

Two features of progress reports can be very helpful to you. First, whatever specific use readers want to make of the information in these reports, they are looking for the same basic kinds of information. Second, progress reports are prepared so often in the workplace that a set of conventions has developed concerning their content and organization. These conventions have proven successful in helping writers provide the information their readers want in a structure the readers find easy to use. The conventions constitute the *superstructure* or *genre* of the progress report. As you research, plan, and write progress reports in college and your career, you will be helped immensely by your knowledge of the readers' typical questions and the superstructure for answering them. The next two sections describe the questions and superstructure.

LEARN MORE For a detailed explanation of superstructures, turn to page 487.

THE QUESTIONS READERS ASK MOST OFTEN

Your readers' concern with the implications of your progress for their future work and decisions leads them to want your progress report to answer the following questions.

- **What work does your report cover**? To be able to understand anything else in a progress report, readers must know what project or projects and what time period the report covers.
- **What is the purpose of the work**? Readers need to know the purpose of your work to see how it relates to their own responsibilities and to the other work, present and future, of the organization.
- **Is your work progressing as planned or expected**? Your readers will want to determine whether adjustments are needed in the schedule, budget, or number of people assigned to the project or projects on which you are working.
- **What results have you produced**? The results you produce in one reporting period may influence the shape of work in future periods. Also, even when you are still in the midst of a project, readers will want to know about any results they can use in other projects now, before you finish your overall work.
- **What progress do you expect during the next reporting period**? Again, your readers' interests will focus on such management concerns as schedule and budget and on the kinds of results they can expect.
- **How do things stand overall**? This question arises especially in long reports. Readers want to know what the overall status of your work is, something they may not be able to tell readily from all the details you provide.
- **What do you think we should do**? If you are experiencing or expecting problems, your readers will want your recommendations about what should be done. Your ideas about how to improve the project will also be welcome.

SUPERSTRUCTURE FOR PROGRESS REPORTS

The conventional superstructure for progress reports provides a very effective framework for answering your readers' questions about your projects:

LEARN MORE Remember that a superstructure is not an outline; you may combine the elements of a superstructure in many ways to serve your readers' needs. See the discussions of superstructures on pages 487 and 488.

SUPERSTRUCTURE FOR PROGRESS REPORTS	
REPORT ELEMENT	**READERS' QUESTION**
Introduction	What work does your report cover? What is the purpose of the work?
Facts and Discussion	
Past Work	Is your work progressing as planned or expected? What results have you produced?
Future work	What progress do you expect during the next reporting period?
Conclusions	In long reports—How do things stand overall?
Recommendations	What do you think we should do?

GUIDING YOU THROUGH THE PROCESS OF PREPARING PROGRESS REPORTS

When creating progress reports, writers perform the same activities as when they are preparing any workplace communication: defining the communication's goals, conducting research, planning, drafting, and revising. The following sections suggest ways of performing these activities that are especially suited to writing progress reports.

Defining Your Report's Goals

When defining the goals of a progress report, focus on the specific ways your readers will use the information you provide. Are they principally interested in whether your projects are on schedule? Then let them know while trimming other information. Do they want to use your latest findings or results in their own work? Then describe your outcomes and accomplishments in enough detail to enable them to build their own work on yours.

Many organizations have strong conventions, even printed or online forms, for writing progress reports. When defining your progress report's goals, learn your readers' expectations.

The Writer's Guide for Defining Your Communication's Goals (page 62) will help you identify the additional information about your report's purpose, readers, and context that is needed to fully define its objectives.

Conducting Research

Employees rarely need to conduct research when writing progress reports. However, you may find it helpful to "research" your memory by making a few notes about what you want to say before you draft. These notes could help you focus on making your most important points directly and succinctly. Brevity is a virtue in progress reports.

Planning

One goal when writing progress reports is to finish your writing quickly (and well) so you can return to the work on which you are reporting. A key to writing rapidly is to plan a simple organization for providing the information your readers need. Here are three of the many organizational plans you might use.

If you are reporting on a single project, you might organize in this way.

I. What are the major events that happened during the most recent time period
II. What major events do I expect to occur during the next time period

Erin used this organization when reporting every two weeks on her assignment to increase efficiency at her employer's steel mills. Figure 27.1 shows the outline of her report for the two weeks in which she discovered employees at one plant were taking too long to change the blade on a hot saw, which is a machine that cuts the white-hot ingots of metal.

If you are working on two or more projects simultaneously, you can expand the organization Erin used.

I. What happened during the most recent time period
  A. Project A
  B. Project B
II. What's expected to happen during the next time period
  A. Project A
  B. Project B

A third option is to organize around your projects rather than time periods.

I. Work on Project A
  A. What happened during the last time period
  B. What I expect to happen during the next time period
II. Work on Project B
  A. What happened during the last time period
  B. What I expect to happen during the next time period

TRY THIS Imagine that you are going to write a progress report about what you've done in the past week or few weeks on a personal effort or course project. To whom would you write? How would your reader use the information in your report? What would your main points be? Alternatively, imagine that you are writing the progress report to yourself.

This organization works very well in reports where you have more than a few sentences to say about one or more of your projects because it keeps all the information on each project together, making the report easy for readers to follow. Lloyd organized this way when reporting on the progress of a large project he directed, which was to introduce a new line of high-fashion women's clothes (Figure 27.2).

Drafting and Revising

As mentioned, in routine progress reports, writing efficiently is a major goal. You can save time at drafting and revising by including only the most important points and by stating your information in a straightforward manner. No flourishes. No spin. This suggestion does not mean you should write carelessly. Review your draft carefully before submitting it.

Progress on Efficiency Project

I. Introduction
   A. I am reporting on the efficiency project.
   B. This report covers my work for the past two weeks.
   C. I focused on the hot saw.

II. Past Work
   A. I discovered a problem with the location of the tools.
   B. I discovered a problem with the blades our supplier provides.

III. Future Work
   A. During the next two weeks, I will visit Winnipeg to check on their hot-saw process.
   B. I will also check on their loading dock procedures.

IV. Conclusions
   A. I'm behind schedule; please let Larry help me for a few days.
   B. I have two recommendations.
      1. Build a tool stand next to the hot saw.
      2. Look for a new supplier or get ours to meet our specifications.

FIGURE 27.1

Outline for Erin's Progress Report on Increasing Efficiency

This outline shows how Erin organized a report in which she described her progress on a project aimed at reducing the time needed to change a saw blade used in her employer's manufacturing process.

She devotes one section of her report to each of the elements of the superstructure for progress reports.

Her full report is shown in Figure 27.3 on page 569.

Introduction
Erin describes the work covered in her progress report, including the work's purpose. She identifies the time period covered.

Past work
Erin emphasizes her accomplishments, including her discovery of a problem that is causing inefficiency.

Future work
She tells specifically what she will do.

Conclusions
Erin indicates that she's behind schedule and asks for assistance.

Recommendations
She describes actions that can be taken immediately.

CRAFTING THE MAJOR ELEMENTS OF A PROGRESS REPORT

All of the advice that Chapters 8 through 16 provide about drafting workplace communications applies to progress reports. The following sections tell how you can apply some of this advice most productively when writing this type of report. As you read, keep in mind that the conventional superstructure is only a general plan. You must use your imagination and creativity to adapt it to particular situations.

FIGURE 27.2

Outline of Lloyd's Progress Report on Introducing a New Line of Clothes

In this report, Lloyd tells his readers about progress in several related projects, devoting a separate section to each one.

Introduction
Lloyd describes the work covered in his progress report, including the work's purpose. He identifies the time period covered.

Progress on Manufacturing

- **Past work**
  Lloyd focuses on a problem.
- **Conclusion**
  Lloyd explains the possible consequences of the problem.
- **Recommendation**
  He recommends actions to be taken in response to the manufacturing problem he has described. If his recommendations are accepted, they will be his future work.

Progress on three other projects
Lloyd briefly describes past work on three other projects, emphasizing accomplishments. Because there are no problems, he has no need to make recommendations. Similarly, because his readers already know what he will be doing, he does not need to describe his future work.

Conclusion
Lloyd summarizes by telling how things stand overall.

Lloyd ends with a reference to his recommendations in Section II. B.

Progress on Development of New Line of Clothes

I. Introduction
  A. I am reporting on progress during the past month on the High Look project.
  B. The report covers the activities of all the groups working under me to introduce our line of high-fashion clothes for women.

II. Manufacturing
  A. Huge problem
    1. Last week, garment workers at the Saucon factory went on a wildcat strike.
    2. Saucon is making 65% of our dresses and 45% of our blouses.
    3. Garments are going to arrive late at retail stores if the strike continues another two days; that would decrease sales by very large amounts.
    4. This morning, Saucon management predicted no quick settlement.
  B. Recommendations
    1. Contract with Webster Corporation to begin manufacturing the garments if we can get the fabrics.
    2. Immediately begin picking alternative fabrics.

III. Marketing
  A. Orders continue to arrive.
  B. We will probably make waves, if we can get our goods to market.

IV. Designs for Next Year
  A. Progress is on schedule.
  B. Designers are playing with ideas for High Look.

V. All Other Areas: Proceeding Well

VI. Conclusion
  A. Although things are going well in most areas, we face a major crisis if our initial offering fails to sell because our goods don't make it to retailers on time.
  B. Let's do something.

Introduction

In the introduction to a progress report, you can address the readers' first two questions. You can usually answer the question, "What work does your report cover?" by opening with a sentence that identifies the project or projects your report concerns and the time period it covers.

Sometimes you will not need to answer the second question—"What is the purpose of the work?"—because all your readers will already be quite familiar with its purpose. At other times, however, it will be crucial for you to tell your work's purpose because your readers will include people who don't know or may have forgotten it. You are especially likely to have such readers when your progress reports are

LEARN MORE For additional advice about writing an introduction, see Chapter 11, Beginning a Communication.

widely circulated in your own organization or when you are reporting to another organization that has hired your employer to do the work you describe. You can usually explain its purpose most helpfully by describing the problem that your work will help your readers solve.

> This report covers the work done on the Focus Project from July 1 through September 1. Sponsored by the U.S. Department of Energy, the Focus Project aims to overcome the technical difficulties encountered in constructing photovoltaic cells that can be used to generate commercial amounts of electricity.

Project and period covered

Purpose of project

Of course, your introduction should also provide any background information your readers will need in order to understand the rest of your report.

Facts and Discussion

In the discussion section of your progress report, you should answer these readers' questions: "Is your work progressing as planned or as expected?" "What results have you produced?" and "What progress do you expect during the next reporting period?"

Because the work to be accomplished during each reporting period is usually planned in advance, you can indicate your progress by comparing what happened with what was planned. Where there are significant discrepancies between the two, your readers will want to know why. The information you provide about the causes of problems will help your readers decide how to remedy them. It will also help you to explain any recommendations you make later in your report.

How much information should you include in your progress reports? Generally, readers prefer brief reports. Although you need to provide your readers with specific information about your work, don't include details unless they will help readers decide how to manage your project or unless you believe readers will be able to make immediate use of them. As you work on a project, many minor events will occur, and you will have lots of small setbacks and triumphs along the way. Avoid discussing such matters. No matter how important these details may be to you, they are not likely to be interesting to your readers. Stick to the information your readers can use.

Conclusions

Your conclusions are your overall views on the progress of your work. In short progress reports, there may be no need to include any conclusions, but if your report covers several projects or tasks, conclusions may help your readers understand the general state of your progress.

Often, you can help your readers by stating your conclusions near the beginning of your progress report, for instance in the introduction. This location alerts readers right away that the project is on schedule or that work has fallen behind.

Recommendations

Your readers will want your thoughts about how to improve the project or increase the value of its results. Your recommendations might be directed at overcoming a difficulty you have experienced or anticipate encountering in the future. Or they might be directed at refocusing or otherwise altering your project.

Place your recommendation where they will be most helpful to your readers. Often that location will be the end. Erin used this placement in her report on her efficiency project for the steel mill (Figure 27.3). If you are reporting on a project with parts, you may be able to help your readers by placing your recommendation in the section on the part that has the problem. For example, when reporting on progress at introducing a new clothing line, Lloyd cited a problem with manufacturing and placed his recommendation for manufacturing immediately afterward (Figure 27.2, page 566).

TONE IN PROGRESS REPORTS

You may wonder what tone to use in the progress reports you prepare. Generally, you want to persuade your readers that you are doing a good job. That is especially likely when you are new on the job and when your readers might discontinue a project if they feel that it isn't progressing satisfactorily.

Because of this strong persuasive element, some people adopt an inflated or highly optimistic tone. However, this sort of tone can lead to difficulties. It might lead you to make statements that sound more like an advertising claim than a professional communication. Such a tone is more likely to make your readers suspicious rather than agreeable. Also, if you present overly optimistic accounts of what can be expected, you risk creating an unnecessary disappointment if things don't turn out the way you seem to be promising. And if you consistently turn in overly optimistic progress reports, your credibility with your readers will quickly vanish.

In progress reports, it's best to be straightforward about problems so that your readers can take appropriate measures to overcome them and so they can adjust their expectations realistically. You can sound pleased and proud of your accomplishments without exaggerating them.

Sample Progress Report

It is much easier to understand writing advice if you see sample communications that follow that advice. Take a moment to look at the sample in Figure 27.3 and the marginal notes that point out some of the writer's major strategies. In this report, Ellen described her progress at reducing the excessive time taken to change the hot saw at one of her employer's steel mills. The outline for Erin's report is shown in Figure 27.1 (page 565).

WRITER'S GUIDES AND OTHER RESOURCES

WEB To download Writer's Guides for planning and revising progress reports, go to your English CourseMate at *www.cengagebrain.com.*

Figure 27.4 (pages 570–571) presents a Writer's Guide for Revising Progress Reports that you can use in your course and on the job. At the website for the book, you can download a copy of this Writer's Guide as well as one for planning progress reports. The website has additional resources to help you write effective reports.

Note to the Instructor For an assignment involving a progress report, see the Progress Report project given in Appendix B. Other projects and cases that involve report writing are included at the book's website. To tailor the Writer's Guides to your course, download them from the website.

FIGURE 27.3

Erin's Progress Report on Increasing Efficiency

In this report, Erin describes her progress on a project aimed at reducing the time needed to change a saw blade used in her employer's manufacturing process.

An outline of her report is shown in Figure 27.1 on page 565.

Memorandum

To Amad Rajani
From Erin Malene
Date July 10, 2013
Subject Progress Report on Efficiency Project

In my efficiency project, I've concentrated during the past two weeks on studying the amount of time required to change the hot-saw blade. The Winnipeg plant shuts down its production for an average of 5 minutes each time it makes this change. In contrast, we stop production for an average of 14 minutes.

Results from Last Two Weeks
By watching several blade changes and by talking with the workers, I've identified two problems. First, the tools are stored in a workroom 30 yards from the hot saw. When an extra tool is needed, minutes are lost while someone retrieves it. Second, the contractor who supplies the blades occasionally makes the mounting holes too large, so extra time is needed to insert shims.

Plans for Next Two Weeks
During the next two weeks, I will travel to Winnipeg, where I will observe their blade changes and also examine their procedures on the loading dock. I was scheduled to make that trip last week but was unable to do so because I had to help solve the boil-over problem in Building 3.

Conclusion
I'm a week behind schedule, so it would be helpful if Larry could assist me in the lab for a few days.

In the meantime, here are two actions we can take right now.

1. Build a tool stand next to the hot saw with all the equipment.
2. Begin looking for a new supplier or gain our current supplier's commitment to meet our specifications.

Introduction
Erin reminds her reader of the purpose of her work.

She tells the time period covered in this report, and she describes the work she has done in this period.

Past work
Erin emphasizes her accomplishments, including her discovery of a problem that is causing inefficiency. By sharing this information, she enables her reader to begin considering solutions immediately, even though Erin has more work to do on her overall project.

Future work
She tells specifically what she will do, and she provides information that explains why she is behind schedule.

Conclusions
Erin indicates that she's behind schedule and asks for assistance.

Recommendations
She describes actions that can be taken immediately.

FIGURE 27.4

Writer's Guide for Revising Progress Reports

To download a copy of this Writer's Guide as well as a Writer's Guide for Planning Progress Reports, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
REVISING PROGRESS REPORTS

Does your draft include each of the elements needed to create a report that your readers will find to be useful and persuasive? Remember that some elements of the superstructure may be unnecessary for your specific readers and purpose and that the elements may be organized in various ways.

Introduction

- ☐ Identifies the work your report covers
- ☐ Indicates the purpose of the work, if the readers need to be reminded
- ☐ Identifies the period covered
- ☐ Forecasts the rest of your report, if doing so would help your readers

Body of Report

- ☐ States whether your work on each of your tasks is progressing as planned with respect to schedule, budget, or other concerns of your readers
- ☐ Tells what you accomplished on each of your major tasks during the period covered by the report
- ☐ Identifies planned work that is not complete
- ☐ Reports results or accomplishments that your readers would like to know about immediately
- ☐ Identifies any significant problems your readers would want to know about
- ☐ Identifies specific tasks you will be performing during the next reporting period
- ☐ Describes the progress you expect to achieve during the next period
- ☐ Identifies any upcoming problems that your readers should know about
- ☐ Identifies any help you feel you need

Conclusion

- ☐ Includes final statement that lets your readers know how things stand overall

Recommendations

- ☐ Indicates any actions you think your readers should take

Prose (See Chapters 4, 5, 8, and 10)

- ☐ Presents information in a clear, useful, and persuasive manner
- ☐ Uses a variety of sentence structures and lengths

FIGURE 27.4

(***continued***)

Writer's Guide
REVISING PROGRESS REPORTS
(***continued***)

- ☐ Flows in a way that is interesting and easy to follow
- ☐ Uses correct spelling, grammar, and punctuation

Graphics (See Chapter 14)

- ☐ Included wherever readers would find them helpful or persuasive
- ☐ Looks neat, attractive, and easy to read
- ☐ Referred to at the appropriate points in the prose
- ☐ Located where your readers can find them easily

Page Design (See Chapter 16)

- ☐ Looks neat and attractive
- ☐ Helps readers find specific information

Ethics

- ☐ Treats all the report's stakeholders ethically
- ☐ Presents all information accurately and fairly

© Cengage Learning


donvictorio/Shutterstock.com

28 | Writing Reader-Centered Instructions

Instructions come in many lengths, shapes, and levels of complexity. They range from the terse directions on a shampoo bottle ("Lather. Rinse. Repeat.") to the huge manuals that are hundreds or thousands of pages long for servicing airplane engines, managing large computer systems, and performing biomedical procedures.

Although some instructions are prepared by professional writers and editors, most other employees also need to prepare instructions. Whether you are developing a new procedure, training a new co-worker, or preparing to leave for vacation, you may need to provide written directions to someone else. You may write for people who will read your instructions on paper, a computer monitor, a smartphone screen, or other electronic device.

This chapter provides advice that you will find valuable regardless of the subject or size of the instructions you write. The advice given in the first part of this chapter applies equally to instructions written for paper and screen. A special section at the end of the chapter provides additional suggestions for instructions that will be delivered digitally as a website or as a video.

WEB For additional examples and advice for writing instructions, go to your English CourseMate at *www.cengagebrain.com.*

HOW TO GET THE MOST VALUE FROM THIS CHAPTER

Almost certainly, you are reading this chapter because your instructor asked you to. It's likely that your instructor also asked you to write a set of instructions. To get the most out of reading this chapter, think of the two assignments together: as you read each piece of advice, focus on planning ways to apply it to your instructions. In particular, concentrate on the points that will help you do the following.

LEARNING OBJECTIVES FOR THIS CHAPTER

1. Describe the major questions asked by readers of instructions.
2. Describe the superstructure for instructions, including the ways its parts correspond with the readers' questions.
3. Adapt the reader-centered writing process to the special goals of instructions.
4. Write effective instructions.

FEATURES OF INSTRUCTIONS THAT HELP YOU

LEARN MORE For a detailed explanation of superstructures, see page 487.

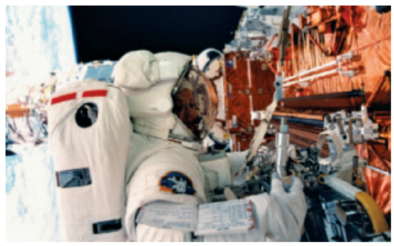
Two features of instructions can be very helpful to you. First, no matter what procedure they want help with, readers want the same basic kinds of information. Second, instructions are prepared so often in the workplace that a set of conventions has developed concerning their content, organization, and other key elements. These conventions have proven successful in helping writers provide the information their readers want in a structure the readers find easy to use. The conventions constitute the *superstructure* or *genre* of instructions. As you research, plan, and write instructions in college and your career, you will be helped immensely by your knowledge of the readers' typical questions and the superstructure for answering them. The next two sections describe the questions and superstructure.

Tom Grill/CORBIS

THE QUESTIONS READERS ASK MOST OFTEN

Readers read instructions in many different ways. Some follow the directions meticulously, concentrating on every word. Others look at the directions only if they get stumped while relying solely on their experience and intuition. Whether they read every word or look only occasionally at instructions, the questions readers ask are almost always versions of the following six.

- **What will these instructions help me do?** Some readers will ask this question exactly as it reads. When others use these or similar words, they are asking, "Do I really have to read these?"
- **Is there anything special I need to know to be able to use these instructions effectively?**
- **If I'm working with equipment, where are the parts I need to use?**
- **What materials, equipment, and tools do I need?**
- **Once I'm ready to start, what—exactly—do I do?**
- **Something isn't working correctly. How do I fix it?**



Courtesy of NASA

Nigel Cattlin/Alamy

Instructions must meet the needs of readers performing vastly different tasks in a wide range of settings and circumstances. To keep both hands free, astronaut Kathryn Thornton has her instructions strapped to her arm.

SUPERSTRUCTURE FOR INSTRUCTIONS

The superstructure for instructions includes five elements that answer the six questions readers ask most often.

The simplest instructions contain only the directions. More complex instructions contain some or all of the other four elements listed below. And some instructions also include such additional elements as covers, title pages, tables of contents, appendixes, lists of references, glossaries, lists of symbols, and indexes.

To determine which elements to include in any instructions you write, follow this familiar advice: Consider your readers' aims and needs as well as their characteristics that will shape the way they read and respond to your communication.

SUPERSTRUCTURE FOR INSTRUCTIONS	
TOPIC	**READERS' QUESTIONS**
Introduction	What will these instructions help me do? Is there anything special I need to know to be able to use these instructions effectively?
Description of the equipment	If I'm working with equipment, where are the parts I need to use?
List of materials and equipment needed	What materials, equipment, or tools do I need?
Directions	Once I'm ready to start, what—exactly—do I do?
Troubleshooting	Something isn't working correctly. How do I fix it?

GUIDING YOU THROUGH THE PROCESS OF PREPARING INSTRUCTIONS

When creating instructions, writers perform the same activities as when they are preparing any workplace communication: defining the communication's goals, conducting research, planning, drafting, and revising. The following sections describe ways to perform each activity in ways especially suited to this special kind of communication.

Defining Your Communication's Goals

The overall usefulness goal for instructions is obvious: to enable readers to perform a procedure correctly and efficiently. By thinking about what people do while reading instructions, you can define the instructions' goals more specifically. People read a step, do a step, read the next step, and do the step. Your instructions goals should include helping readers perform each step quickly and accurately. Each time they complete a step, they must find their place again in the instructions. Your instructions should help readers find that place quickly. People also use instructions as reference sources, looking for a certain part without wanting to use the other parts. Your instructions should help them locate the part they want very rapidly.

Instructions' persuasive objectives are much less obvious than their usefulness objectives, but they are equally important. Many people dislike reading instructions. They want to start right in on the task without taking time to look at the instructions. Thus, one persuasive objective for instructions is to persuade people to read them at all. When people do read instructions, they can be impatient and easily frustrated. Another persuasive objective is to entice readers to look back at the page after they've looked away to perform a step. If your instructions are for a product made by your employer, they will have a third persuasive objective: to persuade readers to feel so good about the product that they will buy from your employer again and recommend that others do likewise.

The Writer's Guide for Defining Your Communication's Goals on page 62 will help you identify the additional information about your instructions' purpose, readers, and context that is needed to fully define their goals.

LEARN MORE For detailed advice about defining your instructions' goals, see Chapter 3.

Conducting Research

The amount of research you'll have to do when writing instructions can vary widely. Sometimes, you'll know the procedure and readers so well that no research will be required at all.

At other times, you may be asked to write instructions for a procedure you know little or nothing about. This is often the case for professional technical communicators, but it also happens to engineers, scientists, and specialists in other fields. Chapter 6 provides detailed advice about conducting research.

LEARN MORE For detailed advice on conducting research, see Chapter 6. For instructions, interviewing is very commonly the main research method used.

When you are relying solely on your own memory, you might conduct a simple form of research that checks on your memory. Write down all the steps in the process and then perform the process by following the steps you listed. You may be surprised at how many steps you didn't remember to write down even though you haven't forgotten to perform them.

Planning

For the instructions to achieve their usefulness and persuasive goals, three features of instructions must work together harmoniously. For all three, planning overlaps with drafting.

- **Organization of the directions.** By organizing the directions hierarchically, you can help readers find the next step as they look back at the instructions after completing the previous step. This organization can also help them find particular information when consulting the instructions as a reference document.

  To create a hierarchical organization, begin by listing all the steps in the process. Next, check the list for thoroughness as described in the previous paragraph. Then, group related steps under headings, such as "preparing the equipment," "using the equipment," and "cleaning up." If the instructions are long, shorter groups can be gathered into larger ones.

LEARN MORE For advice about how to group the steps in your process, see the discussion of segmenting, pages 215–218.

- **Graphics.** For many purposes, well-designed graphics are even more effective than words. Words cannot show readers where the parts of a machine are located, how to grasp a tool, or what the result of a procedure should look like. Graphics are especially helpful in instructions for readers who speak languages other than your own. Sometimes graphics alone can convey all the

LEARN MORE For advice about creating graphics, see Chapter 14.

information your readers need (see Figure 14.1 on page 293). Look actively for places where adding a drawing, diagram, photo, or other graphic would make your directions easier for your readers to understand. Chapter 14 provides suggestions for designing graphics that your readers will welcome.

- **Page design.** Strategically designed pages can help you and your readers in several ways. Page design can help readers find their places as they bounce back and forth between reading steps and performing them. Good page design helps readers see the connections between related blocks of information, such as a written direction and the drawing that accompanies it. An attractive design can entice readers' attention back to instructions they would otherwise choose to ignore. Chapters 16 and 22 can guide you through the process of designing effective printed and on-screen pages.

LEARN MORE For advice about designing pages and screens, see Chapter 16. Chapter 22 provides additional advice about screen design.

Drafting and Revising

Later in this chapter, you will find suggestions for drafting each element of your instructions. The following advice applies to *all* elements: Write clearly and succinctly. Choose words that convey your meaning clearly. Construct sentences your readers will comprehend effortlessly. Use as few words as possible. More words make more work for your readers and increase the chances your readers will stop reading what you've written.

LEARN MORE For advice about writing clearly and succinctly, see Chapter 10.

When you want to find ways to revise a draft of instructions, nothing beats watching members of your target audience using the draft to perform the procedure. Where you see them succeed with some steps, you know that part of your draft is effective. Where they have problems, you have an opportunity to improve. Chapter 18 guides you through the process of planning, conducting, and interpreting the results of user tests. When testing, remember to evaluate your draft's ability to achieve its persuasive objectives as well as its usefulness objectives.

LEARN MORE To learn how to conduct user tests, see Chapter 18.

CRAFTING THE MAJOR ELEMENTS OF INSTRUCTIONS

All the advice about drafting provided in Chapters 8 through 16 can help you write effective instructions. The following sections supplement that advice with suggestions for writing the five elements of the superstructure for instructions.

Introduction

Introductions should be as short as possible—or nonexistent. Many instructions don't need one. The title alone provides all the introductory information readers require. See Figure 28.5 (page 585). On the other hand, readers sometimes do need information up front. The following sections describe the eight elements most commonly included in introductions, together with suggestions for deciding whether your readers need each of them.

Subject

As mentioned above, often the title will fully convey the subject of your instructions. Especially in longer instructions, however, you may need to announce the subject in an introduction. Here is the first sentence from the 50-page operator's manual for a 10-ton machine used in the manufacture of automobile and truck tires:

> This manual tells you how to operate the Tire Uniformity Optimizer (TUO).

Opening sentence that announces the subject

The first page of a manual for a popular desktop publishing program reads:

> The Microsoft Word User's Guide contains detailed information about using Microsoft® Word 2007 for Windows™ and Microsoft Word 2008 for Mac.

Purpose of the Procedure

If the purpose of the procedure your instructions describe isn't obvious from the title, announce it in the introduction. You may be able to convey your instructions' aim by listing the major steps in the procedure or the capabilities of the equipment whose operation you are describing. Here is the second sentence of the manual for the Tire Uniformity Optimizer:

> Depending upon the options on your machine, it may do any or all of the following jobs:
>
> - Test tires
> - Find irregularities in tires
> - Grind to correct the irregularities, if possible
> - Grade tires
> - Mark tires according to grade
> - Sort tires by grade

A list of the purposes for which readers can use the equipment

Intended Readers

When they pick up instructions, people often want to know whether the instructions are directed to them or to people who differ from them in interests, responsibilities, level of knowledge, or some other variable.

Sometimes, they can tell merely by reading the instructions' title. For instance, the operator's manual for the Tire Uniformity Optimizer is obviously addressed to people hired to operate that machine.

In contrast, people who consult instructions for a computer program may wonder whether the instructions assume that they know more (or less) about computers than they actually do. In such situations, answer their question in your introduction. Readers who don't already possess the required knowledge can then seek help or acquire the necessary background.

Scope

By stating the scope of your instructions, you help readers know whether the instructions contain directions for the specific tasks they want to perform. The manual for the Tire Uniformity Optimizer describes the scope of its instructions in the third and fourth sentences:

> This manual explains all the tasks you are likely to perform in a normal shift. It covers all of the options your machine might have.

Statement of scope

A manual for Microsoft Windows NT, an operating system, describes its scope in this way:

Scope of Part I

Scope of Part II

> In Part I, you'll learn the basic features of Windows NT 4.0, including the new Windows 2000 interface. Designed to get you up-to-speed quickly and easily, Part I provides the step-by-step procedures you'll need to get started. Part II lists the system requirements for running this new version, and then guides you through installing this new operating system.

Organization

By explaining how the instructions are organized, an introduction can help readers understand the overall structure of the tasks they will perform and locate specific pieces of information without having to read the entire set of instructions.

Often introductions explain scope and organization together. If you look back at the statement of scope from the Microsoft Windows NT manual, you will see that it also describes the manual's organization: It announces that the manual is organized into two parts, each with two types of content.

Similarly, the introduction to the Tire Uniformity Optimizer devotes several sentences to explaining that manual's organization, and this information also fills out the readers' understanding of the manual's scope.

Paragraph describing a manual's organization

> The rest of this chapter introduces you to the major parts of the TUO and its basic operation. Chapter 2 tells you step by step how to prepare the TUO when you change the type or size of tire you are testing. Chapter 3 tells you how to perform routine servicing, and Chapter 4 tells you how to troubleshoot problems you can probably handle without needing to ask for help from someone else. Chapter 5 contains a convenient checklist of the tasks described in Chapters 3 and 4.

Conventions

If your instructions use abbreviations or conventions that the reader needs to know in order to interpret the directions correctly, explain them in the introduction. For instance, the introduction for a manual for operating a machine for harvesting corn says, "Right-hand and left-hand sides are determined by facing the direction of forward travel."

Motivation

As pointed out above (and as you may know from your own experience), some people are tempted to toss instructions aside and rely on their common sense. A major purpose of many introductions is to persuade readers to read the instructions. You can accomplish this goal by using an inviting and supportive tone and by creating an attractive design. You can also include statements that tell readers directly why it is important to pay attention to the instructions. The following example is from instructions for a ceiling fan that purchasers install themselves.

Statement of scope

Motivation to read the instructions

> We're certain that your Hampton Bay fan will provide you with many years of comfort, energy savings, and satisfaction. To ensure your personal safety and to maximize the performance of your fan, please read this manual.

Safety

Your readers depend on you to prevent them from taking actions that could spoil their results, damage their equipment, or cause them injury. Moreover, product liability laws require companies to pay for damages or injuries that result from inadequate warnings in their instructions.

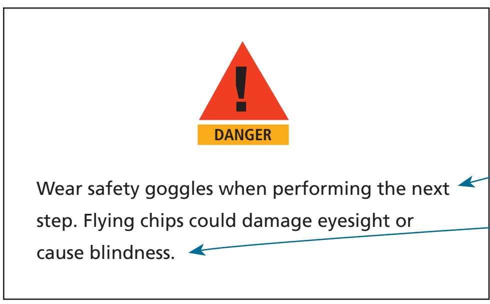
To satisfy your ethical and legal obligations, you must provide prominent, easy-to-understand, and persuasive warnings. If a warning concerns a general issue that covers the entire set of instructions (e.g., "Don't use this electrical tool while standing on wet ground"), place it in your introduction. If it pertains to a certain step, place it before that step. The following principles apply to warnings in either location:

- **Make your warnings stand out visually.** Try printing them in large, bold type and surrounding them with a box. Sometimes, writers use the following international hazard alert symbol to draw attention to the warning.

You may also include an icon to convey the nature of the danger. Here are some icons developed by Westinghouse.

Electrical Shock   Fire   Eye Protection

- **Place your warnings so that your readers will read them before performing the action the warnings refer to.** It won't help your readers to discover the warning after they've performed the step and the damage has been done.
- **State the nature of the hazard and the consequences of ignoring the warning.** If readers don't know what could happen, they may think that it's not important to take the necessary precautions.
- **Tell your readers what steps to take to protect themselves or avoid damage.**



The box and international hazard icon draw attention to the warning.

First sentence tells what readers can do to avoid the hazard.

Second sentence describes the possible consequences of ignoring the warning.

Sample Introductions

Figure 28.1 shows the introduction to the instruction manual for the Tire Uniformity Optimizer. The introduction to another manual appears in Figure 28.2 (page 581).

FIGURE 28.1

Introduction to the Instruction Manual for the Tire Uniformity Optimizer

The first sentence identifies the **subject** of the manual.

The second sentence and list identify the **purposes of the procedures** that can be performed by following the instructions.

This sentence describes the **scope** of the manual: all of the procedures the reader is likely to perform during a normal shift.

This paragraph describes the **organization** of the manual.

The photograph and labels provide readers with a **description of the equipment** that enables them to locate all the major parts they will have to find while following the instructions. More detailed photos are provided later in the manual to guide the reader when using the Operator's Control Panel and other parts.

The manual presents **safety** warnings and information to **motivate** readers to follow certain parts of the procedures at the appropriate places later in the manual. This manual does not use any **conventions** that need to be explained in the introduction.

Chapter 1—Introduction

This manual tells you how to operate the Tire Uniformity Optimizer (TUO) and its controller, the Tire Quality Computer (TQC). The TUO has many options. Depending upon the options on your machine, it may do any or all of the following jobs:

- Test tires
- Find irregularities in tires
- Grind to correct the irregularities, if possible
- Grade tires
- Mark tires according to grade
- Sort tires by grade

This manual explains all the tasks you are likely to perform in a normal shift. It covers all of the options your machine might have.

The rest of this chapter introduces you to the major parts of the TUO and its basic operation. Chapter 2 tells you step-by-step how to prepare the TUO when you change the type or size of tire you are testing. Chapter 3 tells you how to perform routine servicing, and Chapter 4 tells you how to troubleshoot problems with the TUO. Chapter 5 contains a convenient checklist of the tasks described in Chapter 3.

Major Parts of the Tire Uniformity Optimizer

You can find the major parts of the TUO by looking at Figure 1-1. To operate the TUO, you will use the Operator's Control Panel and the Computer Panel.

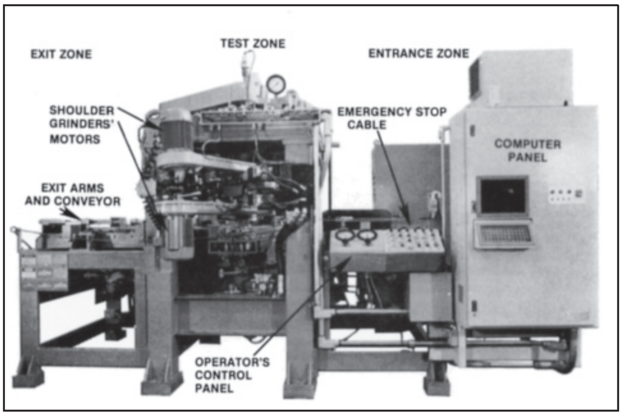


Figure 1-1. *Overview of the TUO and TQC.*

Page 1

Akron Standard, Operator's Manual for the Tire Uniformity Optimizer, (1986) p. 1. Used with permission of ITN Ride Quality Products.

Notice that the manual for the Tire Uniformity Optimizer uses the word *Introduction* and the introduction to the Detroit Diesel Engine Series 53 manual (Figure 11.2) is headed "General Information." The material that this chapter refers to as the *Introduction* is called many other names in other instructions. Sometimes, it is given no title at all.

LEARN MORE To describe equipment, use the pattern for describing an object (pages 214–215) or use a photograph or drawing (pages 295–296).

Description of the Equipment

To be able to operate or repair a piece of equipment, readers need to know the location of its parts. Sometimes, they need to know their functions as well. Instructions often include a description of the equipment to be used, usually by including a labeled photograph or drawing of it. For example, the first page of the manual for the Tire Uniformity Optimizer displays a labeled photograph of the machine. In some instructions, such illustrations are accompanied by written explanations of the equipment and its parts.

List of Materials and Equipment Needed

Some procedures require materials or equipment that readers wouldn't normally have at hand. If yours do, include a list of these items. Present the list *before* giving your step-by-step instructions. This will save your readers from the unpleasant surprise of discovering that they cannot go on to the next step until they have gone to the shop, supply room, or store to obtain an item that they didn't realize they would need.

Directions

At the heart of a set of instructions are the step-by-step directions that tell readers what to do. The following sections describe strategies for writing directions your readers will find easy to understand and use. Figure 28.2 illustrates much of this advice.

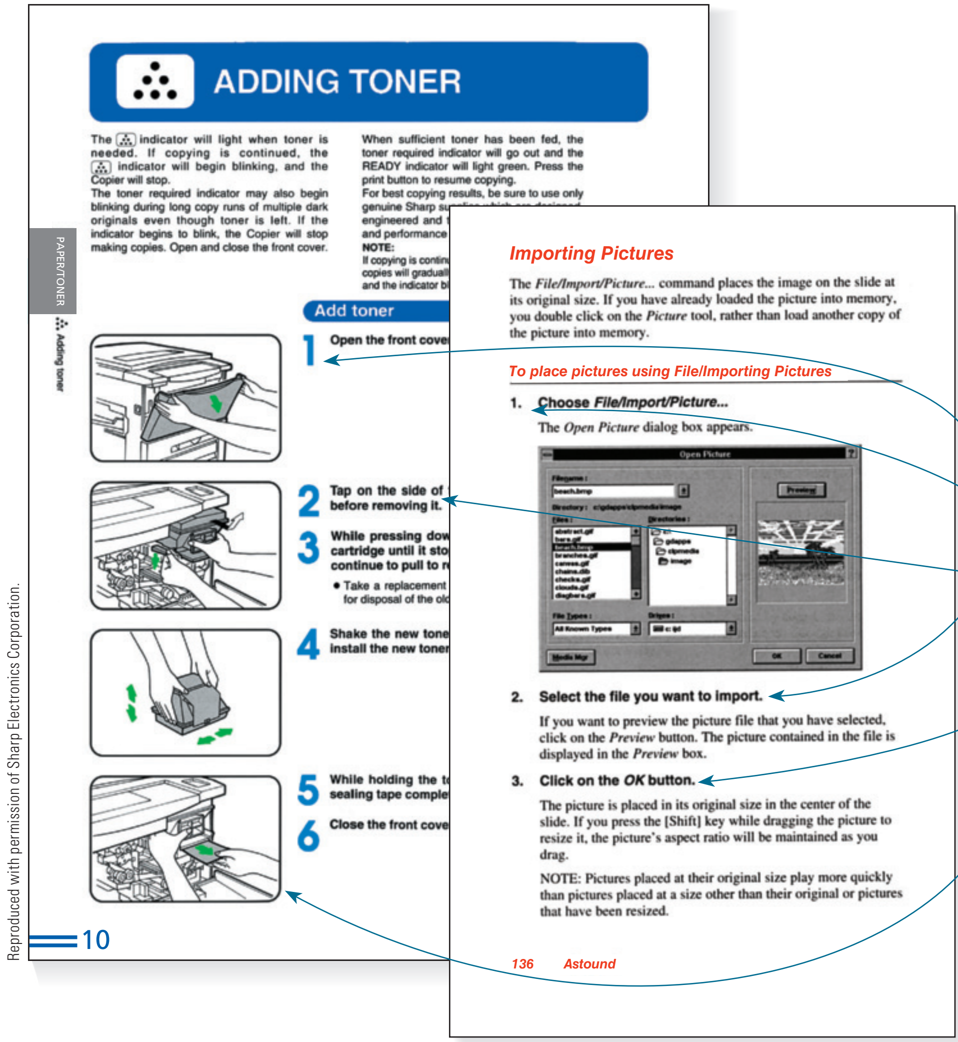


FIGURE 28.2

Well-Designed Presentation of Procedures

Though very different in design, both are easy to read and use because they apply the principles discussed on pages 581–585.

Step numbers are prominent, easy to see.

Each step describes only one action.

Each direction is short and easy to comprehend.

Directions are on a line of their own, separate from explanations, to make them easy to read.

Figures provide additional guidance.

Write Each Direction for Rapid Comprehension and Immediate Use

Readers want to understand as quickly as possible what they should do next.

1. **In each direction give readers only enough information to perform the next step.** If you give more, they may forget some or become confused.
2. **Present the steps in a list.** A list format helps readers see each step as a separate action.
3. **Use the active voice and the imperative mood.** Active, imperative verbs give commands: "*Stop* the engine." (This statement is much simpler than "The operator should then stop the engine.")
4. **Highlight keywords.** In some instructions, a direction may contain a single word that conveys the critical information. You can speed the readers' task by using bold, all-capital letters or a different typeface to make this word pop off the page. Example: Press the RETURN key.

Help Readers Locate the Next Step Quickly

There are many ways you can help your readers as they turn their eyes away from the task and back to your text:

1. **Number the steps.** With the aid of numbers, readers will not have to reread earlier directions to figure out which one they last read.
2. **Put blank lines between steps.** This white space helps readers pick out a particular step from among its neighbors.
3. **Give one action per step.** It's easy for readers to overlook a direction that is tucked in with another direction rather than having its own number.
4. **Put step numbers in their own column.** Instead of aligning the second line of a direction under the step number, align it with the text of the first line. Not this:

Step number is obscured.

> 2. To quit the program, click the CLOSE button in the upper right-hand corner of
> the window.

But this:

Step number is in its own column.

> 2. To quit the program, click the CLOSE button in the upper right-hand corner of
>   the window.

Within Steps, Distinguish Actions from Supporting Information

When actions don't stand out from supporting information, readers can make errors.

1. **Present actions before responses.** As the following example shows, you make reading unnecessarily difficult if you put the response to one step at the beginning of the next step.

The computer response obscures the action to be performed.

> 4. Press the RETURN key.
> 5. The Customer Order Screen will appear. Click on the TABS button.

Instead, put the response after the step that causes it.

Improved placement of the computer reaction lets the actions stand out.

> 4. Press the RETURN key.
>   The Customer Order Screen will appear.
> 5. Click on the TABS button.

2. **Make actions stand out visually from other material.**

   In the following example, bold is used to signal to the readers that the first part of step 4 is an action and the second part is the response.

> 4. **Press the RETURN key.** The Customer Order Screen will appear.

Use bold and layout to make actions stand out.

   You can also use layout to make such distinctions.

> 4. **Press the RETURN key.**
>   - The Customer Order Screen will appear.

   And you can use similar techniques when explaining steps.

> 7. **Enter ANALYZE.** This command prompts the computer to perform seven analytical computations.

Group Related Steps Under Action-Oriented Headings

By arranging the steps into groups, you divide your procedure into chunks that readers are likely to find manageable. You also help them *learn* the procedure so that they will be able to perform it without instructions in the future. Moreover, if you use action-oriented headings and subheadings for the groups of steps, you aid readers who need directions for only one part of the procedure. The headings enable them to locate quickly the information they require.

To create action-oriented headings, use participles, not nouns, to describe the task. For example, use *Installing* rather than *Installation* and use *Converting* rather than *Conversion*. Here are some of the action-oriented headings and subheadings from Chapter 4 of the Microsoft Windows NT manual.

> Setting Up Your Computers on Your Network
> - Connecting to Computers on Your Network
> - Sharing Your Printer
>   - Viewing Network Drives
>   - Using Dial-Up Networking
> - Using Peer Web Services
>   - Installing Peer Web Services
>   - Configuring and Administering Peer Web Services

The first word in each heading and subheading is a participle.

Use Many Graphics

Drawings, photographs, and similar illustrations often provide the clearest and simplest means of telling your readers such important things as:

1. **Where things are.** For instance, Figure 28.3 shows the readers of an instruction manual where to find four control switches.
2. **How to perform steps.** For instance, by showing someone's hands performing a step, you provide your readers with a model to follow as they attempt to follow your directions (see Figure 28.4).
3. **What should result.** By showing readers what should result from performing a step, you help them understand what they are trying to accomplish and help them determine whether they have performed the step correctly (see Figure 28.5).

LEARN MORE Chapters 14 and 15 tell how to design effective graphics for instructions.

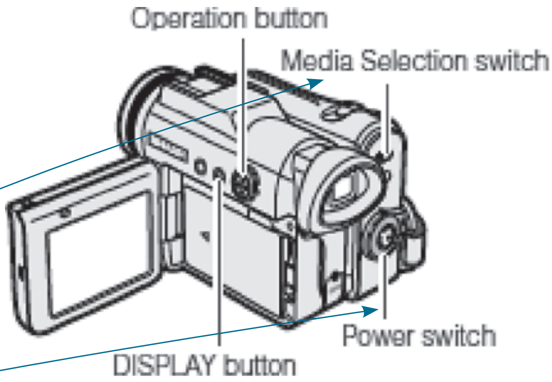
FIGURE 28.3

Drawing That Shows Readers Where to Locate Parts of a Camcorder

Writers at Sharp Electronics used this diagram to show new owners of a camcorder the location of buttons and switches they will use.

The writers placed the labels far enough from the drawing to stand out.

To avoid ambiguity, they drew the arrows directly to the labeled part.



Reproduced with permission of Sharp Electronics Corporation.

FIGURE 28.4

Drawings That Show How to Do Something

The writers created these instructions to tell people with diabetes how to obtain the drop of blood they need in order to check their blood glucose level.

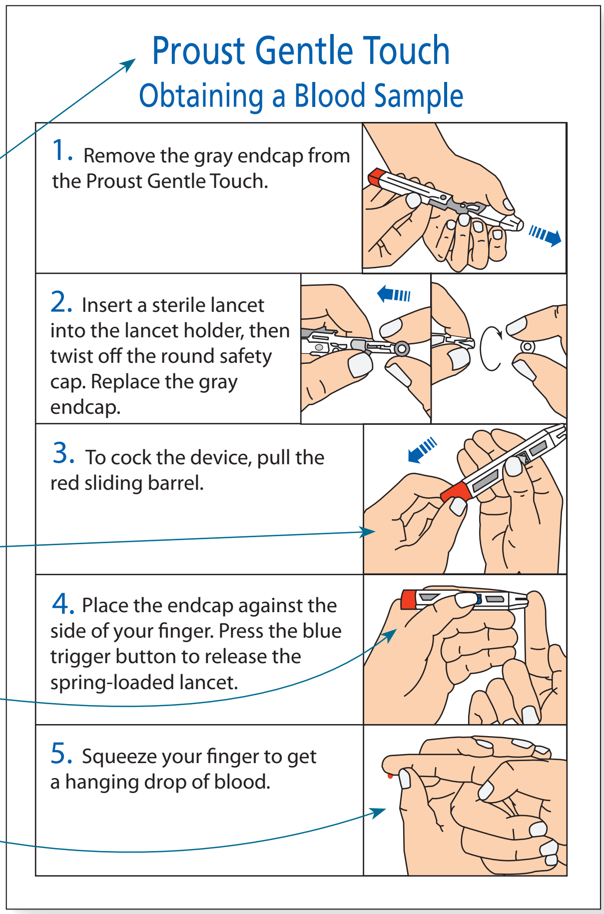
The title provides all the information readers need to understand and use these instructions. No separate introduction is needed.

The lancet is a sharp needle used to prick the skin.

The writers designed each drawing to show exactly how to hold the Gentle Touch.

In the drawing for step 4, the writers highlighted the placement of the endcap against the side of a finger.

In the drawing for step 5, the writers emphasized that the drop of blood must hang from the finger so that it may be applied to a test strip (in the next part of the procedure).



Adapted from Lifescan, 1998. "Obtaining a Blood Sample." Johnson & Johnson.

Incorrect
Retainer clip below armpit.

Correct
Retainer clip at armpit level.

Courtesy National Highway Traffic Safety Administration

FIGURE 28.5

Photos to Show the Successful Result of a Process

By showing both the correct and incorrect placement of the retainer clip, the National Highway Traffic Safety Administration helps readers understand the correct result of their adjustment of the retainer clip when placing children in car seats.

Chapter 16 provides detailed advice for using page design to help readers see which figure goes with which text.

Present Branching Steps Clearly

Sometimes instructions include alternative courses of action. For example, a chemical analysis might require one procedure if the acidity of a solution is at a normal level and another if the acidity is high. In such a situation, avoid listing only one of the alternatives.

Possibly confusing direction

6. If the acidity is high, follow the procedure described on page 20.

Instead, describe the step that enables readers to determine which alternative to choose (in the example, checking the acidity is that step) and then format the alternatives clearly:

Revised direction

6. Check the acidity.
   - If it is high, follow the procedure described on page 20.
   - If it is normal, proceed to Step 7.

Follow the same logic with other places where your instructions branch into two or more directions. The following example is from instructions for a computer program.

9. Determine which method you will use to connect to the Internet:
   - If you will use PPP (Point to Point Protocol), see Chapter 3.
   - If you will use SLIP (Serial Line Internet Protocol), see Chapter 4.

Tell What to Do in Case of a Mistake or Unexpected Result

Try to anticipate the places where readers might make mistakes or obtain an unexpected result. Unless the remedy is obvious, tell your readers what to do.

5. Depress and release the RUN switches on the operator's panel.

   NOTE: If the machine stops immediately and the FAULT light illuminates, reposition the second reel and repeat Step 5.

Troubleshooting

In various circumstances, readers find it easier to have information about correcting mistakes or unexpected results gathered into a single section. Often, a table format works best. Figure 28.6 shows the chapter of the manual for the

FIGURE 28.6

Troubleshooting Section from the Manual for the Tire Uniformity Optimizer

Chapter 4—Troubleshooting

This chapter tells you what to check when troubleshooting the TQC. It lists the problems that may occur, the probable causes, and the remedies.

The first list in this chapter consists of the error messages that appear on the CRT when a problem occurs. Next to the error messages are the causes of the problem and the possible remedies. A list of all the error messages can be found in Appendix B. The second list consists of observable phenomena that are listed in order of normal TQC operation.

One easily solved problem is caused by entering entries too quickly to the TQC through the keyboard. If the operator does not wait for the TQC to respond to one request before entering another, errors and inaccurate data will result. Make sure you allow sufficient time for the TQC to respond to your input before you press another key.

The writers used color to highlight a warning.

Warning

EXTERNAL TEST EQUIPMENT CAN DAMAGE THE TQC. If you use external equipment to troubleshoot the TQC, make sure that it does not introduce undesired ground currents or AC leakage currents.

Troubleshooting with Error Messages

Power-up Error Messages

The writers created the three-column table to enable readers to locate quickly the error message given by the TQC and read across for the relevant information and remedy.

Error Message	*Probable Cause*	*Remedy*
BACKUP BATTERY IS LOW	1. Battery on Processor Support PCB	1. Replace the battery on the Processor Support PCB.
CONTROLLER ERROR	1. PC interface PCB 2. Processor Support PCB	1. Swap the PC Interface PCB. 2. Swap the Processor Support PCB.
EPROM CHECKSUM ERROR	1. Configuration tables 2. Analog Processor PCB	1. Check the configuration tables. 2. Swap the Analog Processor PCB 88/40.
KEYBOARD MALFUNCTION: PORT	1. Keyboard or keyboard cable 2. Processor Support PCB	1. Check the keyboard and cable. 2. Swap the Processor Support PCB.
RAM FAILURE AT 0000:	1. Main Processor 86/30	1. Swap the 86/30.
RAM FAILURE AT 1000:	1. Main Processor 86/30	1. Swap the 86/30.
TIGRE PROGRAM CHECKSUM ERROR	1. TIGRE program	1. Reenter the TIGRE program or debug the program.

Table 4-1. *Power-up error messages.*

Page 59

Troubleshooting Section from the Manual for the Tire Uniformity Optimizer (from the Akron Standard, Operator's Manual for the Tire Uniformity Optimizer, (1986) p. 1. Used with permission of ITN Ride Quality Products.

Tire Uniformity Optimizer that tells how to troubleshoot the TUO's Tire Quality Computer (TQC).

Physical Construction of Instructions

The physical construction of instructions is an important element of their design. Computer manuals are often printed in a small format because readers use them on crowded desktops. Cookbooks are sometimes printed on glossy paper to withstand kitchen spills. Be sure to adapt your instructions to the environment in which they will be used.

Sample Printed Instructions

It is much easier to understand writing advice if you see sample communications that follow that advice. Take a moment to look at the sample in Figure 28.7 and the marginal notes that point out some of the writer's major strategies. Other samples are provided throughout this chapter. Figure 28.7 explains how a student followed the advice you have just read while creating instructions for a lab procedure used in paper mills. For additional examples, see the book's website.

FIGURE 28.7

Instructions Written by a Student

Determining the Percentages of Hardwood and Softwood Fiber in a Paper Sample

These instructions tell you how to analyze a paper sample to determine what percentage of its fibers is from hardwood and what percentage from softwood. This information is important because the ratio of hardwood to softwood affects the paper's physical properties. The long softwood fibers provide strength but bunch up into flocks that give the paper an uneven formation. The short hardwood fibers provide an even formation but little strength. Consequently, two kinds of fibers are needed in most papers, the exact ratio depending on the type of paper being made.

Herman explains the importance of the procedure.

To determine the percentages of hardwood and softwood fiber, you perform the following major steps: preparing the slide, preparing the sample slurry, placing the slurry on the slide, staining the fibers, placing the slide cover, counting the fibers, and calculating the percentages. The procedure described in these instructions is an alternative to the test approved by the Technical Association of the Pulp and Paper Industry (TAPPI). The TAPPI test involves counting fibers in only one area of the sample slide. Because the fibers can be distributed unevenly on the slide, that procedure can give inaccurate results. The procedure given here produces more accurate results because it involves counting all the fibers on the slide.

He provides an overview of the procedure and indicates why the reader should follow it.

EQUIPMENT

He lists all of the equipment needed so readers can assemble it before starting the procedure.

Microscope	Hot plate
Microscope slide	Paper sample
Microscope slide cover	Blender
Microscope slide marking pen	Beaker
Acetone solvent	Eyedropper
Clean cloth	Graff "C" stain
	Pointing needle

Courtesy Curtis J. Walor

(continued)

FIGURE 28.7

(*continued*)

Herman creates small groups of related steps. He places them under headings that help readers understand the overall procedure and quickly locate the directions they need when referring to the instructions in the future.

Herman explains the reason for the caution as a way of motivating readers to avoid making a mistake.

He uses bold for the action taken in each step, thereby making the action stand out from explanatory information.

He places the graphic immediately after the step it helps to explain. He keeps the graphic within the gridlines for the directions and out of the grid column for the step numbers.

2

PREPARING THE SLIDE

1. **Clean slide.** Using acetone solvent and a clean cloth, remove all dirt and fingerprints. NOTE: Do not use a paper towel because it will deposit fibers on the slide.

2. **Mark slide.** With a marking pen, draw two lines approximately 1.5 inches apart across the width of the slide.

3. **Label slide.** At one end, label the slide with an identifying number. Your slide should now look like the one shown in Figure A.

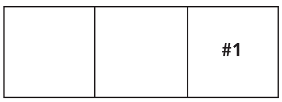


Figure A

4. **Turn on hot plate.** Set the temperature at warm. NOTE: Higher temperatures will "boil" off the softwood fibers that you will later place on the slide.

5. **Place slide on hot plate.** Leave the slide there until it dries completely, which will take approximately 5 minutes.

6. **Remove slide from hot plate.** Leave the hot plate on. You will use it again shortly.

PREPARING THE SAMPLE SLURRY

1. **Pour 2 cups of water in blender.** This measurement can be approximate.

2. **Obtain paper sample.** The sample should be about the size of a dime.

3. **Tear sample into fine pieces.**

4. **Place sample into blender.**

5. **Turn blender on.** Set blender on high and run it for about 1 minute.

6. **Check slurry.** After turning the blender off, see if any paper clumps remain. If so, turn the blender on for another 30 seconds. Repeat until no clumps remain.

7. **Pour slurry into beaker.**

Courtesy Curtis J. Walor

FIGURE 28.7

(*continued*)

3

PLACING THE SLURRY ONTO THE SLIDE

1. **Suck slurry into eyedropper.**

2. **Place 3 ml of slurry onto slide between the lines you marked on it.** This measurement can be approximate.

3. **Place slide onto black paper.**

4. **Check slide.** It should have between 300 and 1,000 fibers.
    - **If it has too few, use the eyedropper to add more slurry.**
    - **If it has too many, use the eyedropper to remove some slurry.**

    When done, your slide should look like the one shown in Figure B.

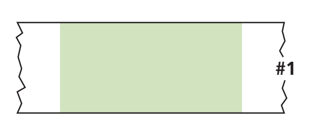


Figure B

5. **Place slide on hot plate.** Leave it there until all the water has evaporated, which will take about 1 hour.

6. **Remove slide from hot plate.**

7. **Turn off hot plate.**

    NOTE: If you cannot complete the entire procedure in one session, this is a good place to stop. The rest of the steps take about 1 hour.

STAINING THE FIBERS

1. **Place 3 drops of Graff "C" stain onto fibers.**

2. **Spread stain.** With the pointing needle, spread the stain evenly over the fibers, using the motion in Figure C.

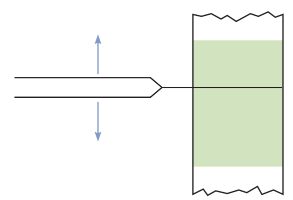


Figure C

PLACING THE SLIDE COVER

1. **Place one end of slide cover onto one of the lines you marked on the slide.** See Figure D.

Courtesy Curtis J. Walor

Herman begins each new section with step number 1.

He provides helpful suggestions for his readers.

He describes the desired result.

By using the bulleted list, Herman helps readers see immediately which of the branching steps they should take.

He provides a graphic showing the desired result so readers can compare their results with it.

(*continued*)

FIGURE 28.7

(*continued*)

Herman labels items in his graphic to help readers understand what it illustrates.

He uses a figure to explain a procedure that would be difficult to understand if presented in words alone.

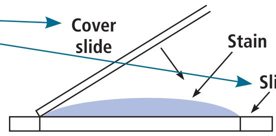


Figure D

2. **Slowly lower the other side of the slide cover.** Be sure that no air gets trapped under the slide cover.

3. **Drain excess stain.** With a cloth underneath, turn the slide onto one of its longest edges so that the excess stain will run off.

4. **Clean slide.** Use acetone solvent to remove residue and fingerprints.

COUNTING THE FIBERS

1. **Place slide onto microscope.**

2. **Adjust magnification.** You should be able to distinguish black fibers from dark purple ones.

3. **Move slide to show upper left-hand corner of area with fibers.**

4. **Count whole fibers.** Move the slide so that your view of it changes in the manner shown in Figure E, counting

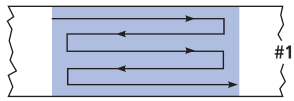


Figure E

the whole softwood and hardwood fibers you see. Ignore fragments of fibers, which you will count later.

* **Recognizing softwood fibers.** Softwood fibers are long and flat. They have blunt ends. The stain dyes the fibers colors that range from slightly purple (almost translucent) to a dark purple. See Figure F.

Courtesy Curtis J. Walor

FIGURE 28.7

(*continued*)

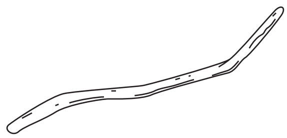


Figure F

* **Recognizing hardwood fibers.** Hardwood fibers are much smaller than softwood fibers. Their ends come to a point, and the stain dyes them deep black. See Figure G.

Figure G

5. **Count fragments.** Fragments result from refining. Count them while moving the slide in the way shown in

Figure E. Count softwood fragments until they equal a typical whole softwood fiber on the slide. Do the same for the hardwood fragments.

CALCULATING THE PERCENTAGES

1. **Multiply the total number of hardwood and softwood fibers by the appropriate factors.**
   - Number of softwood fibers $\times$ 1.5 = X
   - Number of hardwood fibers $\times$ 0.2 = Y
2. **Determine the percentages.**
   - Percentage of softwood = X/(X + Y) $\times$ 100%
   - Percentage of hardwood = Y/(X + Y) $\times$ 100%

Courtesy Curtis J. Walor

Herman uses graphics to help readers distinguish between the two kinds of fibers they will see through the microscope.

He presents the calculations in a format that is easy to read and imitate.

He creates a balanced appearance for the final page by ending the two columns at about the same distance from the top of the page.

WEB PAGE INSTRUCTIONS

As explained at the beginning of this chapter, all the advice you have read so far applies not only to printed instructions but also to web page instructions, which are becoming increasingly common. Often they are included as the online Help in computer programs. Many sites on the Internet provide instructions meant for on-screen use. Although there are special computer programs designed specifically for creating web page instructions, you can also use the feature

WEB To view other examples of online instructions, go to your English CourseMate at *www.cengagebrain.com.*

of your desktop publishing program that enables you to convert text files into website pages. The following guidelines highlight some of the advice given earlier in the chapter that you will find most helpful when creating web page instructions. Figure 28.8 shows sample pages from professionally developed online instructions. Figure 28.9 shows pages from online instructions created by a student.

LEARN MORE For detailed advice on creating websites and web pages from which they are constructed, see Chapter 22.

GUIDELINES FOR WEB PAGE INSTRUCTIONS

1. **Organize the steps into small, related groups arranged hierarchically.** This organizational strategy facilitates quick access to the specific directions that a reader wants. If you devote a separate web page to each of the smallest groups, you also save your readers from the inconvenience and, sometimes, confusion caused when people need to scroll through directions.
2. **Give readers quick access to a complete list of the topics.** When using online instructions, many readers want to skip around among tasks. Help them by creating a complete list of items in your hierarchy so they don't have to move through layers of pages to locate what they want. Make this list available on every page, for instance, by putting a link to it in a navigation bar at the top or side of each page.
3. **Provide links to helpful information.** If your directions use a term that some of your readers may not know, provide a link to an explanation. If readers would find it helpful to learn about an alternative or related procedure, include a link to it.
4. **Write succinct, precise directions.** Even more than on paper, succinctness is valued in online instructions. Extra words not only make extra reading but also extra scrolling.
5. **Include clear, well-labeled graphics.** Tables, drawings, screen shots, and other graphics are just as helpful online as in print.
6. **Use a consistent design on all pages.** As in a printed document, a consistent design makes online instructions easier for readers to use.
7. **Use all the page design strategies you would use on paper.** Despite the many differences between a computer screen and a printed page, online instructions are pages. All of the design features that make paper pages usable and persuasive do the same for digital pages.
8. **If the instructions are for a computer program, enable readers to see your instructions and their work simultaneously.** When people are working on a computer, nothing is more frustrating to them than having to switch between windows to follow directions. Design your web pages and their contents so that readers can keep their work open in a window beside yours.
9. **Conduct user testing.** All instructions, whether in print or online, have to be tested by members of the target audience, who try to use them under conditions identical to those of the anticipated actual use.

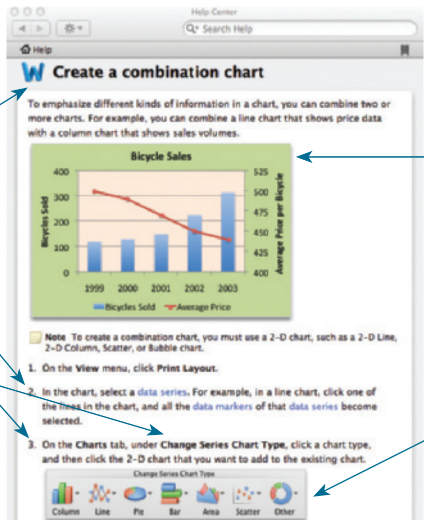
FIGURE 28.8

Online Instructions

© 2012 Microsoft

Writers at Microsoft created online Help pages for Word.

On the main page, they provided a table of contents plus a search option in order give users two ways to locate the information they want. Each link in the table of contents leads to a list of subtopics.



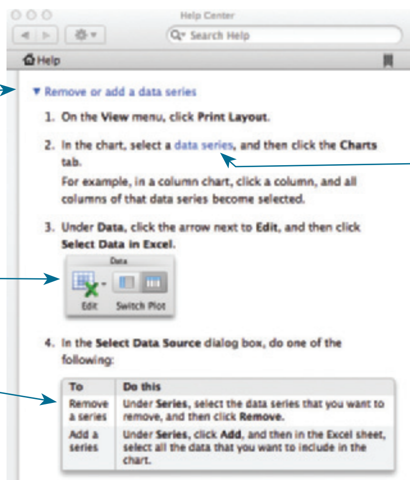
The writers used many features of effective layout that are also used in print instructions.

- Larger, bold type for main headings.
- Extras white space between steps to make reading easier.
- Separate column for step numbers.
- Bold to highlight key terms.

The writers included clear, helpful graphics to show users what they can create.

They showed the program's icons to help users locate the items they needed.

TRY THIS Analyze the online Help for a program you use. In what ways does it follow the guidelines provided in this book? It what ways does it deviate from them?



The writers designed narrow Help windows so users could read the directions and also see their own work on the screen.

The writers used color to make subheadings stand out.

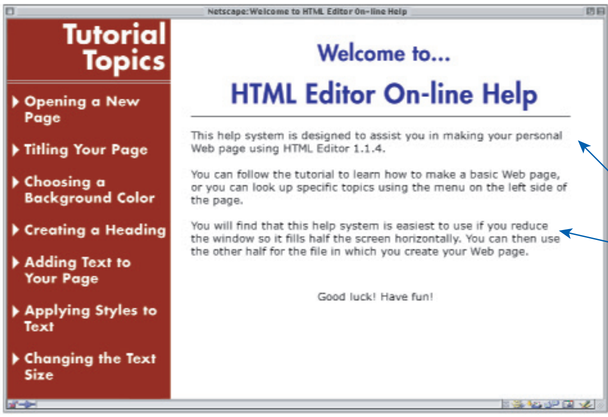
They used color to highlight words users could click for definitions.

They aligned figures in the text column, not the number column.

The writers included tables to help users see how to take alternative actions.

FIGURE 28.9

Online Instructions Created by a Student



Amy's instructions tell how to use a program that helps people make web pages.

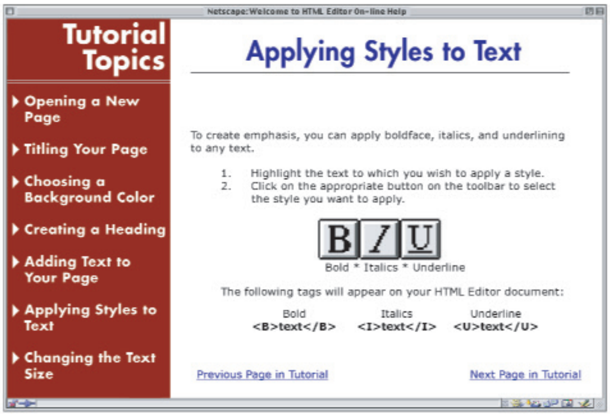
Her introduction tells:

- What the instructions do
- How to use them

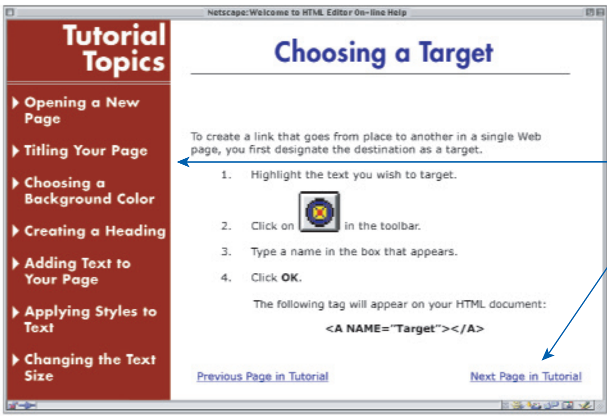
Amy uses the same basic design for all pages.

Most of her screens require no scrolling (though the menu on the left must be scrolled).

Note her use of figures.



Courtesy Amy Beaton Kearns



On each screen, Amy provides two ways of navigating her instructions:

- The menu at left provides rapid access to specific topics.
- The links at the bottom guide the reader through a step-by-step process.

VIDEO INSTRUCTIONS

Increasingly, instructions are prepared as videos, with the text being spoken and the graphics being either a series of still images or video clips. New cars now come with DVDs that provide instructions to new owners. Company websites include movies that tell people how to use the company's products. The Help feature of many computer programs, such as Microsoft Word, include videos that explain how to use some of the program's features. YouTube features an ever-growing collection of movie instructions.

Although web page instructions closely resemble printed instructions, video instructions are quite different. You couldn't create an effective script simply by reading directions prepared for print or a web page. In movie instructions, the relationship between images and script are coordinated through timing rather than placement on the page. In the movie version, you need to have images continuously. You can't leave the visual portion of the movie blank until you come to a place where you would use the next graphic in printed or web page instructions. Tone of voice and pace of reading make a great difference in the effectiveness of video instructions.

Movie-making programs are available for free on almost every computer. For Windows, you can download an easy-to-use program called Windows Movie Maker at *www.microsoft.com*. Apple computers have iMovie. Most new computers are now equipped with cameras and microphones.

At this book's website, you can read a bonus chapter about making video instructions, link to examples made by professionals, and view samples made by students. Go to your English CourseMate at www.cengagebrain.com.

TRY THIS In the Help feature of a program on your computer, find a video that includes step-by-step instructions. Most desktop publishing programs, such as Microsoft Word, have them. Imagine that you are making a set of print instructions for the same procedure. Quickly draft the written instructions for the first few steps, including text and graphics. How are your print instructions like the movie instructions? How do they differ? Alternatively, write the video script, including graphics, for a simple, step-by-step procedure.

WRITER'S GUIDES AND OTHER RESOURCES

Figure 28.10 presents a Writer's Guide for Revising Instructions that you can use in your course and on the job. At this book's website, you can download a copy of this Writer's Guide as well as one for planning instructions.

WEB To download Writer's Guides for planning and revising instructions,go to your English CourseMate at *www.cengagebrain.com.*

Note to the Instructor To tailor the Writer's Guides to your course, download them from the website.

FIGURE 28.10

Writer's Guide for Revising Instructions

To download a copy of this Writer's Guide as well as a Writer's Guide for Planning Instructions, go to your English CourseMate at www.cengagebrain.com.

Writer's Guide
REVISING INSTRUCTIONS

The following headings reflect the elements of the conventional superstructure for instructions. In many situations, some of the elements are unnecessary. Include only the elements that will make your instructions useful and persuasive to your readers.

Introduction

- ☐ Describes the purpose, aim, or desired outcome of the procedure, if it is not clear from the title
- ☐ Identifies the intended readers (their knowledge level, job descriptions, etc.)
- ☐ Tells the scope and organization, either separately or together
- ☐ Provides motivation (reasons for following the instructions rather than using another procedure)
- ☐ Explains the conventions used
- ☐ Includes safety information

Description of the Equipment

- ☐ Shows the location of the key parts
- ☐ Explains the function of the key parts

Materials and Equipment

- ☐ Tells readers what materials and equipment to gather before starting the procedure

Directions

- ☐ Supports rapid comprehension and immediate use by providing only the information your readers need, listing the steps, using the active voice and imperative mood ("Do this."), and highlighting keywords
- ☐ Helps readers locate the next step quickly by numbering the steps and putting blank lines between them, giving one action per step, and putting step numbers in their own column
- ☐ Distinguishes action from supporting information by putting actions before responses, and making actions stand out visually
- ☐ Groups related steps under action-oriented headings
- ☐ Uses many graphics
- ☐ Presents branching steps clearly

Troubleshooting

- ☐ Tells what to do if something fails or there is an unexpected result

Graphics (See Chapter 14)

- ☐ Included wherever readers would find them helpful or persuasive
- ☐ Looks neat, attractive, and easy to read
- ☐ Referred to them at the appropriate points in the prose
- ☐ Located where your readers can find them easily

FIGURE 28.10

(***continued***)

Writer's Guide
REVISING INSTRUCTIONS
(***continued***)

Page Design (See Chapter 16)

- ☐ Looks neat and attractive
- ☐ Helps readers find specific information quickly

Proofreading (See Chapter 18)

- ☐ Uses correct spelling, grammar, and punctuation
- ☐ Provides directions that have been user-tested

USE WHAT YOU'VE LEARNED

EXERCISE YOUR EXPERTISE

1. Find and photocopy a short set of instructions (five pages or less). Analyze the instructions, noting how the writers have handled each element of the superstructure for instructions. If they have omitted certain elements, explain why you think they did so. Comment on the page design and graphics (if any). Then evaluate the instructions. Tell what you think works best about them and identify ways you think they can be improved.
2. Complete the Instructions project in Appendix B.

EXPLORE ONLINE

Choose one:

a. Find a set of instructions designed to be read on the World Wide Web and discuss ways they might be changed to be effective in print.

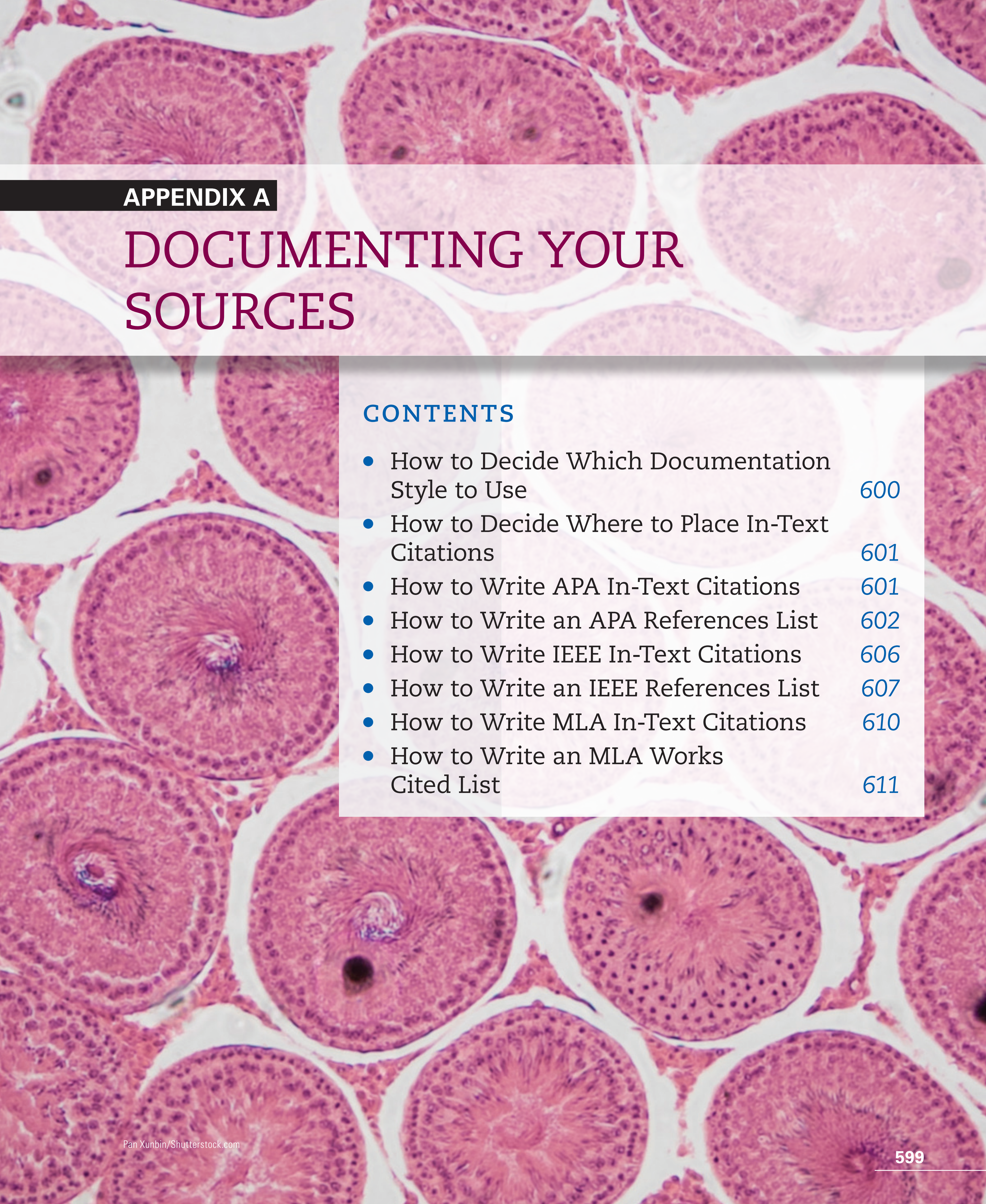
b. Find a set of print instructions and discuss ways they might be changed to make them as effective as possible if viewed on the World Wide Web.

COLLABORATE WITH YOUR CLASSMATES

Working with another student, conduct an informal user test of a set of online instructions for a program on your computer. First, evaluate the screen design together. Next, while one of you uses part of the instructions, the other should record observations about parts of the text and graphics that work well and parts that could be improved. Present your results in a memo to your instructor. Consider the guidelines given on pages 581–585 and your own experience as you prepare your memo.

APPENDIX A

DOCUMENTING YOUR SOURCES



Pan Xunbin/Shutterstock.com

CONTENTS

In many of the communications you will write at work, you will want to tell your readers about other sources of information concerning your subject. You may have any of the following reasons for wanting to do so:

- **To acknowledge the people and sources that have provided you with ideas and information.** For a discussion of this reason for citing your sources, see "How to Observe Intellectual Property Law and Document Your Sources," in Chapter 6 on page 147.
- **To help your readers find additional information about something you have discussed.**
- **To persuade your readers to pay serious attention to a particular idea.** By showing that an idea was expressed by a respected person or in a respected publication, you are arguing that the idea merits acceptance.
- **To explain how your research contributes to the development of new knowledge in your field.** In research proposals and in research reports published in professional journals, writers often include a literature review to demonstrate how their own research advances knowledge. For more information on using references in this way, see the discussion of expanding existing knowledge in the chapter on empirical research reports, page 512.

Whenever you have determined that you should identify your sources for your readers, you must determine how to present that information. This Appendix will help you by providing the following information.

HOW TO DECIDE WHICH DOCUMENTATION STYLE TO USE

WEB For additional information about documenting your sources, including links to other documentation systems, go to your English CourseMate at *www.cengagebrain.com.*

There are many formats for documentation, some very different from one another. Many organizations issue style guides that describe in detail the formats they want their employees to use. Others ask employees to follow a style guide published by a professional organization such as the American Psychological Association (APA), Institute of Electrical and Electronic Engineers (IEEE), or Modern Language Association (MLA). The rest of this appendix explains the APA, IEEE, and MLA styles. Most other documentation styles resemble one of these three.

HOW TO DECIDE WHERE TO PLACE IN-TEXT CITATIONS

While documentation styles differ in many ways, most share the same two elements: a "references" list of sources, giving full information about each one, that is placed at the end of your communication, and "citations" placed by the statements in the text that are based on each of the sources.

Regardless of the documentation style you use, the guidelines for placing the in-text citations are the same. For citations that pertain to a single fact, sentence, or quotation, place your citation immediately after the appropriate material (note that the APA style for formatting these citations is used in the following examples):

> According to F. C. Orley (2010, p. 37), "We cannot tell how to interpret these data without conducting further tests."
>
> Researchers have shown that a person's self-esteem is based upon performance (Dore, 2009), age (Latice, 1998), and weight (Swallen & Ditka, 2012).

If your citation refers to material that appears in several sentences, place the citations in a topic sentence that introduces the material. Your readers will then understand that the citation covers all the material that relates to that topic sentence. As a further aid to your readers, you may use the author's name (or a pronoun) in successive sentences:

> A much different account of the origin of oil in the earth's crust has been advanced by Thomas Gold (2008). He argues that . . . . To critics of his views, Gold responds. . . .

The rest of this chapter describes the specific ways you would write the in-text citations and entries in your references list in the APA, IEEE, and MLA styles.

HOW TO WRITE APA IN-TEXT CITATIONS

To write an APA in-text citation, enclose the author's last name and the year of publication in parentheses inside your normal sentence punctuation. Place a comma between the author's name and the date. Use p. if you are citing a specific page, and use pp. if citing more than one page.

> The first crab caught in the trap attracts others to it (Tanner, 2007, pp. 33–34).

If you incorporate the author's name in the sentence itself, give only the year and pages (if any) in parentheses:

> According to Tanner (2007, pp. 33–34), the first crab caught in the trap attracts others to it.

WEB For additional information and details about the APA documentation style, go to your English CourseMate at *www.cengagebrain.com.*

Here are some other types of citations:

(Hoeflin & Bolsen, 2004)	Two authors.
(Wilton, Nelson, & Dutta, 1932)	First citation for three, four, or five authors.
(Wilton et al., 1932)	Second and subsequent citations for three to five authors. Omit year in subsequent citations in the same paragraph (*et al.* is an abbreviation for the Latin phrase *et alii*, which means *and others; because it is an abbreviation, it is followed by a period*).
(Norton et al., 2004)	First and subsequent citation for six or more authors.
(Angstrom, 2010, p. 34)	Reference to a particular page.
(U.S. Department of Energy, 1997)	Government or corporate author.
("Geologists Discover," 2011).	No author listed (use the first few words of the title). In the example, the words from the title are in quotation marks because the citation is to an article; if a book is cited, the words would be in italics with no quotation marks.
(Justin, 1998; Skol, 1972; Weiss, 1966)	Two or more sources cited together (arrange them in alphabetical order).

In some communications, you might cite two or more sources by the same author. If they were published in *different* years, your readers will have no trouble telling which work you are referring to. If they were published in the same year, you can distinguish between them by placing lowercase letters after the publication dates in your citations and in your references list:

(Burkehardt, 1998a)
(Burkehardt, 1998b)

HOW TO WRITE AN APA REFERENCES LIST

The examples below illustrate and explain how to use the APA style to write references list entries for the most common types of print, electronic, and other sources. To create entries that are not listed here, follow the logic of these examples or consult the *Publication Manual of the American Psychological Association, Sixth Edition*, available in the reference section of most libraries. Figure A.1 shows how to arrange entries in your references list.

Print Sources

1. Book, One Author—APA

Lightman, A. P. (2005). *A sense of the mysterious: Science and the human spirit.* New York, NY: Pantheon Books.

- Give the author's last name followed by a comma and initials (not full first or middle names).
- Place the copyright date in parentheses, followed by a period.
- Italicize the title, and capitalize only the first word of the title, proper nouns, and the first word after a colon or dash in the title.

FIGURE A.1

APA References List

References

Adams, D. J., Dyson, P. J., & Tavener, S. J. (2004). *Chemistry in alternative reaction media.* Hoboken, NJ: Wiley.

Gould, S. J. (1989). *Wonderful life: The burgess shale and the nature of history.* New York, NY: Norton.

Gould, S. J. (1995). *Dinosaur in a haystack: Reflections in natural history.* New York, NY: Harmony.

International Business Machines. (n.d.). What's user-centered design? Retrieved from https://www-01.ibm.com/software/ucd/ucd.html#whatisucd

McLaurin, J., & Chakrabartty, A. (1997). Characterization of the interactions of Alzheimer ß-amyloid peptides with phospholipid membranes. *European Journal of Biochemistry, 245,* 355–63.

Rethinking traditional design. (1997). *Manufacturing Engineering 118*(2), 50.

Younger manufacturing workers can teach old dogs new tricks. (2007). *Manufacturing, 86*(5), 5.

Second and subsequent lines are indented.

When the list includes two or more items by the same author, the oldest appears first.

For the second and subsequent items by the same person, the author's name is repeated.

Items by corporate and government groups are alphabetized by the groups' names (spelled out).

Items without authors are alphabetized by the title.

© Cengage Learning

- Follow the city of publication with a comma and the two-letter postal abbreviation for the state.
- Indent the second and subsequent lines by 5 spaces.

2. Book with Two or More Authors—APA

Budinski, K. G., & Budinski M. K. (2005). *Engineering materials: Properties and selection*. Upper Saddle River, NJ: Pearson.

Adams, D. J., Dyson, P. J., & Tavener, S. J. (2004). *Chemistry in alternative reaction media*. Hoboken, NJ: Wiley.

- Give the names of all authors the same way (last name, then initials).
- Use the ampersand (&) instead of the word *and* before the last author.

3. Anthology or Essay Collection—APA

Bodeker, G., & Burford, G. (Eds). (2007). *Traditional, complementary and alternative medicine: Policy and public health perspectives*. London, UK: Imperial College Press.

- If there is only one editor, use this abbreviation: Ed.

4. Second or Subsequent Edition—APA

Simmons, L. H., & Olin, H, B. (2001). *Construction: Principles, materials, and methods* (7th ed.). New York, NY: John Wiley.

5. Government Report—APA

Frankforter, J. D., & Emmons, P. J. (1997). *Potential effects of large floods on the transport of atrazine into the alluvial aquifer adjacent to the Lower Platte River, Nebraska* (U.S. Geological Survey Water-Resources Investigation Report 96-4272). Denver, CO: U.S. Geological Survey.

- If the report doesn't list an author, use the agency that published it as the author. If it is a United States government agency, use the abbreviation "U.S."
- If the report has an identifying number, place it immediately after the title in parentheses.

6. Corporate Report—APA

Daimler-Benz AG. (2013). *Environmental report 2013.* Stuttgart, Germany: Author.

- List the names of the individual authors rather than the corporation if the names are given on the title page.
- If the names of the individual authors aren't given on the title page, list the corporation as the author. (In the example, "Daimler-Benz AG" is the name of a company.)
- When the author and publisher are the same, use the word Author as the name of the publisher.

7. Chapter in a Book—APA

Moor, J. H. (2008). Why we need better ethics for emerging technologies. In J. Hoven & J. Weckert (Eds.), *Information technology and moral philosophy* (pp. 24–43). New York, NY: Cambridge University Press.

8. Article in an Encyclopedia, Dictionary, or Similar Reference Work—APA

Rich, E. (2003). Artificial intelligence. In *Encyclopedia Americana* (Vol. 2, pp. 407–412). Danbury, CT: Grolier.

- If no author is listed, begin with the article's title.

9. Pamphlet or Brochure—APA

Ohio Department of Natural Resources. (2010). *Ring-necked pheasant management in Ohio.* [Pamphlet]. Columbus, OH: Author.

- If no author is listed, use the organization that published the brochure as the author.

- When the author and publisher are the same, use the word Author as the name of the publisher.

10. Article in Journal That Numbers Its Pages Continuously Through Each Volume—APA

McLaurin, J., & Chakrabartty, A. (1997). Characterization of the interactions of Alzheimer ß-amyloid peptides with phospholipid membranes. *European Journal of Biochemistry, 245,* 355–363.

- After the journal's name (note use of capital letters), add a comma and the volume number (in italics).
- The word *Alzheimer* is capitalized because it is a proper noun.

11. Article in Journal That Numbers Its Pages Separately for Each Issue—APA

Bradley, J., & Soulodre, G. (2009). The acoustics of concert halls. *Physics World, 10*(5), 33–37.

- After the journal title, include the volume number, followed by the issue number (in parentheses).
- Put the volume number—but not the issue number—in italics.

12. Article with No Author Listed—APA

Younger manufacturing workers can teach old dogs new tricks. (2007). *Manufacturing, 86*(5), 5.

- Begin with the article's title. This example gives the issue number in parentheses because the journal numbers its pages separately for each issue (see Example 1).
- Put the volume number in italics but not the parentheses and issue number in this example: (5).

Electronic Sources

To cite online sources, give the standard citation for the source and add the Digital Object Identifier (DOI) at the end. A DOI is a unique combination of letters and numbers assigned to an online publication; for citations, it is preferred to URLs because URLs can change and DOIs, which do change, can be used in browser searches. If the source you are citing does not have a DOI, give the URL instead.

WEB For information about the APA documentation style for other types of electronic sources, go to your English CourseMate at *www .cengagebrain.com.*

13. Electronic Version of Print Book—APA

Shotton, M. A. (1989). *Computer addiction? A study of computer dependency* [DX Reader version]. Retrieved from http://www.ebookstore.tandf.co.uk/html /index.asp

- Because placing a period at the end of an Internet address can cause confusion, final periods are omitted in APA entries for online sources.

14. Electronic-only Book—APA

O'Keefe, E. (2012). *Egoism & the crisis in Western values.* Retrieved from http://www.onlineoriginals.com/showitem.asp?itemID=134

- Because placing a period at the end of an Internet address can cause confusion, final periods are omitted in APA entries for online sources.

Because material available on the Web changes continuously, APA entries do not include the date you retrieved the item.

15. Online Journal Article That Is Not Available in Print—APA

Xu, P. (2013). Analysis of isolation effects about elastic waves by discontinuous barriers composed of rigid piles. *Electronic Journal of Geotechnical Engineering, 18,* 1–11. Retrieved from http://www.ejge.com/2013/JourTOC18A.htm

16. Online Journal Article That Is Also Available in Print—APA

Unger, J. (2012). Intensification of Type 2 Diabetes in Adolescents: Guess What? Exercise Wins! *Clinical Diabetes, 30,* 164–167. **doi: 10.2337/diaclin.30.4.164**

17. Web Page or Document That Is Not Part of a Journal—APA

International Business Machines. (n.d.). What's user-centered design? Retrieved from https://www-01.ibm.com/software/ucd/ucd.html#whatisucd

- If the web page does not give a date, use (n.d.) as an abbreviation for "no date."

Additional Common Sources

18. E-mail—APA

The APA style includes references to e-mails only in parentheses in the text, not in the references list. The parenthetical citation in the text includes the author's initials as well as his or her last name and an exact date:

(M. Grube, personal communication, December 4, 2012)

19. Letter—APA

(L. A. Cawthorne, personal communication, August 24, 2013)

- The APA style treats letters the same way it treats e-mails (see Example 18).

20. Interview—APA

(S. Oparka, telephone interview, October 17, 2012)

- The APA style treats interviews the same way it treats e-mails (see Example 18).

HOW TO WRITE IEEE IN-TEXT CITATIONS

In the IEEE style, in-text citations consist simply of a number enclosed in square brackets and placed inside the sentence punctuation. Each number refers the reader to the description of the source, which is presented in the references list. You number the citations according to the order in which they appear in the text: the first citation is [1], the second is [2], and so on.

Wellings [1] agrees, but Astin [2] argues that the calculations are flawed.

WEB For additional information about documenting your sources, including links to other documentation systems, go to your English CourseMate at *www.cengagebrain.com.*

When a source is cited for a second time, it retains its original number.

As demonstrated by Madden [7] and Thompson [8], Astin [2] was correct.

In the IEEE style, you can also treat citation numbers as nouns.

As can be seen in [2]; According to [5].

HOW TO WRITE AN IEEE REFERENCES LIST

In an IEEE references list, arrange your sources in the order you cite them in your text—*not* in alphabetical order. The source you numbered [1] goes first, followed by [2], and so on. As shown in Figure A.2, place the numbers in square brackets and place them in a column of their own.

FIGURE A.2

IEEE References List

References

[1] D. J. Adams *et al., Chemistry in Alternative Reaction Media*. Hoboken, NJ: Wiley, 2004.

[2] S. J. Gould, *Dinosaur in a Haystack: Reflections in Natural History*. New York, NY: Harmony, 1995.

[3] S. J. Gould, *Wonderful Life: The Burgess Shale and the Nature of History*. New York, NY: Norton, 1989.

[4] International Business Machines. (n.d.). *What's User-Centered Design?* [Online]. Available: https://www-01.ibm.com/software/ucd/ucd.html#whatisucd

[5] J. McLaurin and A. Chakrabartty, "Characterization of the interactions of Alzheimer ß-amyloid peptides with phospholipid membranes," *European J. of Biochem.*, vol. 245, 355–363. Apr. 1997.

[6] "Rethinking traditional design," *Manufacturing Engineering,* vol. 118, no. 2, p. 50. Feb. 1997.

[7] "Younger manufacturing workers can teach old dogs new tricks," *Manufacturing,* vol. 86, no. 5, p. 5. May 2007.

Reference numbers are listed in a separate column.

For second and subsequent items by the same author, the author's name is repeated.

© Cengage Learning

Print Sources

1. Book, One Author—IEEE

[1] A. P. Lightman, *A Sense of the Mysterious: Science and the Human Spirit*. New York, NY: Pantheon Books, 2005.

- Give the author's first and middle initials followed by periods, then the author's last name followed by a comma.
- Italicize the title, followed by a period. Capitalize the major words.
- Follow the city of publication with a colon, the publisher, comma, and date of publication.
- Align lines after the first one with the author's first initial.

2. Book with Two or More Authors—IEEE

[2] K. G. Budinski and M. K. Budinski, *Engineering Materials: Properties and Selection*. Upper Saddle River, NJ: Pearson, 2005.

[3] D. J. Adams *et al*., *Chemistry in Alternative Reaction Media*. Hoboken, NJ: Wiley, 2004.

- Give the names of all authors the same way (initials, then last name).
- Use *et al.* in italics after the first author's name if there are three or more authors. Note that *et al.* includes a period that is followed by a comma (*et al*. is an abbreviation for a Latin phrase that means *and others*).

3. Anthology or Essay Collection—IEEE

[4] G. Bodeker and G. Burford, Eds., *Traditional, Complementary and Alternative Medicine: Policy and Public Health Perspectives*. London, UK: Imperial College Press, 2007.

- If there is only one editor, use this abbreviation: Ed.

4. Second or Subsequent Edition—IEEE

[5] L. H. Simmons, L. H. and H. R. Olin, *Construction: Principles, Materials, and Methods,* 7th ed. New York, NY: John Wiley, 2001.

5. Government Report—IEEE

[6] Frankforter, J. D., and P. J. Emmons. *Potential Effects of Large Floods on the Transport of Atrazine into the Alluvial Aquifer Adjacent to the Lower Platte River, Nebraska*. U.S. Geological Survey Water-Resources Investigation Report 96-4272. Denver, CO: U.S. Geological Survey, 1997.

- If the report doesn't list an author, use the name of the agency that published it as the author. If it is a United States government agency, use the abbreviation "U.S."
- If the report has an identifying number, place it immediately after the title.

6. Corporate Report—IEEE

[7] Daimler-Benz AG, *Environmental Report 2013*. Stuttgart, Germany: Daimler-Benz AG, 2013.

- List the corporation as the author. (In the example, "Daimler-Benz AG" is a company.)

7. Chapter in a Book—IEEE

[8] J. H. Moor, "Why we need better ethics for emerging technologies," in *Information Technology and Moral Philosophy,* J. Hoven and J. Weckert, Eds. New York, NY: Cambridge University Press, 2008, pp. 24–43.

- Capitalize only the first word of the chapter title.

8. Article in an Encyclopedia, Dictionary, or Similar Reference Work—IEEE

[9] E. Rich, Artificial intelligence, in *Encyclopedia Americana.* Danbury, CT: Grolier, 2003, vol. 2, pp. 407–412.

- If no author is listed, begin with the article's title.

9. Pamphlet or Brochure—IEEE

[10] Ohio Department of Natural Resources. *Ring-necked pheasant management in Ohio.* Columbus, OH: Ohio Department of Natural Resources, 2010.

- If no author is listed, use the organization that published the brochure as the author.

10. Article in Journal That Numbers Its Pages Continuously Through Each Volume—IEEE

[11] J. McLaurin and A. Chakrabartty, "Characterization of the interactions of Alzheimer ß-amyloid peptides with phospholipid membranes," *European J. of Biochem.,* vol. 245, no. 5, pp. 355–363. Apr. 1997.

- Place the article's title in quotation marks, and capitalize only the first word.
- Abbreviate the journal name.
- Include the month of publication and abbreviate it.
- In the example, the word *Alzheimer* is capitalized because it is a proper noun (a person's name).

11. Article in Journal That Numbers Its Pages Separately for Each Issue—IEEE

[12] J. Bradley and G. Soulodre, "The acoustics of concert halls," *Physics World,* vol. 10, no. 5, pp. 33–37. May 1997.

- Same as for article in a journal that numbers its pages continuously through each volume. See the preceding explanation (10).

12. Article with No Author Listed—IEEE

[13] "Younger manufacturing workers can teach old dogs new tricks," *Manufacturing,* vol. 85, no. 5, p. 5. May 2007.

Electronic Sources

To cite online sources, give the standard citation for the source and add the Digital Object Identifier (DOI) at the end. A DOI is a unique combination of letters and numbers assigned to an online publication; for citations, it is

preferred to URLs because URLs can change and DOIs, which do change, can be used in browser searches. If the source you are citing does not have a DOI, give the URL instead.

13. Electronic Version of Print Book—IEEE

[14] Shotton, M. A. (1989). *Computer Addiction? A Study of Computer Dependency* [DX Reader version]. Available: http://www.ebookstore.tandf.co.uk/html/index.asp

- Because placing a period at the end of an Internet address can cause confusion, final periods are omitted in IEEE entries for online sources.

14. Electronic-only Book—IEEE

[15] E. O'Keefe. (2012). *Egoism and the Crisis in Western Values* [Online]. Available: http://www.onlineoriginals.com/showitem.asp?itemID=134

15. Online Journal Article That Is Not Available in Print—IEEE

[16] P. Xu. (2013). "Analysis of isolation effects about elastic waves by discontinuous barriers composed of rigid piles." *Electron. J. of Geotech. Eng.*, vol. 18, pp. 1–11. 2012. [Online]. Available: http://www.ejge.com/2013/JourTOC18A.htm

16. Online Journal Article That Is Also Available in Print—IEEE

[17] J. Unger. (2013). "Intensification of Type 2 Diabetes in Adolescents: Guess What? Exercise Wins!" *Clinical Diabetes*, vol. 30, no. 4, pp. 164–167. Fall 2012. [Online] Available: doi: 10.2337/diaclin.30.4.164

17. Web Page or Document That Is Not Part of a Journal—IEEE

[18] International Business Machines. (n.d.). What's user-centered design? [Online]. Available: https://www-01.ibm.com/software/ucd/ucd.html#whatisucd

- If the web page does not give a date, use (n.d.) as an abbreviation for "no date."

Additional Common Sources

18. E-mail—IEEE

[19] M. Grube, private communication, Dec. 4, 2010.

19. Letter—IEEE

[20] A. Cawthorne, private communication, Aug. 24, 2010.

20. Interview—IEEE

[21] S. Oparka, telephone interview, Oct. 17, 2009.

WEB For additional information about documenting your sources, including links to other documentation systems, go to your English CourseMate at ***www.cengagebrain.com.***

HOW TO WRITE MLA IN-TEXT CITATIONS

A basic MLA citation contains two kinds of information: the author's name and the specific page or pages on which the cited information is to be found. Enclose these in parentheses—with no punctuation between them—and place them inside your normal sentence punctuation. If you are citing the entire work, omit the page numbers. The following citation refers the reader to pages 33 and 34 of a work by Tanner. Note that MLA style uses a hyphen to separate page ranges. In large numbers, only the last two digits are provided unless more are necessary (252-53, but 295-305).

> The first crab caught in the trap attracts others to it (Tanner 33-34).

If you incorporate the author's name in the sentence itself, give only the page numbers in parentheses:

> According to Tanner, the first crab caught in the trap attracts others to it (33-34).

Here are some other types of citations:

(Hoeflin and Bolsen 16)	Two authors.
(Wilton, Nelson, and Dutta 222)	Three authors.
(Norton et al. 776)	Four or more authors. Note that *et al.* includes a period (it is an abbreviation for a Latin phrase that means *and others*).
(U.S. Department of Energy 4-7)	Government or corporate author.
("Discover" 31)	No author listed (use the first few words of the title). In the example, the words from the title are in quotation marks because the citation is to an article; if a book is cited, the words would be in italics with no quotation marks. When there are two or more anonymous works by the same title, include in the parenthetical reference either a publication year for a book or a periodical name for an article.
(Justin 23; Skol 1089; Weiss 475)	Two or more sources cited together.

In some of your communications, you might cite two or more sources by the same author. If they were published in different years, your readers will have no trouble telling which work you are referring to. If they were published in the same year, distinguish between them by placing a comma after the author's name, followed by a few words from the title.

> (Burkehardt, "Gambling Addiction")

Whole work cited

> (Burkehardt, "Obsessive Behaviors," 81-87)

Specific pages cited

HOW TO WRITE AN MLA WORKS CITED LIST

The following sections describe how to write entries for the most common types of print, electronic, and other sources. To create entries that are not listed here, follow the logic of these examples or consult those available in the *MLA Handbook for Writers of Research Papers, Seventh Edition,* available in the reference section of most libraries. Figure A.3 shows how to arrange entries in your list of works cited. Note that all entries include the medium of the source: print, Web, DVD, and so on.

Print Sources

1. Book, One Author—MLA

Lightman, Alan P. *A Sense of the Mysterious: Science and the Human Spirit*. New York: Pantheon Books, 2005. Print.

- Give the author's last name followed by a comma and then the first and middle names or initials—exactly as they appear on the title page.
- Italicize the title, followed by a period. Capitalize the major words.
- Follow the city of publication with a colon, the publisher's name, comma, and publication date.
- Indent (5 spaces) all lines after the first one.

2. Book with Two or More Authors—MLA

Budinski, Kenneth G., and Michael K. Budinski. *Engineering Materials: Properties and Selection*. Upper Saddle River: Pearson, 2005. Print.

Adams, Dave J., Paul J. Dyson, and Stewart J. Tavener. *Chemistry in Alternative Reaction Media*. Hoboken: Wiley, 2004. Print.

- Give the names of all authors after the first one in normal order (first name first).

3. Anthology or Essay Collection—MLA

Bodeker, Gerard, and Gemma Burford, eds. *Traditional, Complementary and Alternative Medicine: Policy and Public Health Perspectives*. London: Imperial College Press, 2007. Print.

- Use the abbreviation "ed." for a single editor and "eds." for multiple editors.

4. Second or Subsequent Edition—MLA

Simmons, Leslie H., and Harold Bennett Olin. *Construction: Principles, Materials, and Methods*. 7th ed. New York: John Wiley, 2001. Print.

5. Government Report—MLA

Frankforter, J. D., and P. J. Emmons. *Potential Effects of Large Floods on the Transport of Atrazine into the Alluvial Aquifer Adjacent to the Lower Platte River, Nebraska*. U.S. Geological Survey Water-Resources Investigation Report 96-4272. Denver: U.S. Geological Survey, 1997. Print.

- If the report doesn't list an author, begin the entry with the name of the government, followed by a period and the name of the agency that issued the document. Example: "United States. Geological Survey."
- If the report has an identifying number, place it immediately after the title.
- In the example, the authors' initials (not first and middle names) are given because that is how their names appear on the title page.

FIGURE A.3

MLA List of Works Cited

Works Cited

Adams, Dave J., Paul J. Dyson, & Stewart J. Tavener. *Chemistry in Alternative Reaction Media.* Hoboken: Wiley, 2004. Print.

Gould, Stephen Jay. *Dinosaur in a Haystack: Reflections in Natural History.* New York: Harmony, 1995. Print.

---. *Wonderful Life: The Burgess Shale and the Nature of History.* New York: Norton, 1989.

International Business Machines. *What's User-Centered Design?* n.d. Web. 25 Jan. 2013.

McLaurin, JoAnne, & Avijit Chakrabartty. "Characterization of the Interactions of Alzheimer ß-amyloid Peptides with Phospholipid Membranes." *European Journal of Biochemistry* 245.5 (1997): 355-63. Print.

"Rethinking Traditional Design." *Manufacturing Engineering* 118.2 (1997): 50. Print.

"Younger Manufacturing Workers Can Teach Old Dogs New Tricks." *Manufacturing* 86.5 (2009): 5. Print.

Second and subsequent lines are indented.

When the list includes two or more items by the same author, they are alphabetized by title.

For the second and subsequent items by the same person, the author's name is replaced by three hyphens followed by a period.

Items by corporate and government groups are alphabetized by the groups' names (spelled out).

Items without authors are alphabetized by the title.

6. Corporate Report—MLA

Daimler-Benz AG. *Environmental Report 2013*. Stuttgart: Daimler-Benz AG, 2013. Print.

- List the names of the individual authors rather than the corporation if the names are given on the title page.
- If the names of the individual authors aren't given on the title page, list the corporation as the author. (In the example, "Daimler-Benz AG" is the name of a company.)

7. Chapter in a Book—MLA

Moor, James H. "Why We Need Better Ethics for Emerging Technologies." *Information Technology and Moral Philosophy*. Eds. Jeroen van den Hoven and John Weckert. New York: Cambridge UP, 2008. 24-43. Print.

- Place the article's title in quotation marks and capitalize all major words.
- Use the abbreviation "Ed." for a single editor and "Eds." for multiple editors.

8. Article in an Encyclopedia, Dictionary, or Similar Reference Work—MLA

Rich, Elaine. "Artificial Intelligence." *Encyclopedia Americana*. 2003 ed. Print.

- If no author is listed, begin with the article's title.
- Place the article's title in quotation marks and capitalize all major words.
- If entries in the work are arranged alphabetically, do not give the volume or page number.
- When citing familiar reference works, give the edition number (if provided) and year of publication, but not the publisher or city of publication.

9. Pamphlet or Brochure—MLA

State of Ohio. Department of Natural Resources. *Ring-Necked Pheasant Management in Ohio*. Columbus: State of Ohio, 1996. Print.

- If no author is listed, begin the entry with the name of the government or other organization that published it, followed by a period and the name of the agency that issued the document.
- If the pamphlet or brochure lists no author and no publisher, begin with the document's title.

10. Article in Journal That Numbers Its Pages Continuously Through Each Volume—MLA

McLaurin, JoAnne, and Avijit Chakrabartty. "Characterization of the Interactions of Alzheimer ß-amyloid Peptides with Phospholipid Membranes." *European Journal of Biochemistry* 245.2 (1997): 355-63. Print.

- Place the article's title in quotation marks and capitalize all major words.
- After the journal's name, give the volume number, followed by the year (in parentheses).

- If the journal numbers its issues, add a period and the issue number immediately after the volume number (no spaces). In the example, "245.5" signifies volume 245, issue 5.

For page numbers larger than 99, give only the last two digits unless more are needed for clarity. Examples: "355-63" and "394-405."

11. Article in Journal That Numbers Its Pages Separately for Each Issue—MLA

Bradley, John, and Gilbert Soulodre. "The Acoustics of Concert Halls." *Physics World* 10.5 (2009): 33-37. Print.

- Same as for an article in a journal that numbers its pages continuously through each volume. See the preceding explanation (10).

12. Article with No Author Listed—MLA

"Younger manufacturing workers can teach old dogs new tricks." *Manufacturing* 86.5 (2007): 5. Print.

- Begin with the article's title in quotation marks.
- This example gives the issue number ("5") because the journal numbers its pages separately for each issue (see Example 11).

Electronic Sources

MLA guidelines suggest including URLs for web sources only when the reader would have difficulty locating the source without it. Because they often change or can be specific to a session of use or subscriber, they are limited in their usefulness. When you do give the URL, place it in angle brackets: < >. End entries with the date the item was posted, the word "Web," and the last date you accessed the item.

WEB For more about the MLA documentation style for other types of electronic sources, go to your English CourseMate at ***www.cengagebrain.com.***

13. Electronic Version of Print Book—MLA

Shotton, M. A. *Computer Addiction? A Study of Computer Dependency*. 1989. Web. 4 Mar. 2013.

14. Electronic-only Book—MLA

O'Keefe, Elton. *Egoism and the Crisis in Western Values*. 2012. Web. 11 Nov. 2010.

15. Online Journal Article That Is Not Available in Print—MLA

Xu, Ping. "Analysis of Isolation Effects about Elastic Waves by Discontinuous Barriers Composed of Rigid Piles." *Electronic Journal of Geotechnical Engineering* 30 (2013): 1-11. Web. 12 July 2013.

16. Online Journal Article That Is Also Available in Print—MLA

Unger, Jeff. "Intensification of Type 2 Diabetes in Adolescents: Guess What? Exercise Wins!" *Clinical Diabetes* 30 (2012): 164-167. Web. 8 Nov. 2013.

17. Web Page or Document That Is Not Part of a Journal—MLA

International Business Machines. "What's User-Centered Design? (n.d.). 25 Jan. 2013.

- If the web page does not give a date, use (n.d.) as an abbreviation for "no date."

Additional Common Sources

18. E-mail—MLA

Grube, Melvin. “Effects of Sun Spots.” Message to Justin Timor. 4 Dec. 2010. E-mail.

- Place the title (taken from the subject line) in quotation marks.

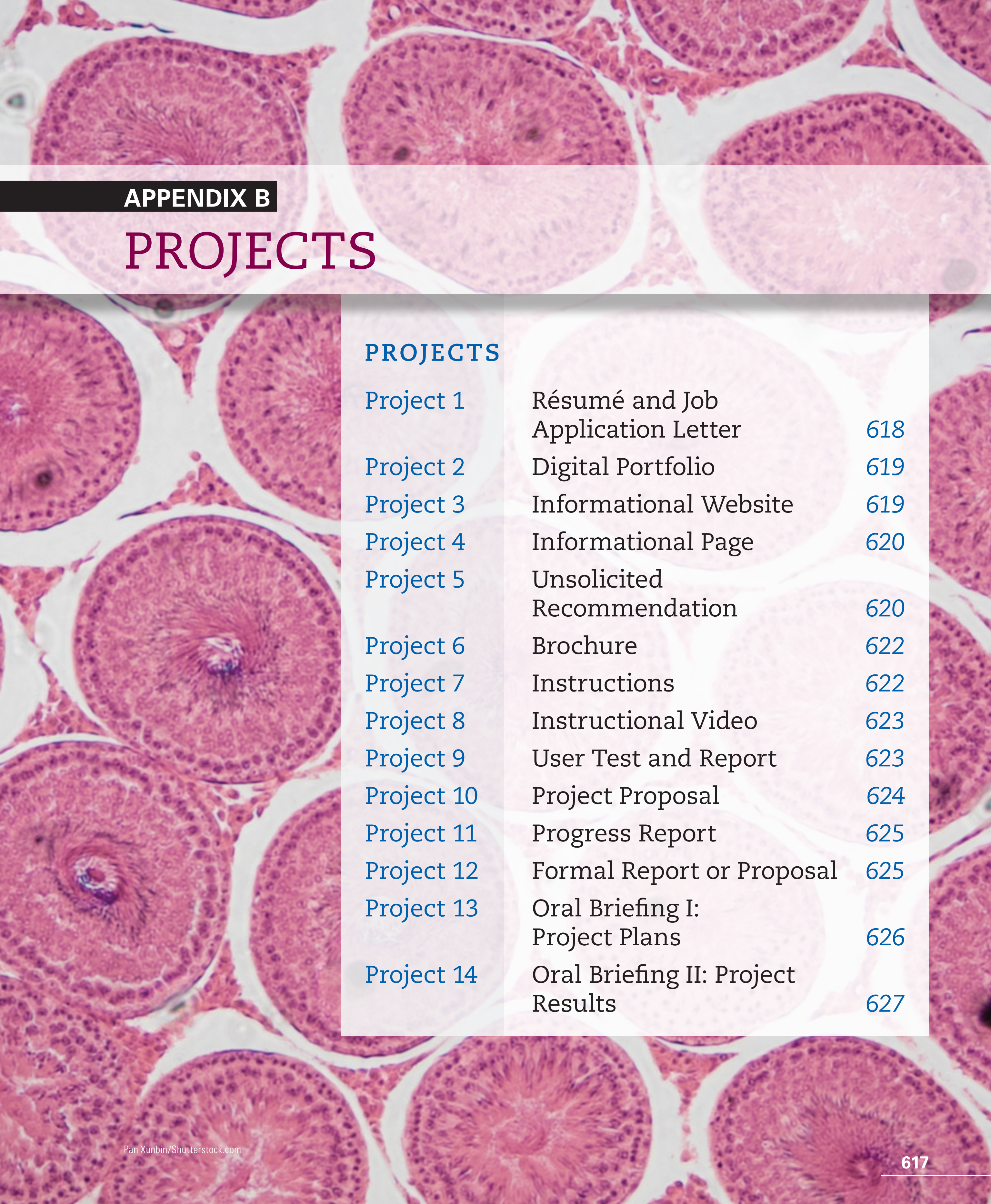
19. Letter—MLA

Cawthorne, Linda A. Letter to the author. 24 Aug. 2010. TS.

- The medium of publication is typescript: TS.

20. Telephone Interview—MLA

Oparka, Sabrina. Telephone interview. 17 Oct. 2009.



Pan Xunbin/Shutterstock.com

APPENDIX B

PROJECTS

PROJECTS

This appendix contains writing and speaking assignments that your instructor might ask you to complete. All share this important feature: They ask you to communicate to particular people for specific purposes that closely resemble the purposes you will have for writing in your career.

Some of the assignments contain specifications about such things as length and format. Your instructor may change these specifications to tailor the assignments to your writing course.

Note to the Instructor. You will find helpful notes about these assignments in the *Instructor's Manual*. Your English CourseMate at www.cengagebrain.com includes versions of these assignments you can download and adapt to your course. It also includes additional assignments and cases.

PROJECT 1: RÉSUMÉ AND JOB APPLICATION LETTER

Write a résumé and job application letter addressed to some real person in an organization with which you might actually seek employment. If you will graduate this year, you will probably want to write for a full-time, permanent position. If you aren't about to graduate, you may want to apply for a summer position or an internship. If you are currently working, imagine that you have decided to change jobs—perhaps to obtain a promotion, secure higher pay, or find more challenging and interesting work.

Begin your work on this project by identifying the organization to which you will apply and by deciding which position or department you will apply for. Next, learn about the company. Follow Chapter 2's advice for gathering reader-centered facts concerning things the organization is proud of (pages 46–47) that are not facts that any other applicant can obtain simply by going to the employer's website. Use the knowledge you gain about the employer's organization to draft an application letter that answers in a persuasive, reader-centered way the employer's questions about why you want to work for this specific company and how you will contribute to it (pages 47–51). Use the results of your research also when deciding what to include and what to highlight in your résumé. Above all, remember to focus on what you will give to the employer's organization, not what you want to get from it (page 29).

Remember also that the appearance of your résumé, letter, and envelope will affect your readers, as will your attention to such details as grammar and spelling. Enclose your letter and résumé in an envelope complete with your return address and your reader's name and address. You will find information about the formats for letters and envelopes on pages 475–478.

As part of your package, include the names, addresses, and phone numbers of three or four references. These may be included within your résumé. If you choose instead to have your résumé say, "References available upon request," enclose a copy of the list of references you would send if the list were requested by an employer. Throughout your work on this project, carefully and creatively follow the advice given in Chapter 2 on résumés and letters of application.

PROJECT 2: DIGITAL PORTFOLIO

As Chapter 22 explains, a digital portfolio can be a powerful supplement to your résumé and job application letters. It demonstrates your abilities by showing projects you have completed. For this assignment, create a digital portfolio you could give employers in your job search.

In the portfolio, include five or more samples of your work. These may be printed documents, video clips of presentations you have made, pictures of projects you've completed, or other appropriate items. You should have at least two groups of two or more samples, such as two engineering projects and two communication projects. Include your résumé.

Provide your portfolio with a home page and with section pages for each of your groups of samples. On each section page, supply helpful and persuasive information about each sample plus a link to the sample. In the portfolio, also include at least two links to external websites.

As you plan, draft, and revise your portfolio, remember that its purpose is to persuade employers that you have the knowledge and abilities they desire in a person they would hire for the job you want.

PROJECT 3: INFORMATIONAL WEBSITE

For this project, you are to create an informational website on a topic that interests you. Begin by identifying a target audience, purpose, and subject for your site. The subject may be related to your major or to something you enjoy and know a lot about. Your site should have the following elements:

- Four or more pages, one of which is a home page (entitled "index.html").
- Links among your pages.
- One or more links to other websites related to your topic.
- At least one image.

To count as a "page" in this project, a page must fill one window on a computer screen when the window is at its maximum size. The material in the window must include some text, but may also contain one or more images.

All pages, including the home page, should be informative, not just entertaining. The text is to be text you have written, not text you have downloaded or otherwise copied from someone else (see the discussions of intellectual property law and documenting sources on pages 147–151). You may obtain your images by downloading them from the web, provided that you are sure they are not copyrighted and that use of them is not otherwise restricted. Avoid movies, large images, and other items that consume much memory and take a long time to load.

Your site may include a link to your personal web page. However, your personal web page does not count among the four that must be about your subject.

Your site should possess the following characteristics:

- All information is presented in a way that is suited to your audience and purpose.
- The text is accurate, informative, and well written.
- The pages are easy to read and use when accessed on a computer screen.

- The pages are easy to navigate individually and as a group.
- The site is well organized.
- The pages are unified with one another in terms of visual design, writing style, and purpose.

Turn in the following items:

- A memo to your instructor that identifies the audience and purpose of your site.
- A DVD-R or CD-R with all files for your site. Be sure your name is on the DVD-R or CD-R. If your instructor permits, you may instead post your site on a server and include the URL in your memo.

PROJECT 4: INFORMATIONAL PAGE

Project Created by Jennie Dautermann

A bus schedule, a chart comparing the features of competing computer programs, and the centerfold in a natural history magazine that uses a timeline, diagrams, and words to explain the evolution of horses—all these are "informational pages." They convey a complex set of information or ideas principally by means of visual design, rather than relying solely on sentences and paragraphs.

For this assignment, you are to create an informational page addressed to some specific set of readers. Use tables or charts. Mix diagrams with words. Or use other ways of presenting information visually to achieve your communication objectives. But use only one side of one sheet of paper.

When planning your informational page, think carefully about how your readers will use your information and about how you can use graphics to make the facts you present as accessible, understandable, and useful as possible. The advice given in Chapters 14 ("Creating Reader-Centered Graphics") and 16 ("Designing Reader-Centered Pages and Documents") can be especially helpful.

Here are informational pages you might create (note that each targets a specific group of readers):

- An explanation of a basic concept in your major, addressed to students who have just begun course work in it
- An explanation of a concept from your major that is important for members of the general public to understand as they make practical decisions
- A description of a process that would be important for clients or customers to know if they are going to purchase products or services from the kind of employer you would like to work for after graduation
- A study guide that might help someone in one of your courses learn a topic that will be on an exam

PROJECT 5: UNSOLICITED RECOMMENDATION

This assignment is your chance to improve the world — or at least one small corner of it. You are to write a letter of 400 to 800 words in which you make an unsolicited recommendation for improving the operation of some organization with which you have personal contact — perhaps the company that employed you last summer, a club you belong to, or your sorority or fraternity.

There are four important restrictions on the recommendation you make:

1. Your recommendation must concern a real situation in which your letter could *really* bring about change. As you consider possible topics, focus on situations that can be improved by the modest measures that you can argue for effectively in a relatively brief letter. It is not necessary, however, that your letter aim to bring about a complete solution. In your letter, you might aim to persuade one of the key people in the organization that your recommendation will serve the organization's best interests.
2. Your recommendation must be unsolicited—that is, it must be addressed to someone who has not asked for your advice.
3. Your recommendation must concern the way an organization operates, not just the way one or more individuals think or behave.
4. Your recommendation may *not* involve a problem that would be decided in an essentially political manner. Thus, you are not to write on a problem that would be decided by elected officials (such as members of Congress or the city council), and you may not address a problem that would be raised in a political campaign.

Of course, you will have to write to an *actual* person, someone who, in fact, has the power to help make the change you recommend. You may have to investigate to learn who that person is. Try to learn also how that person feels about the situation you hope to improve. Keep in mind that most people are inclined to reject advice they haven't asked for; that's part of the challenge of this assignment. From time to time throughout your career, you will find that you want to make recommendations that your reader hasn't requested.

In the past, students have completed this assignment by writing on such matters as the following:

- A no-cost way that the student's summer employer could more efficiently handle merchandise on the loading dock
- A detailed strategy for increasing attendance at the meetings of a student organization to which the student belonged
- A proposal that the Office of the Dean of Students establish a self-supporting legal-aid service for students

Bear in mind that one essential feature of a recommendation is that it compares two alternatives: keeping things the way they are now and changing them to the way you think they should be. You will have to make the change seem to be the better alternative *from your reader's point of view*. To do this, you will find it helpful to understand why the organization does things in the present way. By understanding the goals of the present method, you will probably gain insight into the criteria that your reader will apply when comparing the present method with the method you recommend.

When preparing this project, follow the advice about the letter or memo format on pages 475–479. Figure 5.10 (page 128) shows an unsolicited recommendation written by a student in response to this assignment.

PROJECT 6: BROCHURE

Create a brochure about some academic major or student service on your campus. Alternatively, create a brochure for a service organization in your community.

Begin by interviewing people at the organization to learn about their aims for such a brochure. Then follow the advice given in Chapter 3 ("Defining Your Communication's Goals") to learn about the target audience for the brochure. Remember that to be effective the brochure must meet the needs of both the organization and the readers.

In addition to any artwork you may decide to include on the cover, use at least one graphic (such as a table, flowchart, drawing, or photograph) in the text of the brochure. Note that your cover need not have any artwork; it may consist solely of attractively lettered and arranged words that identify the topic of your brochure. Along with your brochure, turn in copies of any existing brochures or other printed material you used while working on this project.

Your success in this project will depend largely on your ability to predict the questions your readers will have about your subject—and on your ability to answer those questions clearly, concisely, and usefully. Think very carefully as well about how you want your brochure to alter your readers' attitudes about your subject. Remember that along with the prose, the neatness and graphic design of your brochure will have a major effect on your readers' attitudes.

PROJECT 7: INSTRUCTIONS

Following the advice given in Chapter 28, create a set of instructions that will enable your readers to operate some device or perform some process used in your major. The procedure must involve at least twenty-four steps.

With the permission of your instructor, you may also choose from topics that are not related to your major. Such topics might include the following:

- Using some special feature of a desktop publishing or spreadsheet program
- Operating a piece of equipment used in your major
- Changing a bicycle tire
- Rigging a sailboat
- Starting an aquarium
- Some other procedure of interest to you that includes at least twenty-four steps

Your instructions should guide your readers through some specific process that your classmates or instructor could actually perform. Do not write generic instructions for performing a general procedure. For instance, do not write instructions for "Operating a Microscope," but rather for "Operating the Thompson Model 200 Microscope."

Be sure to divide the overall procedure into groups of steps rather than presenting all the steps in a single list. Use headings to label the groups of steps.

When preparing your instructions, pay careful attention to the graphic design of your finished communication. You must include at least one illustration, and you may rely heavily on figures if they are the most effective way for you to achieve your objectives. In fact, your instructions need not contain a single sentence.

Finally, your instructor may require you to use a page design that has two or more columns (rather than having a single column of type that runs all the way from the left-hand margin to the right-hand margin). In a two-column design, you might put all of your steps in the left-hand column and all of your accompanying illustrations in the right-hand column. Alternatively, you might mix both text and figures in both columns. Large figures and the title for the instructions can span both columns.

You may use the format for your instructions that you believe will work best—whether it is a single sheet of 8½ × 11-inch paper, a booklet printed on smaller paper, or some other design.

Don't forget that your instructions must be accurate.

Note to the Instructor. If you wish to make this a larger project, increase the minimum length of the procedure about which your students write. In this case, you may also want to specify that they create an instruction manual rather than, for example, an instruction sheet.

PROJECT 8: INSTRUCTIONAL VIDEO

There are many ways to provide instructions for step-by-step procedures. Changing the medium you use can significantly affect what you say and show as well as how you say and show it.

In this assignment, your challenge is to create the first two minutes of a video that guides viewers through a procedure they haven't performed before. To succeed, you'll need to take a much different approach than you would use to prepare printed instructions. Instead of writing a list of numbered steps, you will prepare a script. Rather than using graphics that illustrate selected steps, you will design a visual track that will be on the screen every moment from start to finish. Rather than placing your words and graphics side by side on the page, you must create a film that weaves speech and images together. The outcome must be clear, precise, well integrated, and easy to follow.

To make your instructional video, you can use such free programs as Windows MovieMaker, which is included for free with the Windows operating systems for PCs, or iMovie, which is included for free with Apple operating systems. Your images may be photos, drawings, screen captures, or video clips.

As you write your script, provide viewers with the same understanding of the structure of the process that headings provide in printed instructions. When recording the script, control the pace of your speech to make your instructions clear and understandable upon one hearing.

Your visual track should enable viewers to see all significant parts and actions. All steps should be illustrated visually.

Your sound and visual tracks should be fully integrated and carefully coordinated so that viewers simultaneously see and hear about the same actions.

PROJECT 9: USER TEST AND REPORT

As you learned in Chapter 6, one excellent way to evaluate the usefulness and persuasiveness of a draft is to conduct a user test in which you give your draft to members of your target audience, asking them to use it in the same way that your target readers will use the final draft. For this assignment, you are to conduct a user test of a nearly finished draft of a project you are preparing in this course (or another course, if your instructor permits), then report the results in a memo to your instructor. Instructions make an excellent subject for a user test, but other communications can be evaluated in this way also.

For your test, use a draft that is as close as possible to what you envision for your final draft. Ask two people to serve as your test readers, and arrange for them to work independently. If you cannot recruit test readers who are from your target audience, choose people who resemble the target readers as closely as possible. Similarly, if you cannot arrange for your test readers to read in exactly the same circumstances that your target readers will, simulate those conditions in some reasonable way. Also use simulation if your communication involves a potentially dangerous step (such as jacking up a car or pouring a strong acid from one container to another) that might result in injury to your test readers if they make a mistake.

Write your report using the superstructure for empirical research reports (Chapter 25). To make your report readable and informative for your instructor, consider the following advice about the sections of your report:

- **Introduction.** Remind your instructor of the topic and target audience of the communication you are testing.
- **Objectives.** Identify the objectives of your communication (see Chapter 3) and those of your test. Remember that even instructions have to be persuasive as well as useful.
- **Method.** Describe your draft (how closely does it resemble your planned final draft?), your test readers (who were they, and why are they good representatives of your target audience?), the location of your test (how closely does it resemble the setting in which your target readers will use your communication?), and your procedure (what did you ask your test readers to do, and how did you gather information from them?).
- **Results and discussion.** Report the results your test produced (where did your test readers have difficulties, and what did they say about your communication?) and tell what these indicate about your communication. Be quite specific in this section.
- **Conclusion.** Tell what you learned overall from your test and indicate the specific revisions you will make as a result of what you learned.

PROJECT 10: PROJECT PROPOSAL

Write a proposal seeking your instructor's approval for a project you will prepare later this term.

Your work on this proposal serves three important purposes. First, it provides an occasion for you and your instructor to agree about what you will do for the later project. Second, it gives you experience at writing a proposal, a task that will be very important to you in your career. Third, it gives you a chance to demonstrate your mastery of the material in Chapters 3 ("Defining Your

Communication's Goals"), 4 ("Planning for Usefulness"), and 5 ("Planning Your Persuasive Strategies").

Notice that while working on this assignment, you will have to define the objectives of two different communications: (1) the *proposal* you are writing now, which is addressed to your instructor; and (2) the *project* you are seeking approval to write, whose purpose and audience you will have to describe to your instructor in the proposal.

When writing your proposal, you may think of your instructor as a person who looks forward with pleasure to working with you on your final project and wants to be sure that you choose a project from which you can learn a great deal and on which you can do a good job. Until your instructor learns from your proposal some details about your proposed project, however, his or her attitude toward it will be neutral. While reading your proposal, your instructor will seek to answer many questions, including the following:

- What kind of communication do you wish to prepare?
- Who will its readers be?
- What are its goals?
    - What is the final result you want it to bring about?
    - What task will it enable its readers to perform?
    - How will it alter its readers' attitudes?
- Is this a kind of communication you will have to prepare at work?
- Can you write the communication effectively in the time left in the term using resources that are readily available to you?

For additional insights into the questions your instructor (like the reader of any proposal) will ask, see Chapter 24.

Your proposal should be between 400 and 800 words long. Write it in the memo format (see pages 478–479), use headings, and include a schedule chart (page 333).

PROJECT 11: PROGRESS REPORT

Write a report of between 400 and 800 words in which you tell your instructor how you are progressing on the writing project you are currently preparing. Be sure to give your instructor a good sense not only of what you have accomplished but also of what problems you have encountered or anticipate. Remember that, as Chapter 27 explains, progress reports are primarily about the future, not the past.

PROJECT 12: FORMAL REPORT OR PROPOSAL

Write an empirical research report, feasibility report, or proposal. Whichever form of communication you write, it must be designed to help some organization — real or imaginary — solve some problem or achieve some goal, and you must write it in response to a request (again, real or imaginary) from the organization you are addressing.

A real situation is one you have actually encountered. It might involve your employer, your major department, or a service group to which you belong—to name just a few of the possibilities. Students writing on real situations have prepared projects with such titles as:

- Feasibility of establishing an online ordering system for a local pizza and sandwich shop whose business was growing rapidly. The student wrote the report for the shop's owner.
- "Attitudes of Participants in Merit Hotel's R.S.V.P. Club." The student wrote this empirical research report at the request of the hotel, which wanted to find ways of improving a marketing program that rewarded administrative assistants who booked their companies' visitors at that hotel rather than at one of the hotel's competitors.
- "Expanding the Dietetic Services at the Campus Health Center: A Proposal." The student wrote this proposal to the college administration at the request of the part-time dietitian employed by the Health Center.

An imaginary situation is one that you create to simulate the kinds of situations that you will find yourself in once you begin your career. You pretend that you have begun working for an employer who has asked you to use your specialized training to solve some problems or answer some questions that face his or her organization. You may imagine that you are a regular employee or that you are a special consultant. Students writing about imaginary situations have prepared formal reports with titles such as:

- "Improving the Operations of the Gift Shop at Six Flags over Georgia." The student who wrote this proposal had worked at this shop for a summer job; she imagined that she had been hired by the manager to study its operation and recommend improvements.
- "Performance of Three Lubricants at Very Low Temperatures." The student wrote this empirical research report about an experiment he had conducted in a laboratory class. He imagined that he worked for a company that wanted to test the lubricants for use in manufacturing equipment used at temperatures below −100°F.
- "Upgrading the Monitoring and Communication System in the Psychology Clinic." The student who wrote this report imagined that she had been asked by the Psychology Clinic to investigate the possibility of purchasing equipment that would improve its monitoring and communication system. All of her information about the clinic and the equipment were real.

For this project, prepare a communication that has a cover, title page, and the other book-like features described in Chapter 13. Remember that your purpose is to help your readers make a practical decision or take a practical action in a real or imaginary organization. The body of your report should be between twelve and twenty pages long (not counting cover, executive summary, title page, table of contents, appendixes, and similar parts).

PROJECT 13: ORAL BRIEFING I: PROJECT PLANS

At work, you will sometimes be asked to report in brief talks about projects on which you are working. For this assignment, you are to give an oral briefing to the class about your final project. Here are the things you should cover:

- **What kind of communication are you writing?** Who will your readers be? What role will you be playing? Identify your readers by telling what organization they are in and what positions your key readers hold. Describe your role by saying whether you are imagining that you work for the company as a regular employee or have been hired as a consultant. State whom you report to.
- **What organizational problem will your communication help your readers solve?** What need or goal will it help them satisfy or reach? Provide the background information your classmates need in order to understand the situation from your readers' point of view.
- **What are you doing to solve the problem?**
  - *Your research activities:* What kind of information are you gathering and how, or what kind of analysis are you providing and why?
  - *Your writing activities:* How do you plan to organize and present your information? What will your communication look like?
- **What is the gist of your message to your readers?** What are the main points you are planning to make?

As you prepare and deliver your oral briefing, pretend that you are interviewing for a job (or for a new job) and that the prospective employer has asked you to give an oral briefing about a project of yours for which you are now writing a report or proposal. The members of your class can play the role of the people your employer has asked to attend your presentation. Pretend that your classmates have not heard about your project as yet, even though you may have already discussed it in class several times. This means that you will have to provide all the background information that will enable your listeners to understand the organizational situation in which you are writing.

As the name implies, a briefing is a brief presentation. Make yours between four and five minutes long—no longer. Gauge the time by making timed rehearsals. In your briefing, use at least one graphic. It might show an outline for your project, or it might be one of the graphics you will use within your project. You may present this graphic as a poster, overhead transparency, or handout, and you may use more than one graphic if doing so will increase the effectiveness of your briefing.

PROJECT 14: ORAL BRIEFING II: PROJECT RESULTS

At work, people often present the results of their major projects twice: once in a written communication and a second time in an oral briefing that covers the major points of the written document. In some ways, this briefing is like an executive summary—an overview of all the important things presented in more detail in writing.

For this assignment, you are to give an oral briefing on one of your writing projects. Address the class as if it were the same audience that you address in writing, and imagine that the audience has not yet read your communication. Limit your briefing to four or five minutes—no longer (see the last paragraph of Project 13). Use at least one graphic.

If your instructor requests, include a slide presentation made with PowerPoint or a similar program.

REFERENCES

Adler, P. S. (1975). Beyond cultural identity: Reflections on cultural and multicultural man. In L. Samovar & R. Porter (Eds.), *Intercultural communication: A reader* (2nd ed., pp. 362–378). Belmont, CA: Wadsworth.

Anderson, J. R. (1995). Attention and sensory information processing. *Cognitive psychology and its implications* (4th ed., pp. 40–48). New York, NY: W. H. Freeman.

Andrews, D. C., & Andrews, W. D. (1992). *Business communication* (2nd ed.). New York, NY: Macmillan.

Anonymous. (1994). Personal interview with corporate executive who requested that the company remain anonymous.

Axtell, R. E. (2007). *Essential do's and taboos: The complete guide to international business and leisure travel*. Hoboken, NJ: Wiley.

Beaufort, A. (1999). *Writing in the real world: Making the transition from school to work*. New York, NY: Teachers College Press.

Beebe, S. A. (1974). Eye contact: A nonverbal determinant of speaker credibility. *Speech Teacher, 23,* 21–25. Cited in M. F. Vargas, *Louder than words*. Ames, IA: Iowa State UP, 1986.

Beer, D. F., & McMurrey, D. (2009). *A guide to writing as an engineer* (3rd ed.). New York, NY: Wiley.

Benne, K. D., & Sheats, P. (2000). Functional roles of group members. In W. L. French, C. H. Bell, Jr., & R. A. Zawacki (Eds.), *Organization development and transformation: Managing effective change*. Boston, MA: McGraw-Hill.

Bereiter, C., & Scardamalia, M. (1993). *Surpassing ourselves: An inquiry into the nature and implications of expertise*. Chicago, IL: Open Court.

Bolten, J. (1999). International business communication: An interactive approach. In C. R. Lovitt & D. Goswami (Eds.), *Exploring the rhetoric of international professional communication: An agenda for teachers and researchers* (pp. 139–156). New York, NY: Baywood.

Boren, M. T., & Ramey, J. (September 2000). Thinking aloud: Reconciling theory and practice. *IEEE Transactions on Professional Communication, 43*(3), 261–278.

Bosley, D. S. (1993). Cross-cultural collaboration: Whose culture is it, anyway? *Technical Communication Quarterly, 2,* 51–62.

Bostrom, R. N. (1981). *Persuasion*. Englewood Cliffs, NJ: Prentice-Hall.

Bowman, J. P. (April 1, 2002). Selling yourself. *Business communication: Managing information and relationships*. Retrieved from http://www.hcob.wmich.edu/bis/faculty/bowman/job2.html

Bransford, J. D., & Johnson, M. K. (1972). Contextual prerequisites for understanding: Some investigations of comprehension and recall. *Journal of Verbal Learning and Verbal Behavior, 11,* 717–726.

Brownell, J. (1999). Effective communication in multicultural organizations: A receiver-defined activity. In C. R. Lovitt & D. Goswami (Eds.), *Exploring the rhetoric of international professional communication: An agenda for teachers and researchers* (pp. 171–187). New York, NY: Baywood.

Carté, P., & Fox, C. (2004). *Bridging the culture gap: A practical guide to international business communication*. Sterling, VA: Kogan Page.

Chen, G. M., & Tan, L. (April 1995). *A theory of intercultural sensitivity*. Paper presented at the annual meeting of the Eastern Communication Association, Philadelphia, PA.

Coleman, E. B. (1964). The comprehensibility of several grammatical transformations. *Journal of Applied Psychology, 48,* 186–190.

Connor, U. (1996). *Contrastive rhetoric: Cross-cultural aspects of second-language writing*. England, UK: Cambridge.

Couture, B., and Rymer, J. (1993). Situational exigence: Composing processes on the job by writer's role and task value. In R. Spilka (Ed.), *Writing in the workplace: New research perspectives*. Carbondale, IL: Southern Illinois UP.

Covey, S. R. (1989). *The seven habits of highly effective people*. New York, NY: Simon & Schuster.

Day, R. A., & Gastel, B. (2005). *How to write and publish a scientific paper* (6th ed.). Westport, CT: Greenwood.

Deakin University. (2010). *Japan career guide*. Retrieved January 4, 2010, from http://www.deakin.edu.au/current-students/services/careers/country-guides/japan.php

Dias, P., & Paré, A. (Eds.) (2000). *Transitions: Writing in academic and workplace settings*. Cresskill, NJ: Hampton.

Ding, D. D. (2003). The emergence of technical communication in China. *Journal of business and technical communication, 17,* 319–345.

Dixson, K. (November 13, 2001). Crafting an e-mail resume. *Business Week*.

Doheny-Farina, S. (1992). *Rhetoric, innovation, technology: Case studies of technical communication in technology transfers*. Cambridge, MA: MIT.

Ede, L., & Lunsford, A. (1990). *Singular texts/plural authors: Perspectives on collaborative writing*. Carbondale, IL: Southern Illinois UP.

Elashmawi, F., & Harris, P. (1998). *Multicultural Management 2000: Essential cultural insights for global management success*. Houston, TX: Gulf.

Elbow, P. (1998). *Writing without teachers* (2nd ed.). New York, NY: Oxford University Press.

Fisher, A. (December 1998). The high cost of living and not writing well. *Fortune,* 244.

Golen, S., Powers, C., & Titkemeyer, M. A. (1985). How to teach ethics in a basic business communication class. *Journal of Business Communication, 22,* 75–84.

Grosse, R., & Kujawa, D. (1988). *International business: Theory and managerial applications*. Burr Ridge, IL: Richard D. Irwin.

Gudykunst, W. B., & Ting-Toomey, S. (1988). *Culture and interpersonal communication*. Newbury Park, CA: Sage.

Gudykunst, W. B., Yang, S. M., & Nishida, T. (1987). Cultural differences in self-consciousness and unself-consciousness. *Communication Research, 14,* 7–36.

Hall, E. T. (1976). *Beyond culture*. Garden City, NY: Anchor.

Hays, R. B. (1985). A longitudinal study of friendship development. *Journal of Personality and Social Psychology, 48,* 909–924.

Herrington, A., & Moran, C. (2005). *Genre across the curriculum*. Logan, UT: Utah State UP.

Herzberg, F. (2003). One more time: How do you motivate employees? [Reprinted from 1968] *Harvard Business Review, 81,* 87–96.

Hofstede, G., Hofstede, G. J., & Ninkov, M. (2010). *Cultures and Organizations: Software of the Mind* (3rd ed.). Hightstown, NJ: McGraw-Hill.

Human Japanese. (2005). Correspondence, Japanese Style. http://www.humanjapanese.com/appendix/letters.htm. October 31, 2005.

Jewett, M., & Margolis, R. (1987). A study of the effects of the use of overhead transparencies on business meetings. Reported in B. Y. Auger, *How to run better business meetings: A reference guide for managers*. New York, NY: McGraw-Hill.

Jobera.com. (2010). *French cover letter*. Retrieved January 4, 2010, from http://www.jobera.com/job-letters/international-cover-letters/france/french-cover-letter.htm

Kachru, Y. (1988). Writers in Hindi and English. In Alan Purves (Ed.), *Writing across languages and cultures: Issues in contrastive rhetoric* (pp. 109–137). Thousand Oaks, CA: Sage.

Kelman, H. C., & Hovland, C. I. (1953). Reinstatement of the communicator in delayed measurement of opinion change. *Journal of Abnormal and Social Psychology, 48,* 327–335.

Kleck, R. E., & Nuessle, W. (1967). Congruence between indicative and communicative functions of eye-contact in interpersonal relations. *British Journal of Social and Clinical Psychology, 6,* 256–266.

Kleinke, C. L., Bustos, A. A., Meeker, F. B., & Staneski, R. S. (1973). Effects of self-attributed gaze on interpersonal evaluations between males and females. *Journal of Experimental Psychology, 9,* 154–163.

Kostelnick, C., & Roberts, D. D. (1998). *Designing visual language: Strategies for professional communicators*. Boston, MA: Allyn & Bacon.

Krug, S. (2006). *Don't make me think* (2nd ed.). Berkeley, CA: New Riders.

Kulhavy, R. W., & Schwartz, N. H. (Winter 1981). Tone of communications and climate of perceptions. *Journal of Business Communication, 18,* 17–24.

Lauer, J. (1994). Persuasive writing on public issues. In R. Winterowd & V. Gillespie (Eds.), *Composition in context* (pp. 62–72). Carbondale, IL: Southern Illinois UP.

Lay, M. M. (1989). Interpersonal conflict in collaborative writing: What can we learn from gender studies? *Journal of Business and Technical Communication, 3*(2), 5–28.

Layton, P., & Simpson, A. J. (1975). Deep structure in sentence comprehension. *Journal of Verbal Learning and Verbal Behavior, 14,* 658–664.

Levie, W. H., & Lentz, R. (1982). Effects of text illustrations: A review of research. *Journal of Educational Psychology, 73,* 195–232.

Lustig, M. W., & Koester, J. (2006). *Intercultural competence: Interpersonal communication across cultures* (5th ed.). New York, NY: HarperCollins.

Mancusi-Ungaro, H. R., Jr., & Rappaport, N. H. (April 1986). Preventing wound infections. *American Family Physician, 33,* 152.

Marsico, T. Personal communication with the author. 14 April 1997.

Maslow, A. H. (2000). *Maslow business reader.* D. D. Stephens, Ed. New York, NY: Wiley.

Mathes, J. C., & Stevenson, D. W. (1991). *Designing technical reports* (2nd ed.). New York, NY: Macmillan.

Mehrabian, A. (1972). *Nonverbal communication.* Chicago, IL: Aldine.

Miller, C. R. (1984). Genre as social action. *Quarterly Journal of Speech, 70,* 151–167.

Munter, M. (1987). *Business communication: Strategy and skill.* Englewood Cliffs, NJ: Prentice-Hall.

Murray, R. L. (2003). Manke, K. L. (Ed.) *Understanding radioactive waste.* (5th ed.). Columbus, OH: Battelle.

National Commission on Writing. (2004). *Writing: A ticket to work . . . or a ticket out: A survey of business leaders. The National Commission on Writing for America's Families, Schools, and Colleges.* New York, NY: College Board.

Neulip, J. W., & McCroskey, J. C. (1997). The development of a U.S. and generalized ethnocentrism scale. *Communication Research Reports, 14,* 385–398.

Nielsen, J. (2000). *Designing Web usability: The practice of simplicity.* Indianapolis, IN: New Riders.

Nishiyama, K. (1983). Intercultural problems in Japanese multinationals. *Communication: The Journal of the Communication Association of the Pacific, 12,* 58.

Patterson, V. (1996). Résumé talk from recruiters. *Journal of Career Planning & Employment,* 56, 33–38.

Petty, R. E., & Cacioppo, J. T. (1981). *Attitudes and persuasion: Classic and contemporary approaches.* Dubuque, IA: William C. Brown.

Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change.* New York, NY: Springer-Verlag.

Rabinowitz, C. J. & Carr, L. W. (2001). *Modern day vikings: A practical guide to interacting with the Swedes.* Yarmouth, ME: Intercultural Press.

Rajamäki, T., Alakomi, H., Ritvanen, T., Skyttä, E., Smolander, M., & Ahvenainen R. (2006). Application of an electronic nose for quality assessment of modified atmosphere packaged poultry meat. *Food Control, 17,* 5–13.

Randolph, G., Landis, D., & Tzeng, O. (1977). The effects of time and practice upon culture assimilator training. *International Journal of Intercultural Relations, 1,* 105–119.

Ray, G. B. (1986). Vocally cued personality prototypes: An implicit personality theory approach. *Communication Monographs, 53,* 266–276.

Ricks, D. A. (2006). *Blunders in international business* (4th ed.). Malden, MA: Blackwell.

Roach, R. (January 31, 2002). Making Web sites accessible to the disabled. *Black Issues in Higher Education, 16,* 32.

Rogers, C. R. (1952). Communication: Its blocking and its facilitation. *Harvard Business Review, 30,* 46–50.

Ruben, B. D. (1976). Assessing communication competency for intercultural adaptation. *Group and Organization Studies, 2,* 470–479.

Ruch, W. V. (1984). *Corporate communications: A comparison of Japanese and American practices.* Westport, CT: Quorum.

Sageev, P., & Romanowski, C. J. (2001). A message from recent engineering graduates: results of a survey on technical communication skills. *Journal of Engineering Education, 90,* 685–692.

Sauer, B. A. (2003). *The rhetoric of risk: Technical documentation in hazardous environments.* Mahwah, NJ: Erlbaum.

Schriver, K. (1997). *Dynamics of document design: Creating text for readers.* New York, NY: Wiley.

Scollon, R. (1999). Official and unofficial discourses of national identity: Questions raised by the case of contemporary Hong Kong. In R. Wodak & C. Ludwig (Eds.), *Challenges in a changing world: Issues in critical discourse analysis* (pp. 21–5). Vienna , Austria: Passagen Verlag.

Scollon, R., & Scollon, C. W. (2001). *Intercultural communication* (2nd ed.). Malden, MA: Blackwell.

Scott, M., & Rothman, H. (1992). *Companies with a conscience: Intimate portraits of twelve companies that make a difference.* New York, NY: Carol.

Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2003). *Teaching and learning at a distance: Foundations of distance education.* Upper Saddle River, NJ: Pearson.

Smith, F. (2004). *Understanding reading* (6th ed.). Hillsdale, NJ: Erlbaum.

Smith, L. B. (28 June 1993). A user's guide to PCC (politically correct communiqué). *PCWeek, 10*(25), 204.

Spilka, R. (Ed.). (1993). *Writing in the workplace: New research perspectives.* Carbondale, IL: Southern Illinois UP.

Stanford University. (January 4, 2010). *Copyright & fair use.* Retrieved from http://fairuse.stanford.edu/Copyright and_Fair_Use_Overview/chapter9/index.html.

Steier, F. (1999). A relational framework for professional communication in international organizations. In C. R. Lovitt & D. Goswami (Eds.), *Exploring the rhetoric of international professional communication: An agenda for teachers and researchers* (pp. 157–170). New York, NY: Baywood.

Sternthal, B., Dholakia, R., & Leavitt, C. (1978). The persuasive effect of source credibility: Tests of cognitive response. *Journal of Consumer Research, 4,* 252–260.

Stevenson, D. W. (1983). Audience analysis across cultures. *Journal of Technical Writing and Communication, 13,* 319–330.

Suchan, J., & Colucci, R. (1989). An analysis of communication efficiency between high-impact and bureaucratic written communication. *Management Communication Quarterly, 2,* 464–473.

Thompson, M. A. (2000). *The global resume and CV guide.* New York, NY: Wiley.

Thorell, L. G., & Smith, W. J. (1990). *Using computer color effectively: An illustrated reference.* Englewood Cliffs, NJ: Prentice Hall.

Tinker, M. A. (1969). *Legibility of print.* Ames, IA: University of Iowa Press.

Toulmin, S., Rieke, R., & Janik, A. (1984). *An introduction to reasoning* (2nd ed.). New York, NY: Macmillan.

Tversky, A., & Kahneman, D. (1974). Judgment and uncertainty: Heuristics and biases. *Science, 185,* 1124–1131.

van Dijk, T. (1980). *Macrostructures: An interdisciplinary study of global structure in discourse, interaction, and cognition.* Hillsdale, NJ: Erlbaum.

Varner, I. & Beamer, L. (2005). *Intercultural communication in the global workplace.* Boston, MA: McGraw-Hill.

Warren, E. K., Roth, L., & Devanna, M. (Spring 1984). Motivating the computer professional. *Faculty R&D.* New York, NY: Columbia Business School, 8.

Watson, C. E. (1991). *Managing with integrity: Insights from America's CEO's.* New York, NY: Praeger.

Weak writers. *The Wall Street Journal* (14 June 1985), A1.

Webb, J., & Keene, M. (1999). The impact of discourse communities on international professional communication. In C. R. Lovitt & D. Goswami (Eds.), *Exploring the rhetoric of international professional communication* (pp. 81–110). New York, NY: Baywood.

Wells, B., Spinks, N., & Hargarve, J. (June 1981). A survey of the chief personnel officers in the 500 largest corporations in the United States to determine their preferences in job application letters and personal résumés. *ABCA Bulletin, 14*(2), 3–7.

Westinghouse Corporation. (1981). *Danger, warning, caution: Product safety label handbook.* Author.

Wheildon, C. (1995). *Type & layout: How typography and design can get your message across—or get in the way.* Berkeley, CA: Strathmoor.

White, J. V. (1990). *Color for the electronic age.* New York, NY: Watson-Guptil.

Williams, J. M. (2005). *Style: Ten lessons in clarity and grace* (8th ed.). New York, NY: Pearson Longman.

Williams, R. (1994). *The non-designer's design book.* Berkeley, CA: Peachpit.

Wiseman, R. L., Hammer, M. R., & Nishida, H. (1989). Predictors of intercultural communication competence. *International journal of intercultural relations, 13,* 349–370.

Wolgemuth, L. (May 2010). America's Best Careers. *U.S. News & World Report, 147*(5), 20-25.

Wolvin, A. D., & Oakley, C. (1985). *Listening.* Dubuque, IA: William C. Brown.

INDEX

H

I

Q

R

T

Y