Chapter 3
Writing for End Users

A GUIDE TO
COMPUTER USER SUPPORT
FOR HELP DESK AND SUPPORT SPECIALISTS
SIXTH EDITION BY FRED BEISSE

Chapter Objectives

- Types of end-user documentation
- How technical writing differs from other writing
- How technical documents are organized
- How to plan effective user documents
- The technical writing process
- Effective use of formats
- Strategies for technical writing
- Common problems in technical writing
- Tools used for technical writing
- How to evaluate documents

Technical Writing

- **Documentation**: written communication to provide information to end users or coworkers
- Goal of technical writing: to produce documents that effectively and efficiently communicate information that readers need
  - *Effectively*: Readers get correct information to master a topic or perform a task
  - *Efficiently*: Readers do not have to waste time searching for information
- Good technical writing saves users time

Types of User Documents

- Brochures and flyers
- Newsletters
- Handouts and training aids
- User guides and manuals
- Online help systems
- Email, chat, and text messages
- Webpages
- Proposals, letters, and memos
- Procedural and operational documents
- Troubleshooting guides

Brochures and Flyers

- Purpose: primarily promotional
  - Catch the eye of the reader and sell an event
- Use to advertise:
  - Staff training sessions
  - Computer fairs
  - Career fairs
  - Product demonstrations
  - Guest speakers

Newsletters

- Purpose: communicate information
  - From support group to end users
- Popular in large companies where support staff does not regularly contact other workers
- Formats:
  - Printed
  - Electronic distribution

Handouts and Training Aids

- Purpose: summarize and promote recall of material covered in training session
  - Common example: printouts of PowerPoint slides
- Usually short and address a single topic
- May be distributed online

User Guides, Handbooks, and Manuals

- Purpose: supplement vendor documents and trade books with information specific to an organization or computer facility
- Structure:
  - **Tutorial format**: a step-by-step guide to hardware or software features (in learning sequence)
  - **Reference format**: all material on each topic is covered in a single location (more comprehensive)
  - Combination format: tutorial plus reference

Online Help Systems

- Purpose:
  - Provide convenient access to information
  - Replace or supplement printed materials
- Features:
  - Information presented must be succinct
  - **Hyperlinks**, indexes, and keyword searches provide powerful tools to locate information quickly
- Tip: Not all users are adept at using online materials; some still prefer the printed format

Email, Chat, and Text Messages

- Purpose: formal and informal online communication
  - With external clients and vendors
  - With internal end users and coworkers
- Caveats:
  - Messages project an image of the organization and support specialist
  - Use good technical writing skills
  - Avoid the use of abbreviations (U, BTW, IMHO, etc.)
- Tip: Growth in the use of written communications emphasizes the need for user support specialists with excellent writing skills

Webpages

- Purpose: provide access to support materials on the web
  - Need to be organized and written so users can locate information quickly and easily
  - Must be short, but contain hypertext links to additional information
- Image of organization is projected in web documents
- An ongoing challenge is to keep web-based support information current and accurate

Proposals, Letters, and Memos

- Purpose: technology tools are often used to prepare correspondence
  - Proposals
  - Letters
  - Memos
  - Needs assessment reports
  - Performance appraisals
  - Other correspondence
- Ability to prepare basic business correspondence is an important user support skill

Procedural and Operational Documents

- Purpose: procedure steps and checklists are primarily for internal use
- Examples:
  - Written problem reports in a help desk environment
  - Descriptions of hardware or software installation procedures
  - Entries in *Site Management Notebook* (see Chapter 10)

Troubleshooting Guides

- Purpose: help support agents and computer users diagnose and solve problems
- Examples:
  - Troubleshooting section in user manual
  - FAQ on problems users encounter frequently
  - Script on incident handling procedures
  - Problem report in help desk knowledge base
- Must be clear, concise, and well written

How Technical Writing Differs from Other Writing

- Differences in:
  - Goals
  - Organization of document
  - Type of information communicated
  - Writing style

Technical Writing Characteristics

- Economical writing style
- Begins with the most important information first
- Communicates information vital to the reader's productivity
- Uses styles and formats that help readers understand a sequence of events and document organization
- Is concise, but not cryptic
- Includes pointers and cross-references
- Focuses on information, not entertainment

Technical Writing Characteristics (continued)

- Strategies:
  - Use short, simple, declarative sentences, phrases, and lists
  - Describe a sequence of steps in the order performed
  - Include pointers to where readers can find more information
  - Use format elements to help readers understand:
    - Organization of information
    - Transitions between topics
  - Avoid:
    - Run-on sentences
    - Humor
    - Calling attention to the writer's personality or style

How Technical Documents Are Organized

- **Sequential organization**: follows a step-by-step sequence from first to last
  - Example: procedural check list for installation of hardware or software
- **Hierarchical organization**: flows from top to bottom, and from general to specific information
  - Example: an online help system

Common Organization for Technical Documents

- Introduction
  - Purpose of document
  - Intended audience
  - Why read document
- Body
  - Specific task steps
  - Common problems users encounter
- Summary
  - Review of main points
  - Pointers to additional information

Document Planning

- Who is the target audience?
- What does the audience already know?
- What does the audience need to know?
- What do you want the audience to be able to do when they finish reading the document?
- What medium will be used to transmit the document to its audience?

Help the Reader

- Target the reading level at 10th to 12th grade
  - Most word processors include a readability index
- Tell readers who the intended audience is
  - Organize the document so experienced readers can skip basic materials
- State the document's purpose in the first few sentences
- Tell readers which tasks they can perform after completing the document
- Tailor the document to the media
  - *Printed*: generally longer; help readers with topic transitions
  - *Online*: generally shorter; help readers with pointers to additional information

Steps in the Technical Writing Process

1. Generate a list of ideas or features
2. Organize the list into a logical sequence (outline)
3. Expand the outline into a first draft
4. Edit the draft for clarity
5. Arrange for an outside review
6. Revise the draft into its final form
7. Proofread the final document

Step 1: Generate an Idea List

- **Brainstorm**: a technique to generate a list of potential topics
- During brainstorming, exclude nothing
- Don’t worry about whether a topic is:
  - Major or minor
  - Useful or not
  - High or low priority

Step 2: Organize the List into an Outline

- Arrange topics into a logical sequence
  - Identify major and minor topics
- Cut and paste to try a different sequence of ideas
  - Use the word processor's outline feature as a tool
- Final organization should answer the following question:
  - *In what order does a reader need to know this information?*

Step 3: Expand the Outline into a First Draft

- Strategies
  - Each paragraph has a topic sentence
  - Use transitions between paragraphs and sections
    - *First . . ., Second . . ., Next . . ., Then . . ., Finally . . .*
  - Define terms
    - In text
    - In glossary
  - Format features
    - Style elements
    - Format consistency
    - Lists and tables

Step 3: Expand the Outline into a First Draft (continued)

- **Style elements** help reveal document structure:
  - Chapter or modular organization
  - Fonts
  - Capitalization
  - Centering
  - Indentation
  - Underlines
  - Bullets and numbered lists
- **Format consistency** helps ensure consistent use of style elements
  - Use style sheets and templates in a word processor
- **Lists and tables** help readers locate information quickly
  - Use instead of long narrative passages

Step 4: Edit the Draft

- Pass 1: Eliminate extra words
- Pass 2: Perform a **format consistency check**
  - Consistent use of fonts for headings and subheadings, indentation, centering, boldface, italics, and underlining
  - Tip: Overuse of format features detracts from the document contents
- Pass 3: Perform a **technical accuracy check**
  - Test procedural or technical steps
  - Eliminate errors in instructions
  - Check URLs for dead links
  - Verify screenshots

Step 5: Get an Outside Review

- Purpose:
  - Identify and clarify any questions about contents
  - Spot inconsistencies
  - Find unclear meanings
  - Identify poor writing techniques
  - Locate other problems
- Tip: Sometimes a writer is too close to a document to see problems

Step 6: Revise the Draft

- Incorporate revisions into a document
- Tip: When an edit pass results in marginal improvements, consider the document done

Step 7: Proofread the Document

- Final pass through the document before publication
- Look for:
  - Typos
  - Inconsistent capitalization and punctuation
  - Inconsistent font use
  - Extra spaces between words and sentences
  - Incorrect page breaks

Technical Writing Strategies

- **Analogy**: describes how an unfamiliar concept is similar to a familiar concept
- Repetition
  1. Introduce
  2. Explain
  3. Summarize
- Consistent word use
  - Use a consistent word to refer to each concept
    - Avoid varying: *DVD*, *DVD-ROM*, *digital video disc*, *optical disk*
  - **Style sheet**: lists preferences for spelling and word use
    - Example: *end user* is a noun; *end-user* is an adjective
- Consistent verb tense
  - Prefer present tense unless events clearly occurred in the past

Sample Page from a Style Sheet

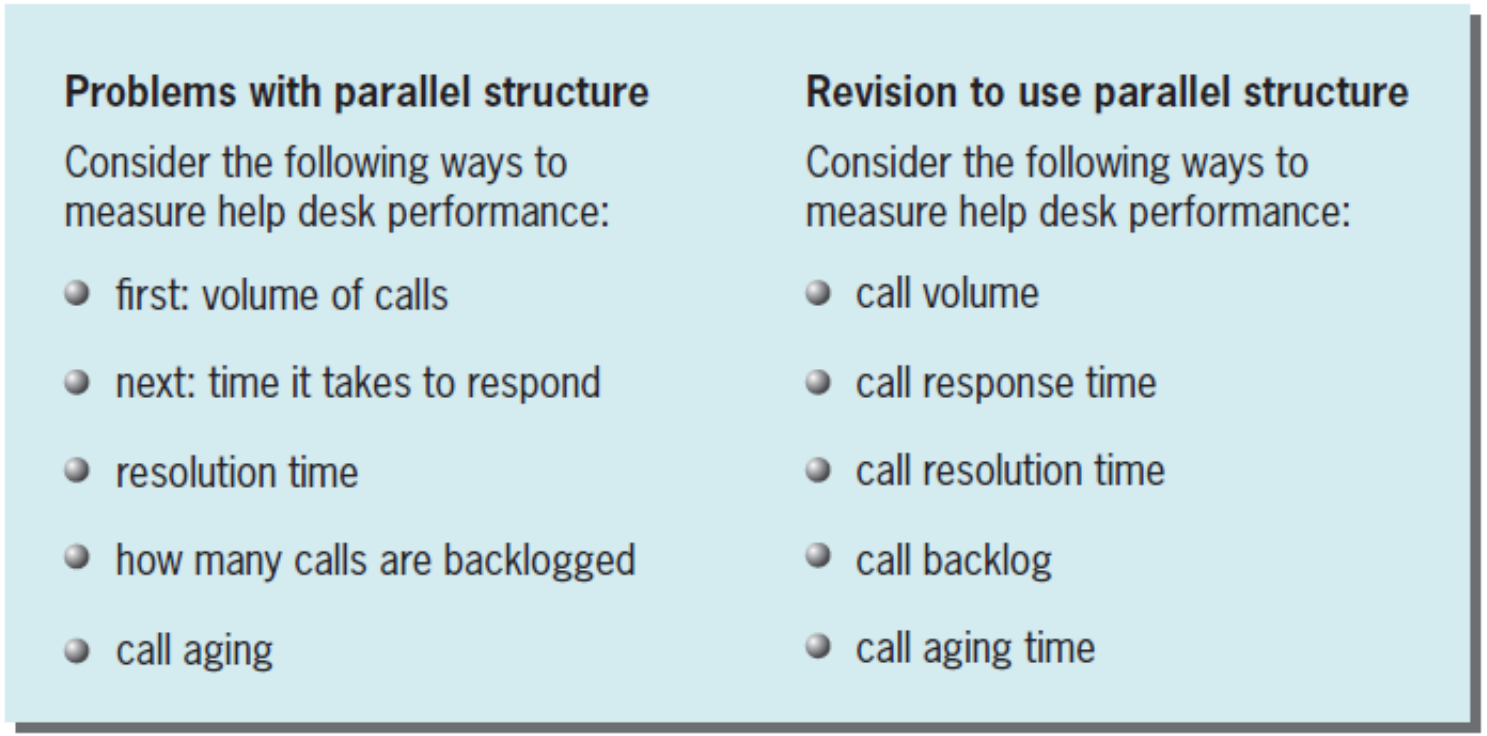
Style Sheet *Page 3*

Item	Comment
acronyms	• at first use, either "spelled out (ACRONYM)" or "ACRONYM (spelled out)"; then use only ACRONYM
chapter references	• capitalize first letter in running text; (In Chapter 1, we discuss…)
key terms	• bold in text and end-of-chapter list
URLs	• bold in running text and tables • omit **http://** • use **www.cnn.com**, not **www.cnn.com/index.html**

Vocabulary	Comment
back up	• verb; (back up a system)
backup	• noun; (create a system backup)
check list	• two words; not checklist or check-list
coworker	• one word; not co-worker
end user	• noun; two words (Most end users need . . .)
end-user	• adjective; hyphenated (End-user computing is . . .)

Technical Writing Strategies
(continued)

- **Parallel structure**: similar items are treated consistently throughout a list or c



Problems with parallel structure

Consider the following ways to measure help desk performance:

- first: volume of calls
- next: time it takes to respond
- resolution time
- how many calls are backlogged
- call aging

Revision to use parallel structure

Consider the following ways to measure help desk performance:

- call volume
- call response time
- call resolution time
- call backlog
- call aging time

Common Technical Writing Problems

- Clutter
- Inappropriate typefaces
- Gender references
- Unclear referents
- Passive voice
- Nominalization
- Wordiness
- Jargon
- Undefined acronyms and intialisms
- Idioms
- Dangling phrases

Clutter

- Use graphics to illustrate (screenshot) or highlight a point
  - Not for decoration
- Use formatting to help locate information or understand a topic
  - Use sparingly and consistently
- Include considerable white space
- Use at least 10-point body text
  - Larger for slide shows, brochures, flye
- Left-align most body text
  - Centered text and block-justified text are harder to read

Justified text is aligned at both the right and left margins, like this

Inappropriate Typefaces

- **Serif typefaces**: include fine lines (serifs) that project from the top and bottom of characters
  - Frequently used for body text
- **Sans serif typefaces**: do not have serifs
  - Often used for titles and headings
- **Specialty typefaces**: type styles intended for special use to draw attention to text
  - Save for informal use
    - Invitations, brochures, flyers

Example Typefaces

Which is most readable?

This is an example of a 28-point serif typeface called Georgia.

This is an example of a 28-point sans serif typeface called Arial.

This is an example of a 37-point script typeface called Brush Script.

Gender References

- Avoid gender-related words unless they clearly fit
  - Avoid: *he*, *she*, *him*, *her*, *s/he*
  - Use: *they*, *their*, *it*, *he and she*, *she and he*
- Gender-neutral words are clearer and less offensive
  - Use *staffed* instead of *manned*
  - Use *chair* instead of *chairman*
  - Use *supervisor* instead of *foreman*
  - Can you think of other examples?

Unclear Referents

- **Referent**: a concrete word or concept that is designated (referred to) by another word
- The referent of words such as *it*, *them*, *this*, *he, she* and *their* should be clear
- Example: *A user in Excel on an HP Pavilion PC entered a long list of numbers with a voice recognition utility program. Halfway through the list, it froze up.*
  - Does *it* refer to the HP Pavilion PC, Excel, the voice recognition utility, or the user?

Passive Voice

- **Passive voice**: the subject of the sentence receives the action indicated by the verb
  - Example: *The final report was filed.*
  - Avoid passive voice
- **Active voice**: the subject of the sentence *performs* the action indicated by the verb
  - Example: *The project team filed its final report.*
  - Use active voice to make text livelier and more interesting

Nominalization

- **Nominalization**: the use of *-tion*, *-ing*, *-ment*, and similar endings to create nouns where verbs are easier to understand
- Example:
  - Use of nominalization: *Perform an installation of the printer driver.*
  - Use of verb: *Install the printer driver.*

Wordiness

- Avoid unnecessary words
  - Too many words: *Prior to the actual installation of the system...*
  - Reduced: *Before installing the system...*
- Use short words when possible
  - Use *use* instead of *utilize* or *utilization*
  - Use *document* instead of *documentation*
  - Use *added* instead of *additional*
- Can you think of other examples?

Jargon

- **Jargon**: words understood primarily by those experienced in a field
- Use simple, direct words that anyone can understand
  - Example:
    - Avoid: *Hack the documentation for the new VPN connection steps.*
    - Use: *Edit the document for the new network connection steps.*
- Tip: If you use jargon terms, define them first

Undefined Acronyms and Initialisms

- **Acronym**: a word formed from the initial letters of words in a phrase
  - Example: *RAM* is an acronym for *random access memory*
  - An acronym is pronounced as a word (i.e., “ram”)
- **Initialism**: an abbreviation formed from the initial letters of words in a phrase
  - Example: *USB* an initialism for *universal serial bus*
  - An initialism is pronounced as a sequence of letters (i.e, u-s-b)

Handling Acronyms and Initialisms

- On the first use of an acronym or initialism:
  - Spell out the words
  - Then include the acronym or initialism in parentheses
  - Example: *digital video disc (DVD)*
- Tip: Include acronyms and initialisms in a glossary
- Tip: Don’t create unnecessary new acronyms or initialisms
  - Example: *Writers Against Unnecessary Words and Acronym Use (WAUWAU)*

Idioms

- **Idiom**: a word or phrase whose meaning is different from the literal meaning of the separate words
  - Example: *Keep an eye out for users who have their antivirus application turned off.*
  - Better: *Be aware of users who have their antivirus application turned off.*

Dangling Modifier

- **Dangling modifier**: a word or phrase at the beginning or end of a sentence that adds little meaning
  - Example: *Needless to say, the installer should verify that the user's PC is operational, of course.*
- Eliminate the word (or phrase), or include it elsewhere in the sentence
  - Better: *The installer should verify that the user's PC is operational.*

Technical Writing Tools

- Outline tool
- Spell checker
- Custom dictionary
- Thesaurus
- Grammar checker
- Readability index
- Desktop publishing features
- Collegiate dictionary

Document Evaluation Criteria (Overview)

- Content
- Organization
- Format
- Mechanics

Content

- Is the information relevant?
- Is the information timely and accurate?
- Is the coverage of the topic complete?

Organization

- Is the information easy to locate?
- Are transitions between topics identifiable?
- Can readers get in and out quickly with the answer they need?

Format

- Does the layout help guide the reader?
- Is the format consistent?

Mechanics

- Are words spelled correctly?
- Is it grammatically correct?
- Is the writing style effective?

Chapter Summary

- User support staff write a variety of types of documents to communicate with end users, coworkers, vendors, and managers
- The goal of technical documents is to effectively and efficiently communicate information needed by the reader
- Technical writing:
  - Defines characteristics of the target audience and tasks the writer wants readers to be able to do
  - Uses short words and sentences, and an organization that helps readers locate information

Chapter Summary (continued)

- The technical writing process includes these steps:
    1. Generate a list of ideas or features
    2. Organize the list into a logical sequence (outline)
    3. Expand the outline into a first draft
    4. Edit the draft for clarity
    5. Arrange for an outside review
    6. Revise the draft into its final form
    7. Proofread the final document
- The document's layout and formatting help readers know what is important and identify transitions between topics
- Technical writers use analogies, repetition, consistent words, and parallel structure

Chapter Summary (continued)

- Successful writers avoid clutter, hard-to-read typefaces, gender references, unclear referents, passive voice, nominalizations, wordiness, jargon, acronyms and initialisms, idioms, and dangling modifiers
- Software tools that aid writers include an outline tool, spell checker, thesaurus, and grammar checker
- Four criteria to evaluate technical documents:
  - Content
  - Organization
  - Format
  - Mechanics