

THIRD EDITION

# TECHNICAL ENGLISH

WRITING, READING,  
AND SPEAKING

NELL ANN PICKETT  
ANN A. LASTER



# Technical English

Writing, Reading, and Speaking

**NELL ANN PICKETT / ANN A. LASTER**

Hinds Junior College

Third Edition

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## **TECHNICAL ENGLISH**

### **Writing, Reading, and Speaking**

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# Preface

Since 1970, when *Writing and Reading in Technical English* was published, some 20 faculty members at our school have used the book in technical writing classes. During this time, these teachers have discussed with us additions and revisions that would improve the book for classroom use. Many faculty members and students at other schools using the text have also shared with us their ideas on additions and revisions. At the same time, we have continued to talk with instructors in technical fields and with industrial personnel, listening to their ideas and suggestions. We have studied all these ideas carefully, and the result is *Technical English*, Third Edition.

This third edition continues to fill two definite needs: the need of teachers in two-year and four-year colleges and technical schools to have texts written on a level appropriate to their students, and the need of technical students who, out of necessity and interest, require guidance in technical writing.

We reaffirm, with even greater conviction, our original philosophy about the technical student and the English language: the future technician must be made aware of industry's demand that workers be able to communicate effectively; emphasis in a technical English course should be on practical application rather than on theory, rules, or rhetoric; and class materials for technical English should be selected and prepared with particular care, since technical students often complete their programs in two years rather than four.

*Technical English* retains the three-part division of the previous editions. Part I presents the basic principles and forms of communication that any student needs to know, but there is an emphasis on industrial communication demands. Included are chapters on instructions and process, description of a mechanism, definition, analysis through classification and partition, analysis through effect-cause and comparison-contrast, summary, business letters, report writing, the research report, oral communication, and visuals. The section on analysis through comparison-contrast is new; and the chapters on business letters, report writing, the research report, and oral communication have been thoroughly revised. Part II: Selected Readings retains pieces that instructors have found especially useful and includes several new pieces. Introductory material suggests a method for selective reading, and questions at the end of each reading will stimulate thought and initiate responses. The readings, chosen for their inherent interest and pedagogical utility, can have real value for the technical student—the person whose background, experience, ability, interests, and ambition have led to a specialized program of higher education. Part III, a handbook of usage, has been completely revised and expanded. It contains chapters on the sentence, the paragraph, grammatical usage and word choice, and mechanics. The Handbook retains the com-

nonsense approach that language is the tool of man, not man the tool of language, and that adherence to certain standards is not legislated but simply wise if one is to be understood.

Certain features of the text make it exceptionally teachable and student-oriented. Each chapter opens with clearly stated objectives, so that students know exactly what is expected of them. Then the topic is developed through discussion and examples, principles are explained, and a step-by-step procedure for writing or speaking is outlined. Plan Sheets, completed to serve as models, reinforce the need for careful preparation and show its result. Blank Plan Sheets corresponding to end-of-chapter assignments are provided for students to fill in. The pages are perforated so that the Plan Sheets may be torn out and handed in if the instructor wishes.

The readings in Part II have been selected to illustrate and amplify the writing assignments in Part I. The handbook (Part III) is a resource that instructors and students can rely on according to individual needs and preferences. In its third edition, *Technical English* is once again a complete course.

Many individuals have had a part in the development of the third edition, some offering encouragement, some suggestions, and others materials for inclusion. Specifically, we are grateful to the following Hinds Junior College personnel. McLendon Library staff, especially Nancy Flournoy; Nancy Kneeland, English instructor, and our students. To each individual, whatever the contribution, we say sincerely, "Thank you."

**Nell Ann Pickett**  
**Ann A. Laster**

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# General Format Directions for Writing

1. *Paper.* Use good quality typing paper, 8½ by 11 inches; or standard (not narrow-lined) loose-leaf notebook paper.
2. *Ink.* Use black, blue, or blue-black ink. The first draft of a paper may be in pencil, but the final draft should be in ink or, preferably, typewritten.
3. *Title page.* If a title page is required, it should contain the title of the paper, centered on the page, and your name, class, and the date, aligned in the lower right corner.
4. *Plan Sheet or outline.* If a Plan Sheet or an outline is required, it should follow the title page.
5. *Margins.* Margins should be ample all around so that the page does not look crowded. On the sides and bottom, allow at least a one-inch margin; at the top, allow about two inches.
6. *Title.* Capitalize the first and last words. In addition, capitalize all other words except prepositions (such as *of*, *for*, *about*), conjunctions (such as *and*, *but*, *or*, *when*), and the articles *a*, *an*, and *the*.
7. *Page numbers.* Number the pages consecutively throughout the paper. Do not put a number on the title page, the outline, and the first page of the body of the paper, but allow a number for each page. Place page numbers two spaces above the first line and aligned with the right-hand margin.
8. *Stapling.* Staple or paper-clip the pages together in the upper left corner.
9. *Corrections.* In a paper written outside of class, keep corrections on the final draft to a minimum. One or two neat, unnoticeable corrections on a page are permissible; however, if more than two corrections are needed on a page, re-write it.

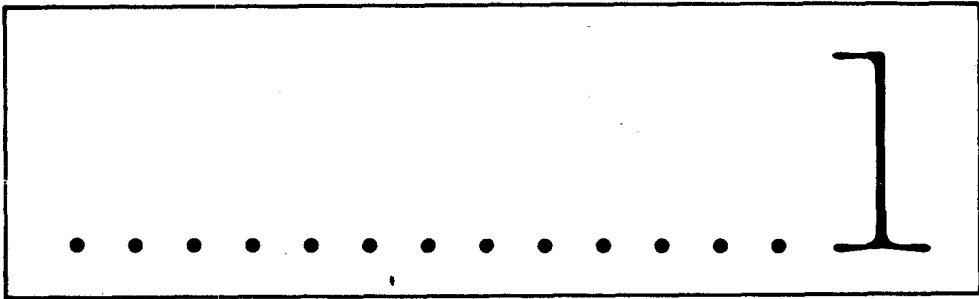


# .....Part I

## **FORMS OF COMMUNICATION**

原书缺页

# 原书缺页



# Instructions and Process: Explaining a Procedure

- **OBJECTIVES**
- **INTRODUCTION**
- **CLASSIFYING INSTRUCTIONS**
  - Locational Instructions
  - Operational Instructions
- **INTENDED AUDIENCE**
- **ORAL PRESENTATION**
- **VISUALS**
- **GENERAL PRINCIPLES IN GIVING INSTRUCTIONS**
- **PROCEDURE FOR GIVING INSTRUCTIONS**
  - Form
  - Content
  - Length of Presentation
- **PLANNING AND GIVING INSTRUCTIONS**
- **APPLICATIONS**
- **DESCRIPTION OF A PROCESS**
- **INTENDED AUDIENCE**
  - Process Description for a General Audience
  - Process Description for a Specialized Audience
- **ORAL PRESENTATION AND VISUALS**
- **GENERAL PRINCIPLES IN DESCRIBING A PROCESS**
- **PROCEDURE FOR DESCRIBING A PROCESS**
  - Form
  - Content
  - Length of Presentation
- **APPLICATIONS**

## OBJECTIVES

Upon completing this chapter, the student should be able to:

- Define instructions
- Classify instructions
- Plan a presentation giving instructions to two different audiences
- Use visuals in giving instructions
- Explain the relationship between planning and giving instructions
- Give instructions in writing and orally
- Define process
- Explain the difference between giving instructions and describing a process
- Give a process description directed to a general audience
- Give a process description directed to a specialized audience
- Use visuals in describing a process
- Give process descriptions in writing and orally

## INTRODUCTION

Practically from the beginning of your life, you have been a giver and receiver of instructions. As a child, you were told how to drink from a cup, how to tie your shoes, how to tell time, and so on. As you matured, you became involved with more complex instructions: how to parallel park an automobile, how to throw a block in football, how to tune an electric guitar, how to stock grocery shelves. Since entering college, you have been confronted with even more complex and confusing instructions: how to register as an incoming freshman, how to write an effective report, how to get along with a roommate, how to spend money wisely, how to study.

Since all aspects of life are affected by instructions, every person needs to be able to give and to follow instructions satisfactorily. Frequently, clear, accurate, complete instructions save the reader or listener time, help do a job faster and more satisfactorily, or help get better service from a product. Being able to give and to follow instructions is essential for any employee. Certainly, in order for technicians to advance to supervisory positions, they must be able to give intelligent, authoritative, specific, accurate instructions; and they must be able to follow the instructions of their superiors.

## CLASSIFYING INSTRUCTIONS

Giving instructions seems much simpler than following them. Telling someone how to study for a test, for instance, appears to be much easier than studying for it. But giving instructions—telling someone how to get somewhere or how to perform a particular operation—is deceptively simple.

You may find it helpful to look at two categories of instructions: locational and operational. As a student and a future technician you will have to give and receive both locational and operational instructions.

### Locational Instructions

*Locational instructions*, as the term suggests, help you locate a person, place, or thing. These instructions should clearly identify the starting point and the destina-

tion, the distance between the two, and the general direction. As with all instructions, giving them can be deceptively simple. Which of us at one time or another has not experienced the confusion of the delivery boy in the following dialogue.

DELIVERY BOY Could you tell me where Mr. Sam Smith lives so I can deliver this load of fertilizer?

LOCAL INHABITANT Go down the road a piece and turn left at the mailbox—the one just on this side of Mr. Jenkins's house. After you leave the main road and pass that bad curve, you should see the house you're looking for, not too far off up the road to the right.

The delivery boy receiving these instructions may have difficulty in reaching his destination. Obviously, "down the road a piece" and "not too far" are, at best, indefinite; the inquirer has no idea where Mr. Jenkins lives; and what might be a "bad curve" to one person might not be to someone else. These instructions might have been more accurately and more clearly stated as follows:

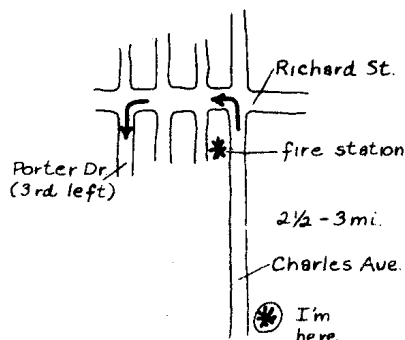
LOCAL INHABITANT Continue down this highway for about two miles. When you come to the second gravel road, turn left onto it. At this intersection, there is a large mailbox on a white wooden frame. When you take the gravel road, you will be about a half mile from where Mr. Smith lives. His is the second house on the right, the one that has a white paling fence around it.

In contrast to the lack of clarity and accuracy in the first instructions given the delivery boy, consider these instructions given to the driver of a moving van in an unfamiliar city:

DRIVER After I took Exit 53 off the Interstate, I got balled up somehow, and I can't seem to find Porter Drive, much less 4437 Porter Drive. It's supposed to be around here somewhere.

SERVICE STATION ATTENDANT You took the right exit OK. As a matter of fact, you're only about three or four miles due south from where you want to be. If you knew where you were going and how to get there, it would take you ten minutes or less. Got a piece of paper to jot this down on? Now this street you are on, Charles Avenue, comes within three blocks of Porter Drive. Stay on Charles for about two-and-one-half or three miles until you get to Richard Street. You will turn left onto Richard. And Richard Street comes up just after you pass a fire station on the left. Got that? After you turn left on Richard from Charles, go three blocks. You run right into Porter Drive, which intersects with Richard Street. The address you are looking for is a few blocks on your left.

DRIVER I think maybe I can find it now. Does this map I've sketched look right?



SERVICE STATION ATTENDANT That looks perfect. Remember—just stay on this

street till after you pass a fire station on your left, a couple of miles from here. Turn left onto Richard. Go three blocks. Take a left onto Porter.

Those directions are clear and easy to follow.

Or perhaps you have been in a situation similar to the following:

**LOCKSMITH** I'm Jack Jones from National Lock and Key Company. I'm supposed to change a lock on Ms. Grady's desk.

**RECEPTIONIST** Yes, I've been expecting you. Ms. Grady's office is on the third floor, Office 301. You'll notice identifying numbers over the door. After you enter the office, go to the desk on the left. As you face the desk, the drawer on the right is the one that needs to have the lock replaced.

Those directions are also clear and easy to follow.

### **Operational Instructions**

*Operational instructions* tell how to carry out a procedure or operation, for example, how to put a child's outdoor gym set together, how to run a lathe, how to prepare a blood smear, how to fill out an accident report, how to rescue a person from the tenth floor of a burning building, or any number of other "how to's."

The following illustrates operational instructions. It explains to employees of a large department store chain how to get cash register terminals ready for a day's business.\*

**HOW TO OPEN A CASH REGISTER TERMINAL**

**Opening Procedure**

The Opening Procedure must be performed before any sales can be recorded for that day's business. Pick up the **CHANGE FUND BAG** from Cashier.

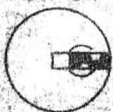
There are five (5) important functions in the Opening Procedure:

1. Turning on Terminal
2. Dating: This dates the terminal for the day.
3. Reading: Terminal must be read in order to verify that it was reset properly the night before, thus preventing a carry over of yesterday's total.
4. Counting: The money in your **CHANGE FUND BAG** must be counted to be sure that the amount is correct.
5. Reporting: The receipts from Steps 2, 3, and 4 are placed in the Red Void Envelope and the keys are removed from the terminal and placed in the terminal drawer.

**Step 1 Turning on Terminal**

1. Place key in **ON-OFF** lock. Turn on terminal.
2. Shut terminal drawer.

OFF-ON

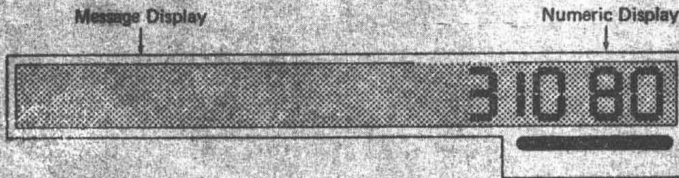


The **POWER ON-OFF KEY** is used only to turn the power on and off. The keys should not remain in the terminal during the day.

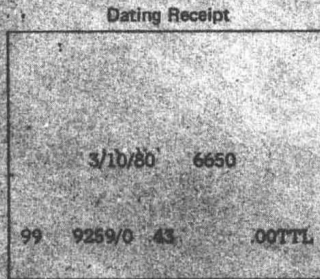
\* Used by permission of McRae's Department Stores.

**Step 2 Dating**

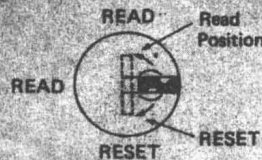
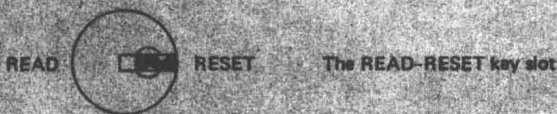
1. Key-in opening Code 43 and ENTER.
2. Key-in your clock number and ENTER.
3. The message display panel will read "Month/Day/Year." Key-in today's complete date and ENTER.



4. The terminal drawer will open. The terminal will recycle for a few seconds. Close terminal drawer.
5. Remove the dating receipt.

**Step 3 Reading**

1. Insert Read Key in Read Lock and turn toward "READ."



The words READ and RESET are placed in the normal lengthwise off position.

To READ: the key must be turned UP (left)

2. Key-in Code 44 and ENTER.
3. Key-in your clock number and ENTER.
4. Depress TOTAL key.



5. Remove the terminal receipt. Check to make sure all totals are 00. If not, notify your immediate supervisor.

Reading

|         |        |           |
|---------|--------|-----------|
| 3/10/80 |        | 6650      |
|         |        | .00CSH    |
|         |        | .00RTN    |
|         |        | .00SLE    |
| 99      | 6260/0 | 44 .00PTL |

6. Check the date for accuracy.
7. Close the terminal drawer.

#### Step 4 Counting

1. Key Code 44 and ENTER.
2. Key-in your clock number and ENTER.
3. Count your Cash Fund by each denomination.  
Multiply each amount as follows:  
Number of coins  $\times$  value of coin ( $17 \times .01$ ) and ENTER.  
Number of bills  $\times$  value of currency ( $21 \times \$1.00$ ) and ENTER.
4. Depress TOTAL key.
5. Remove the change receipt.

Counting Change Fund

|         |        |              |
|---------|--------|--------------|
| 3/10/80 |        | 6650         |
| 1       | 50     |              |
| 18      | 90     |              |
| 26      | 2.60   |              |
| 24      | 5.00   |              |
| 2       | 1.00   |              |
| 1       | 29.00  |              |
| 8       | 40.00  |              |
| 2       | 20.00  |              |
|         |        | .00CSH       |
|         |        | .00RTN       |
|         |        | .00SLE       |
| 99      | 6262/0 | 44 100.00TTL |