

The Gregg Philosophy

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Despite technological advances being made in areas such as voice, optical-character, and handwriting recognition, it is likely that keyboards will remain the primary means of data entry for the foreseeable future. And with computers on practically every desktop, keyboarding has become a primary means of basic communication—and keyboarding skills are more important than ever.

Gregg College Keyboarding & Document Processing (GDP) reflects the latest research findings in a number of areas: the principles of learning, especially those relating to the acquisition of psychomotor skills; current business practices as they relate to the office environment; technological developments in providing instruction via software and the Internet; and the skills and knowledge needed for office employment. Thus, the current edition of this program is based on the following fundamental principles.

General

PRINCIPLE 1. The role of the instructor is paramount.

A few instructors teach keyboarding and document processing in a traditional classroom, with only textbook, computer, and a word processing program available but with no additional software or technology. Currently, however, most instructors add to this mix a correlated educational software program designed specifically to increase not only the efficiency with which students learn but also the level of skill they are able to attain. And an increasingly large number of instructors teach keyboarding and document processing in a distance-learning environment, using the Internet as the connection between student and instructor.

In every educational or training environment one can imagine, the *instructor* is the one critical element that determines the success or failure of the endeavor. In some situations, the instructor assumes a traditional role, introducing the new learning, guiding the students' practice, and assessing the results. In other situations, the instructor must become familiar with the features and operation of the correlated educational software being used, adapt his or her teaching methodology as needed, and use the software's scoring and recordkeeping features to increase the effectiveness and efficiency of skills assessment. In still other situations, the instructor must become an instructional designer and Webmaster, completely reconcep-



tualizing the course so that instruction will be effective in an essentially noninstructor delivery system.

As has been true since the dawn of formal education, the effective instructor determines the goals of instruction, assesses the resources available, and analyzes the preparation, motivation, and maturity of his or her students to create an effective, efficient teaching and learning system.

The Professional Handbook section of the *Instructor Wraparound Edition* (IWE) contains, in effect, a mini-methods course in teaching keyboarding and document processing. Instructor notes on each student text page provide specific help on each lesson. The purpose of both unique features is to help instructors—especially part-time faculty, adjunct faculty, and faculty new to the teaching profession—perform their vital function more effectively.

PRINCIPLE 2. The use of appropriate computer technology for skill development should be an essential component of all keyboarding instruction.

Correlated software provides an additional avenue of learning, enhances student interest, provides flexibility, promotes individualized progress, and frees the instructor for other classroom management and instructional duties.

The GDP Web-based software offers access to all aspects of the contemporary keyboarding classroom, including:

- Keyboard introduction
- Skillbuilding
- Language arts instruction
- Word processing
- Document proofreading and scoring

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- Instructor management
- Distance learning

This sophisticated, pedagogically sound, and easy-to-use software component helps students gain keyboarding and document processing skills efficiently and effectively.

PRINCIPLE 3. The keyboard should be taught rapidly and logically.

The entire keyboard (including letters, numbers, and symbols) is taught within the first 20 lessons. All alphabetic keys are presented in 10 lessons, and the number and symbol keys are presented in 10 lessons.

In addition to the effective approach for teaching the keyboard that was used in GDP/10, the GDP/11 revision presents the following enhancements for the introduction of new keys:

- Only three new keys are presented in each lesson.
- Weak finger reaches (*P, Q, Z*) are delayed until Lessons 7, 8, and 9.
- Keys requiring shorter reaches are introduced before those requiring longer reaches.
- Keys are introduced in a sequence that makes it possible to type words and sentences early in the course.
- Each lesson contains a mixture of left- and right-hand reaches.
- There are at least two lessons separating the introduction of each key and its shifted symbol.

- There is a minimum of 25 occurrences of the keys learned in the immediately preceding lesson and at least 10 occurrences of all other keys in each new-key lesson.
- Each lesson from Lesson 1 through Lesson 20 includes an enrichment exercise.
- In each lesson there is a balance between the new keys controlled by the left hand and those controlled by the right hand.
- Color is used throughout to help students identify correct finger reaches.

PRINCIPLE 4. Consistent, correct technique should be stressed at every level of instruction.

Good keyboarding technique is critical not only for high productivity but also for health reasons. Today, repetitive strain injuries such as carpal tunnel syndrome are the fastest-growing occupational injuries. Carpal tunnel syndrome comes about from hour after hour of straight keyboarding—making fast, repetitive motions that strain the tendons of the wrists and arms. The condition is exacerbated by the use of improper technique at the keyboard. Thus, at every stage of instruction, students must be taught to practice and maintain proper finger, hand, wrist, arm, and body position in order to remain healthy and productive.

Specific drills to improve technique are systematically interspersed into all 24 units of instruction in GDP/11. The table below illustrates the planned, systematic approach to a review of a variety of drills to improve technique.

Technique Practice																							
Unit	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
SHIFT Key	■					■					■					■					■		
BACKSPACE Key		■					■					■					■					■	
SPACE BAR			■					■					■					■					
TAB Key				■					■					■					■				
ENTER Key					■					■					■					■			

Skillbuilding

PRINCIPLE 5. Straight-copy skillbuilding should be stressed at every level of instruction.

Most office employment tests require speed and accuracy at the keyboard. This means that students who cannot pass a straight-copy typing test will not even get the opportunity to demonstrate their well-developed word processing skills.

Straight-copy keyboarding skill is becoming increasingly important in today's automated office. One of the benefits of word processing is that document production becomes more like straight-copy typing because many decision-making and machine adjustments are automated.

Many typists and typing instructors, for example, remember the numerous *nontyping* steps involved in manually creating report footnotes or in creating tables. Word processing software now handles these tasks with ease. This means that the typist

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can spend most of the time *keystroking*; and, as a result, straight-copy keystroking skill becomes even more important.

Thus, skillbuilding activities are included in every lesson in the text; moreover, a Skillbuilding section at the back of the text provides “anytime” individualized exercises. In addition, a balance between speed and accuracy development throughout the course is maintained. Students should acquire keyboarding skill that incorporates both speed and accuracy because both are essential for using the skill efficiently.

Finally, using the GDP software, students can access all of the skillbuilding routines at any time. Students are always “just a click away” from improving their straight-copy speed and accuracy.

PRINCIPLE 6. Students learn best by using a systems approach to skill development.

Keyboarding is a *psychomotor* skill; that is, it involves both mental and motor processes. Benefiting from the massive amount of evidence drawn from research in educational psychology, industrial psychology, and human anatomy, students learn to keyboard using a systems approach.

A *system* is a group of interacting elements forming a complex whole. Straight-copy speed and accuracy are developed systematically in GDP. Every skillbuilding routine has a specific objective (either speed or accuracy). These routines are cycled systematically throughout the program of study. There is scant time in the typical class for random, one-shot, cure-all approaches; therefore, GDP/11 employs a systems approach to skill development, as illustrated below.

		Technique Practice																			
	Unit	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Warmup		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
MAP+	Alphabet	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Numbers	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Symbols	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Progressive Practice	Alphabet	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Numbers	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Pretest/ Practice/ Posttest	Vertical Reaches					■															
	Alternate/One-Hand Words						■														
	Common Letter Combinations	■							■												
	Close Reaches		■																		
	Discrimination Practice			■																	
	Horizontal Reaches				■																
12" Speed Sprints		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Sustained Practice	Syllabic Intensity					■															
	Numbers and Symbols						■														
	Capitals	■																			
	Punctuation		■																		
	Alternate-Hand Words			■																	
	Rough Draft				■																
Paced Practice		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Technique Practice	SHIFT Key				■																
	BACKSPACE Key					■															
	SPACE BAR	■																			
	TAB Key		■																		
	ENTER Key			■																	

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PRINCIPLE 7. The typist should always be working toward an attainable goal.

In any classroom, it cannot be assumed that *all* students need to work on accuracy as opposed to speed at any given point, or that *all* students need to work toward achieving a speed goal of 34 wpm, or that *all* students need remedial practice on reaching for a particular key on the keyboard.

Students' individual strengths and weaknesses vary. Even though end-of-term goals are established for straight-copy typing, students build toward these goals by pursuing short-term *individual goals*. They are always competing against their previous best effort—not some arbitrary “one-size-fits-all” goal.

PRINCIPLE 8. The analysis of keystroking errors must precede the correction of keystroking errors.

Just as physicians prescribe specific medicines for specific illnesses, the “typing doctor” should prescribe specific remedies for specific typing weaknesses. There is no “tonic” that cures all ills, and there is no one drill routine that works equally well with all students.

Only by analyzing a student's specific *pattern* of errors can effective remediation be achieved. Included in this edition is MAP+ (Mistroke Analysis and Prescription), a one-of-a-kind software program that analyzes the types of errors students make and then prescribes unique remediation drills to correct the most serious error patterns. Types of errors identified and remediated include

- Individual reach errors
- Alphabetic, number, and symbol errors
- Left-hand/right-hand errors
- Function key errors
- Insertion/omission errors
- Substitution errors
- Transposition errors

In all, 80 types of errors are identified by MAP+ (see p. GDP-13 for a more detailed discussion of MAP+).

PRINCIPLE 9. Timed writings used to assess skill should have a consistent format, length, and difficulty level.

Exercises designed to *build* straight-copy skill can have varying formats, lengths, and difficulty levels, depending upon the specific purpose of the drill. However, timed writings used to *measure* skill should be consistent.

This means that once students take a 5-minute timed writing (Lesson 52), they should be graded only on 5-minute

timed writings from then on, since most employment tests require a 5-minute timed writing.

All timed writings in GDP are in a consistent format as an aid to evaluation. Having a consistent format and difficulty level means that any change in a student's score can be attributed to a change in skill rather than merely to a change in the format of the timed writing; thus, more valid grading results. All timed writings are shown single-spaced in a monospaced font, all contain all letters of the alphabet (but no numbers or symbols other than common punctuation marks), and all have a similar syllabic intensity.

Document Processing

PRINCIPLE 10. The sequence of training activities should be based on a systematic spiral approach.

Most units in GDP (a unit consists of five lessons) are topical; that is, all the lessons in a unit stress a single topic, such as preparing correspondence. In this way, students cycle through the important document processing tasks (for example, correspondence, reports, and tables) and then repeat the cycle. The topical repetitions should spiral upward into levels of increasing difficulty and complexity. Such a plan is based upon the principle that learning proceeds most effectively when the learner participates in a continuously expanding pattern of behaviors.

The topical repetition of the units serves several functional purposes.

- First, whatever the length of a student's course, the student will achieve a balance of skillbuilding and document processing. Students whose schedule might limit them to a single semester of keyboarding will still achieve a functional level of skill and receive an introduction to basic office and personal-use documents.
- Second, because the spiral approach introduces a new topic to students every week, constant refreshment and renewal of interest take place. Thus, the spiral approach avoids boredom.
- Third, students need “growing time” between the rungs of the ladder of document processing skill development. A spiral approach meets that need.

PRINCIPLE 11. Competent language arts skills should be an essential component of competent document processing skills.

What good is it if a typist can type fast and has competence in word processing if the typist consistently makes errors in

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English or fails to proofread and correct his or her drafts? A document containing grammatical or typographical errors is unmailable—whether it is sent as an electronic file or as a paper document.

In GDP, students improve their language arts skills through a systematic series of exercises in abbreviations, capitalization, composing, number expression, proofreading, punctuation, spelling, subject-verb agreement, and word choice. These skills are then reinforced in the document processing exercises in that lesson. Remedial instruction in the form of tutorials is also available in the GDP software.

PRINCIPLE 12. Word processing skills should not be taught in isolation.

Competence in one or more popular word processing software programs is an *enabling* skill—not a *terminal* skill. This means that typists learn word processing for one reason only—to produce typical office and personal documents as efficiently and correctly as possible.

Thus, formatting skills should be taught on the basis of *document requirements*, not on the basis of *word processing capabilities*. Formatting skills should be taught on a “need-to-know” basis, not on the basis of word processing features. It is not the word processing features themselves that are important; instead, it is the ability to produce a finished document efficiently and correctly that is important.

Word processing skills should not be taught as a course separate from keyboarding courses. Instead, they should be integrated into the keyboarding courses, with each word processing feature introduced as it is needed in order to format a particular document efficiently.

In GDP, students don't even start word processing instruction until after they have mastered the keyboard. Then, they have a four-lesson orientation unit on Microsoft Word, the most popular word processing software program. After this unit, word processing features are introduced systematically as they are needed to format the specific document introduced in the lesson.

PRINCIPLE 13. The formatting standards taught should achieve a delicate balance between reflecting industry practices and promoting office productivity.

As the long-time overwhelming leader in sales, *Gregg College Keyboarding & Document Processing* has had a tremendous impact on industry practice and office proficiency. The majority of students taking postsecondary keyboarding and

document processing have learned their formatting standards from this text, and they carry these standards into the workplace. At the same time, the contemporary office is a dynamic environment—with new document types, new needs, and new pressures to increase productivity.

Gone, for example, are the days when clerical workers would estimate the number of words in the body of each letter they were about to type and then adjust the side margins and vertical spacing on the basis of letter length. Today's competitive environment requires high-efficiency formatting conventions. The simplified formats standardized in GDP promote office efficiency by requiring fewer hardware or software adjustments and less decision making.

Here's an example: traditionally, the second page of a document contained a heading consisting of the name of the recipient, date, and page number. Typing the three-line page 2 heading was simple enough on the typewriter—because typists knew precisely when they removed the first page and inserted the second page into the machine. Not so with computers. Computer operators either had to learn to use the header/footer feature of their word processing program—or risk positioning the information in the wrong place on the page. Now, GDP recommends that a consistent format be used for the second page of *all* business documents—simply use the word processing feature to insert the page number at the top right on the second and subsequent pages. Nothing could be simpler—or more efficient.

Throughout the text, GDP maintains a careful balance between reflecting current formatting standards in industry and promoting more efficient standards.



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Gregg College Keyboarding & Document Processing, 11th edition, is a multicomponent instructional system designed to prepare students for the business world, where keyboarding and word processing skills are essential for success. The components of this easy-to-use program, including software, textbooks, manuals, and online resources, are completely integrated and designed to work together as a complete system. This section describes effective instructional methods for teaching from this program, including the following:

- Presenting the new keys
- Developing keyboarding technique
- Building straight-copy skill
- Building number-typing skill
- Building document processing skill
- Building language arts skills

Presenting the New Keys

Lessons 1–20 present all the new keys: the alphabetic keys in Lessons 1–10 and the number and symbol keys in Lessons 11–20. By the end of these 20 lessons, students should be able to touch-type at a rate of at least 28 wpm on a 2-minute timed writing, with no more than 5 errors.

THE FIRST DAY AT THE KEYBOARD

The first day students are sitting at the keyboard ready to begin learning is typically *not* the first day of class, but more often the second. The first day of class is generally spent on course management—finalizing class enrollment; introducing the course; and going over the course syllabus, needed supplies, and the like. Students will not typically come to the first class with the materials and supplies they need. On the first day of class you should, however, assign as homework the reading of Introduction to the Student that is found in the opening pages of their textbook.

As soon as students have their materials and supplies, familiarize them with their textbooks and the GDP program. Let students know that each text lesson is presented in the software, so that most students will use the software rather than their textbooks to navigate through each lesson. The software will *always* let students know when they need to refer to their texts. Then, flip to a typical new-key lesson (for example, Lesson 2 on pp. 7–9), and point out the usual elements of each new-key lesson.

- The lesson goals identify the new keys introduced in that lesson and the speed (number of words per minute) that the student should be typing by touch at the end of the lesson.

- The keyboard chart highlights the keys introduced in that lesson, identifies keys previously learned, and leaves yet-to-be-learned keys blank. The chart is color-coded to show which fingers control which keys.
- A picture of translucent hands superimposed over the home-row keys assists students in determining proper placement of their hands on the home-row keys.
- GDP/11 introduces 3 new keys in every lesson until the entire alphabet, number keys, and symbols have been covered.
- The warmup is 3 lines of text that review the new key reaches introduced in the previous lessons. The first line emphasizes the learned keys, the second line focuses on concentration words, and the third line consists of easy words.
- Each new key is introduced in 4 lines. The first line practices the reach from the home row. Students should look as their fingers make the reach to the new letter the first several times; thereafter, they should make the reach by touch. Lines 2 and 3 of the new-key drills have students type words that emphasize the letter that was introduced. Line 4 emphasizes phrases that include the letter that was introduced, and, in Lesson 4 after the period is introduced, Line 4 focuses on complete sentences.
- After all the letters in a lesson have been introduced and reviewed, a 1-minute timed writing is included to measure students' speed and accuracy skills. Each timed writing contains the same number of words as the speed goal, so if students finish the timed writing, they have met their speed goal for the lesson.
- Each of the first 20 lessons ends with an enrichment section that includes new-key reinforcement, short clauses and phrases, and sentences to reinforce the keys presented in the lesson as well as to build speed and accuracy. After Lesson 1, each enrichment section includes 27 lines of drill.
- Built into each drill line are at least 25 occurrences of the keys learned in the immediately preceding lesson and at least 10 occurrences of all other keys in each new-key lesson.

Next, walk students through the process of using the GDP software, explain the main menu, and point out the major features of the software. Show students how they can always return to the main menu and how they exit the program.

CORRECT STROKING

Keys should be operated only by finger motion. The shoulders, arms, and wrists should be almost motionless. Poor technique

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when reaching for the keys pulls the hands from the proper position and causes errors.

Losing one's place when typing results in decreased speed and accuracy. Students must therefore pay close attention to the material being typed without glancing at their fingers or the screen. (*Exception:* Typists should look at their fingers when first learning each new key reach and at their screen when composing at the keyboard.)

LEVELS OF RESPONSE

There are three levels of response at which students are called upon to perform. The first, *letter response*, is developed in the very early stages of keyboarding. Each letter in a word is typed as a separate unit; that is, the student sees and thinks each letter of the word, as in *t-h-e*. This level of response is common during the learning of each new key.

In the second level, *word response*, students type short, familiar words as complete units without sounding out each letter. For example, the student sees the word *the* and types it without spelling out each letter.

The third level is a combination *word/letter response*. Everyone at one time or another types at this level. Whenever a new or difficult word is encountered, part of the word may be typed at the word level and the other part may be typed letter by letter; for example, *the-a-t-e-r*.

Developing Keyboarding Technique

To build good keyboarding skills, students must develop, improve, and refine a number of basic techniques.

TECHNIQUE DEVELOPMENT

Students should position themselves at the workstation so that good technique is promoted. An example of proper position is illustrated in the next column.

Students must learn and practice correct techniques for efficiency and physical well-being:

- Position the chair so that the upper and lower legs form nearly a 90-degree angle and the lower back is supported.
- Position the keyboard even with the front of the desk or support tray. Place it slightly below your elbows, sloping slightly away from you so that your wrists are in a neutral position when your fingers are placed on the keys.
- Position the text on either side of the monitor as close to the monitor vertically and horizontally as possible to minimize head and eye movement and to avoid neck strain.



- Position the mouse on a pad at the side of the monitor opposite the text.
- Center the body in front of the keyboard.
- Place the base of the spine touching the back of the chair and the feet flat on the floor.
- Keep the elbows alongside the body, with the elbow angle opened slightly beyond 90° to promote circulation to the lower arm and hand.
- Curve the fingers naturally over the home position, with the back of the hand at the same angle as the keyboard.
- Raise the hands slightly so that the wrists do not touch the keyboard while typing. (Hands may rest at the bottom of the keyboard—away from the keys—during nontyping intervals.)
- Make quick, snappy strokes using the correct fingers.
- Return the finger immediately to the home position or move to the next position after each stroke.
- Operate all keys by touch, keeping the eyes on the copy most of the time while typing.
- Avoid gripping the mouse too tightly; such action can cause muscle strain and hand cramping.

TECHNIQUE PRACTICE

Although most of the students' efforts are devoted to increasing skill on the printing keys, students also must develop facility on the nonprinting operational keys. Most typists quickly learn to strike the large ENTER key by touch, but the typist who has to interrupt his or her production to stop and manually locate the ENTER, LEFT or RIGHT SHIFT, BACKSPACE, or TAB key cannot develop top-level proficiency.

These operational keys are systematically practiced in GDP, with every unit containing a special technique practice

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routine. In addition, the *11th* edition includes a Technique Practice on the BACKSPACE key that provides intensive practice on this frequently used nonprinting reach.

TECHNIQUE EVALUATION

Both the instructor and the student should use the Technique Evaluation Form for evaluating students' typing techniques. A sample form is provided on the College Keyboarding Web site at www.mhhe.com/gdp11.

Name _____	Class _____	Date _____				
Technique Evaluation Form						
Date	Workstation		Position at the Keyboard		Keystroking	
	Acceptable	Needs Improvement	Acceptable	Needs Improvement	Acceptable	Needs Improvement

Workstation

1. Positions the chair so that the upper and lower legs form a 90-degree angle and the lower back is supported.
2. Positions the keyboard even with the front of the desk.
3. Positions the text on either side of the monitor as close to it vertically and horizontally as possible to minimize head and eye movement and to avoid neck strain.
4. Positions the mouse on a pad at the side of the monitor opposite the text.

Position at the Keyboard

5. Centers the body opposite the keyboard.
6. Leans forward slightly from the hips, with the base of the spine touching the back of the chair and the feet flat on the floor.
7. Keeps the elbows alongside the body in a relaxed position.
8. Curves the fingers naturally over the home position, with the back of the hand at the same angle as the keyboard.

Keystroking

9. Keeps the forearms horizontal and raises the hands slightly when typing so that the wrists do not touch the keyboard while typing. (Hands may rest at the bottom of the keyboard—away from the keys—during nontyping intervals.)
10. Makes quick, snappy strokes using the correct fingers.
11. Returns the finger immediately to the home position or moves to the next position after each stroke.
12. Operates all keys by touch, keeping the eyes on the copy most of the time while typing.

Comments

The form should be used frequently during the early stages of instruction and occasionally thereafter. At no point in the development of keyboarding and document processing skill should proper typing technique be ignored. When the Technique Evaluation Form is used, students are rated as either “acceptable” or “needs improvement” on three separate factors:

- Workstation
- Position at the keyboard
- Keystroking

One way to use the form is to have each student rate himself or herself; then the instructor rates each student. Periodically, have students simply read through the Technique Evaluation Form so that they are reminded of proper techniques. During

these sessions, the instructor might want to demonstrate proper technique and discuss the role technique plays in terms of speed and accuracy as well as in avoiding fatigue and physical injury.

Building Straight-Copy Skill

As discussed earlier (see Principle 5 on p. GDP-6), straight-copy skillbuilding should be stressed at every level of instruction, primarily for two reasons: (1) most office workers must pass a straight-copy typing test for initial employment and (2) word processing software makes document production much like straight-copy typing because it automates much of the decision making and machine adjustments.

CONCEPTS FOR BUILDING STRAIGHT-COPY SKILL

A number of factors serve as the basis for building, maintaining, and improving speed and accuracy. These factors should be stressed heavily during the initial stages of instruction and should be reinforced as needed thereafter.

Early Accuracy. At the very outset, a respectable level of accuracy (perhaps no more than 3 errors per minute) should be the goal. If that level can be attained within the first few weeks, refining it to an even higher level will not be difficult.

Learners developing any new skill will make inaccurate responses during their initial attempts, and you should focus on proper typing technique during the early lessons. However, the instructor who says that errors do not matter in the early lessons will surely regret those words later.

Systematic Push for Speed. Typing speed does not come naturally as a by-product of something else. It comes only by conscious effort, intent, thought, and practice. The push for speed must be gradual—the speed goals themselves should increase gradually. For example, in most five-lesson units in GDP, the speed goal increases by only 1 word per minute.

Some aspect of typing should be timed (and recorded) every day—if only to keep students time-conscious and speed-conscious. Also, it should be remembered that fatigue affects speed just as it affects accuracy. Speedbuilding routines are best administered during the first part of the class period to minimize the adverse effects of fatigue.

Intent. Speed and accuracy require conscious effort. No one ever typed quickly or accurately by accident; one must *intend* to type quickly or accurately. Thus you must constantly keep the goals of speed or accuracy in front of your students. However, you should realize that students cannot stress speed and accuracy simultaneously during their skill drives. Every skillbuilding routine should have as a goal speed *or* accuracy—not both.

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Grading Emphasis. One of the easiest and most effective strategies that you can use to promote speed or accuracy is to vary the weight of the speed or accuracy portion of the score on document processing jobs. If students are putting too much stress on speed to the detriment of accuracy, increasing the accuracy standards is the way to let your students know how important you consider accuracy to be. Similarly, if students are “obsessing” on accuracy to the detriment of speed, increase your speed standards.

Another way of letting your students know the importance you attach to accuracy or speed is the manner in which you ask for timed writing results. Instructors who want students to be more conscious of accuracy will ask for accuracy scores first; those who want students to be more conscious of speed will ask for speed scores first—always in the form of “Who increased his or her speed during that timed writing?” (but not “Who typed at least 40 words per minute?”—since speed goals should always be attainable and, therefore, individualized).

MAP+ (MISSTROKE ANALYSIS AND PRESCRIPTION)

The MAP program first appeared in the 9th edition of GDP, and it allowed students to improve their speed and accuracy skills starting with Lesson 20 after all the alphabetic characters and selected punctuation marks had been introduced. MAP+ is being introduced in the 11th edition as an enhanced version of this highly sophisticated, individualized error analysis and remediation software program. MAP+ is comprehensive and simple to use and has no counterpart anywhere else in keyboard publishing.

The following is a brief discussion of the format, procedure, and benefits of using MAP+. A more detailed discussion of the manner in which MAP+ analyzes errors and the types of errors analyzed, as well as a sample error analysis and a review of related literature and research, is provided on the College Keyboarding Web site at www.mhhe.com/gdp11.

Format. The heart of the program is the MAP+ Summary Chart (shown at right), a one-shot identification of all the errors made on the pretest paragraph and the recommended prescriptive drills to correct these errors. MAP+ identifies and remediates 80 different types of misstrokes, which are included in Table 1 on p. GDP-14.

Procedure. The student begins by typing a random passage of 3 paragraphs (there are 16 passages in all). Each passage contains at least three occurrences of each alphabetic character, two occurrences of common punctuation (period, question mark, semicolon, and comma), no occurrences of other punctuation

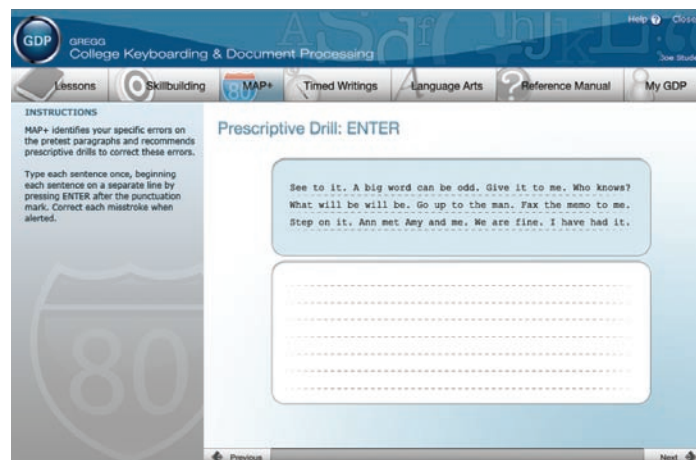
and symbols, and two occurrences of each function key (TAB, ENTER, SPACE BAR, LEFT SHIFT Key, and RIGHT SHIFT Key).

The program then analyzes the student’s typing and displays the MAP+ Summary Chart. In the sample screen shown below, Joe Student made 11 errors on the pretest paragraph (including 1 TAB key error, 1 Z key error, and 5 E key errors). Each error is identified either on the keyboard or in designated areas to the right of or below the keyboard.



The student can click any labeled key or box on the MAP+ Summary Chart to receive intensive practice on that reach. However, the software program recommends up to three remedial drills (in order of need). Students can click on any one of the recommended drills to immediately move to the selected exercise. For example, if the student clicked the ENTER key, an exercise similar to the one below would appear.

Because the drill lines are composed randomly by the software program, based upon specially developed dictionaries, every time the student accesses a prescriptive drill, new drill lines appear.



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Table 1. TYPES OF MISSTROKING ERRORS IDENTIFIED IN MAP+ (N = 80)

Sequence	Error Category	Explanation
1–5	Function: TAB LEFT SHIFT RIGHT SHIFT SPACE BAR ENTER	Incorrectly pressing or failing to press the: TAB key LEFT SHIFT key RIGHT SHIFT key SPACE BAR ENTER key
6	Alphabet Keys	The total of all of the misstrokes of the five function keys
7	Insertion/Omission	Incorrectly adding or leaving out a character or word
8	Substitution	Making one of the following most common substitution errors: R for %, M for N, I for O, A for S, D for S, E for R, or E for I (or vice versa)
10–19	Number	Misstroking any digit: 1 2 3 4 5 6 7 8 9 or 0
20	Number Keys	The total of all of the misstrokes of the 10 digits
21–34	Symbol	Misstroking any of these symbols: ! @ # \$ % & * () - : ' " or /
35	Symbol Keys	The total of all of the misstrokes of the 14 symbol keys
36–65	Alphabet	Misstroking any of these keys: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z ; , . or ?
66	Alphabet Keys	The total of all of the misstrokes of the 30 letter and punctuation keys
67	Finger: A	Misstroking: Q A or Z
68	S	W S or X
69	D	E D or C
70	F	R T F G V or B
71	J	Y U H J N or M
72	K	I K or ,
73	L	O L or .
74	;	P ; or ?
75	HAND: Left Hand	Misstroking: Q W E R T A S D F G Z X C V or B
76	Right Hand	Y U I O P H J K L ; , . or ?
77	Row: Number Row	Misstroking: 1 2 3 4 5 6 7 8 9 0 ! @ # \$ % & * () or -
78	Upper Row	Q W E R T Y U I O or P
79	Home Row	A S D F G H J K L or ;
80	Lower Row	Z X C V B N M , . or ?

Teaching Strategies

Student Benefits. MAP+ provides the following unique benefits:

- **Simple.** A single menu provides one-click access to all accuracy drills.
- **Comprehensive.** A total of 80 different accuracy problems are identified and practiced.
- **Individualized.** The prescriptive drills are based on the student's demonstrated accuracy deficiencies.
- **Fast and Efficient.** Each drill is made up of three lines of words—all crammed with examples of the problem reach.
- **Motivational.** The drills change with every access. No matter how many times students access the same prescriptive drill, new drill lines appear.
- **Research-Based.** Scientific error analysis has a long history in psychology and education. (Refer to the GDP Web site referenced earlier for a discussion of numerous research reports and journal articles that help provide a theoretical basis for the study of keyboarding accuracy and support for the use of MAP+ in developing keyboarding skill.)

Error analysis has many supporters. Here are some of their comments.

Most writers agree that diagnosis must precede cure. . . . The typing teacher must diagnose her students' difficulties and determine the nature and causes of errors before she can cure her students.

E. G. Blackstone and Sofrona L. Smith,
Improvement of Instruction in Typewriting

By recording the number and kinds of errors made by his students, a teacher may ascertain the exact kind of difficulties which cause them the most trouble and apply a remedy that will prevent or correct them at once.

William F. Book, *Learning to Typewrite*

There is but one intelligent approach to errors. It lies in your asking, "Why have I made this particular mistake?" . . . With the error as your cue, you will first look for your underlying difficulty. After finding the real trouble, you will plan to remove it.

August Dvorak et al., *Typewriting Behavior*

An analysis of errors must be made by and for each pupil. It is absolutely essential that the individual pupil's errors be studied in order that corrective drill work may be given for these particular difficulties.

D. D. Lessenberry,
Teacher's Manual, 20th Century Touch Typewriting

Practice in and of itself does not make perfect. It is correct practice that makes perfect. One must practice the correct thing, the correct way, at the correct time in order to achieve the correct results.

Cortez Peters, *Championship Keyboarding Drills*

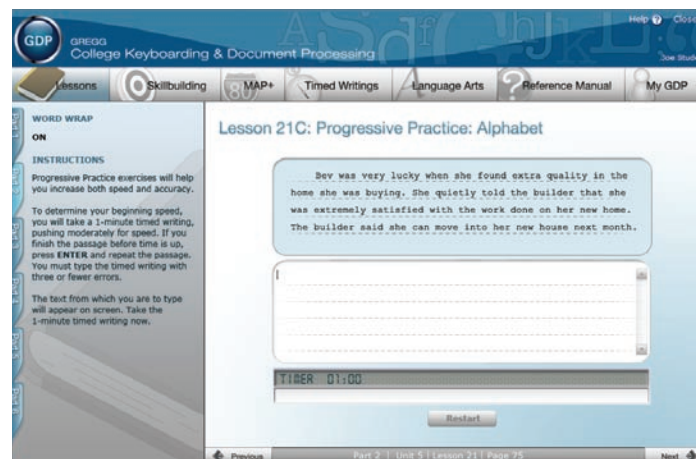
Analysis of errors on timed writings will provide all the data necessary for a determination of needed remedial practice for a student.

Allien B. Russon and S. J. Wanous,
Philosophy and Psychology of Teaching Typewriting

PROGRESSIVE PRACTICE

The Progressive Practice program is designed to build straight-copy speed and accuracy in short, easy steps using individualized goals and immediate feedback. This program can be used at any point after Lesson 9, when all the alphabet keys have been introduced.

Format. Each passage contains the exact number of words needed to reach a particular 30-second speed goal *with no errors*. The alphabetic passages range from 16 to 104 wpm, and the numeric passages range from 16 to 80 wpm.



Procedure. The first time the Progressive Practice program is used, the student takes a 1-minute timed writing test to establish his or her base rate. The software then automatically displays a passage that is 1 or 2 wpm higher than the speed achieved on the test passage. Students then take a series of six 30-second timed writings. They repeat each passage until they can complete it within 30 seconds with no errors. Then they progress to the next, slightly longer passage.

The software automatically keeps track of progress and either redisplay the same passage (if the goal was not met) or displays the next passage. When students access the Progressive

Teaching Strategies

Practice program the next time, the appropriate passage is displayed, based on the student's last best performance.

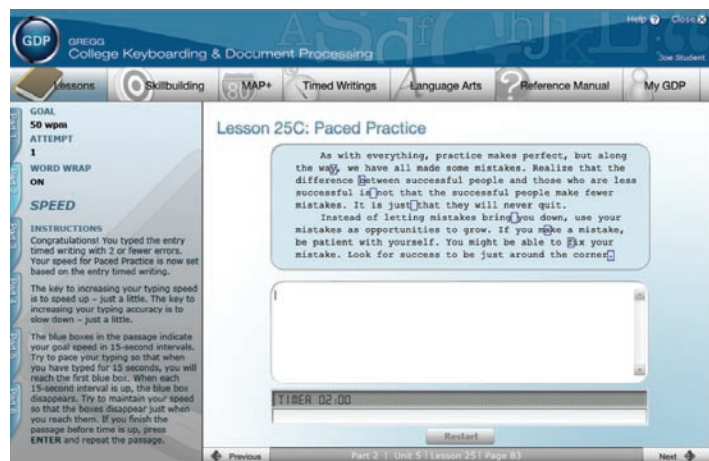
Student Benefits. The Progressive Practice program enables each student to work at his or her own speed. The program also encourages self-competition. Students compete against themselves rather than against the class; thus, the goals are motivational and realistic. Finally, this type of speed forcing is a proven way to break students of the habit of looking at the keys as they type.

PACED PRACTICE

The Paced Practice program is an individualized skill development program designed to help students alternate between speed and accuracy improvement. The program can be used at any point after Lesson 9.

Format. Each passage contains the exact number of words needed to reach a particular 2-minute goal. The passages range from 16 to 96 wpm.

Procedure. The first time the Paced Practice program is used, the student takes a 1-minute timed writing test to establish his or her base rate. The software then automatically displays the appropriate passage with *either* a speed or an accuracy goal. Note in the illustration below, for example, that this particular student is working toward a *speed* goal of 50 wpm.



Speed Goal. When speed is the goal, students type the passage until they can complete it within 2 minutes without regard to the number of errors made. Then they switch and work on accuracy.

Accuracy Goal. To type accurately, students need to slow down—*just a bit*. Therefore, to reach their accuracy goal, the software drops back 2 wpm to the previous passage. Students type the passage until they can complete it within 2 minutes with no more than 2 errors. Then the software moves forward 4 wpm, and the student works again for speed.

Note that, when completing a Paced Practice exercise using the GDP software, some of the characters in the passage are highlighted. These highlighted characters indicate how much text should be typed every 15 seconds to achieve the speed goal. Every 15 seconds the next highlighting disappears. Students should pace their typing to reach the highlighted character just before the highlighting disappears—typing neither too fast nor too slow. When a goal has been reached, the software automatically advances to the next timed writing.

Student Benefits. To increase speed, students should speed up—just a little. To increase accuracy, they should slow down—just a little. Any extreme variation in speed—either typing grossly faster or slower than a normal, comfortable speed—is detrimental to skill development.

The problem, of course, is knowing just how much is “a little” change in speed. Students should be instructed to pace their typing so that they are within a couple of characters before or after the highlighted character when the highlighting disappears. By the end of the 2-minute timed writing, students should be able to pace their speed accurately, thereby enhancing their chances of achieving their goal.

PRETEST/PRACTICE/POSTTEST

The Pretest/Practice/Posttest (PPP) program is designed to build straight-copy speed and accuracy through a three-step program that focuses on either speed or accuracy, depending on pretest performance.

Format. The program consists of three sections:

1. The Pretest is the preliminary effort to determine the learner's initial skill level.
2. The Practice section consists of intensive drills to improve the reaches focused on in the Pretest.
3. The Posttest measures the effect of the practice.

PPP PRETEST » PRACTICE » POSTTEST

PRETEST
Take a 1-minute timed writing.

C. PRETEST: Discrimination Practice

4 Steven saw the younger, unruly boy take flight as he 11
5 threw the coin at the jury. The brave judge stopped the 22
6 fight. He called out to the youth, who recoiled in fear. 33
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12

D. PRACTICE: Left Hand

7 vbv verb bevy vibes bevel brave above verbal bovine behaves
8 wew west weep threw wedge weave fewer weight sewing dewdrop
9 fgf gulf gift fight fudge fugue flags flight golfer feigned

E. PRACTICE: Right Hand

10 uyu buys your usury unity youth buoys unruly untidy younger
11 oio coin lion oiled foils foist prior recoil iodine rejoice
12 jhj jury huge enjoy three judge habit adjust slight jasmine

F. POSTTEST: Discrimination Practice

POSTTEST
Repeat the Pretest timed writing and compare performance.

Teaching Strategies

Procedure. The student takes a 1-minute timed writing on the Pretest, and the software determines the speed and errors. If the student made 2 or fewer errors on the Pretest (no more than 1 error in Lessons 61–120), he or she types each *individual* line 2 times. If 3 or more errors were made (2 or more in Lessons 61–120), the student types each *group* of lines (as though it were a paragraph) 2 times. Finally, students repeat the Pretest timed writing and compare performance.

Student Benefits. Each time, students work on either accuracy or speed, depending on their Pretest results. In addition, PPP provides intensive practice on six different types of reaches:

- Horizontal reaches
- Vertical reaches
- Close reaches
- Alternate- and one-hand words
- Common letter combinations
- Discrimination practice

12-SECOND SPEED SPRINTS

The 12-Second Speed Sprints foster speed improvement through the use of fast, repetitive typing on short, easy sentences without an error limit.

Format. Each drill consists of four 1-line sentences made up of easy words to type.

B. 12-SECOND SPEED SPRINTS

4	The eight old books are to be thrown into the fields today.	
5	Alan may then take apart both of the toys out on the lanai.	
6	Due to the big quake, the city may start to move all autos.	
7	Glen may take apart the old robots when he comes into town.	
5.....10.....15.....20.....25.....30.....35.....40.....45.....50.....55.....60	

Procedure. Students take three 12-second timed writings on each line. Although the software automatically computes the typing speed, the scale below the last line shows the wpm speed for a 12-second timed writing. The goal is to increase one's speed on each successive typing of the line.

Student Benefits. Students enjoy these speed sprints because they can achieve much higher speeds by typing for just 12 seconds on easy copy. Thus, the practice is motivational. Because the software automatically times the student, instructors don't have to worry about students trying to squeeze in an extra letter or two (on a 12-second timed writing, each extra letter typed increases the wpm speed by 1 word).

SUSTAINED PRACTICE

The Sustained Practice program develops increased speed. Students are challenged to maintain or exceed their initial speed level on copy of increasing difficulty.

Format. The practice lines consist of four paragraphs of the same length. Each paragraph is more difficult than the preceding one, based on one of several difficulty factors:

- Syllabic intensity
- Numbers and symbols
- Punctuation
- Rough-draft symbols
- Alternate-hand words
- Capital letters

For example, in the illustration shown below, each paragraph is more difficult than the preceding one, based on syllabic intensity (average number of syllables per word):

Para. 1: SI = 1.35

Para. 2: SI = 1.47

Para. 3: SI = 1.62

Para. 4: SI = 1.88

B. SUSTAINED PRACTICE: CAPITALS

4	There are several different approaches that one can	11
5	take when considering a major purchase. Some people make	22
6	the mistake of simply going to a store and making a choice.	34
7	When one couple decided to buy a chest-type freezer,	11
8	they looked at a consumer magazine in the library. The	22
9	Sears, Amana, and General Electric were shown as best buys.	34
10	That same issue of their magazine compared electric	11
11	ranges. Jonathan and Mary Anne found that the Maytag, Magic	23
12	Chef, Amana, and Gibson were determined to be best buys.	34
13	Best buys for full-size microwave ovens were the Sharp	11
14	Carousel, Panasonic, and GoldStar Multiwave. Good midsize	23
15	models were the Frigidaire, Panasonic, and Sears Kenmore.	34
	1 2 3 4 5 6 7 8 9 10 11 12	

Procedure. Students take a 1-minute timed writing on the first paragraph to establish their base speed. (This paragraph is clearly marked in the textbook, with a solid line drawn around the entire paragraph to differentiate it from the following three paragraphs that students type.) Students then take four 1-minute timed writings on the remaining paragraphs. As soon as they equal or exceed their base speed on one paragraph, they advance to the next, more difficult paragraph.

Student Benefits. This drill is different from others in that the goal is to *maintain* speed rather than to *increase* speed. The “catch,” of course, is that the copy in each paragraph gets more difficult to type. As always, the drill is individualized, with students competing against their previous best efforts. Thus, the goal is always attainable.

Teaching Strategies

A SKILLBUILDING SYSTEM

No matter how effective individual skillbuilding routines are, they lose much of their effectiveness if they are not used in a *systematic* and scientific manner to build skill. As illustrated in Table 2 on p. GDP-19, GDP systematically cycles these skillbuilding routines throughout the textbook to provide maximum benefit, constant refreshment of skill, and motivation.

Building Number-Typing Skill

A competent typist should be able to use all the keys on the keyboard, including the number keys, with both speed and accuracy. Considering the importance of numerical data in the contemporary office, it is easy to understand why management expects typists to be proficient in number typing.

Whether a person is typing dates, telephone numbers, Social Security numbers, order numbers, inventory numbers, or amounts of money, accuracy is essential. An error that occurs in typing numbers could be much more serious than an error on alphabetic copy. For example, typing \$6,400 instead of \$4,600 can be a much more costly error than typing *teh* for *the*.

INTRODUCING THE NUMBER KEYS

The top-row number keys are taught in Units 3 and 4 (Lessons 11–17), immediately after the alphabet keys are learned. Your role in motivating students during the introduction of number keys is critical. Impress upon them the importance of touch-typing numbers accurately. Your enthusiastic and positive introduction of the top-row keys will help students develop confidence that they can, indeed, master these keys.

The text and GDP software follow the same procedure in introducing the number keys as in introducing alphabet keys. Each new key is introduced in four lines. The first line provides practice in the reach from the home row. Students should look as their fingers make the reach to the new number key the first several times; thereafter, they should make the reach by touch. Lines 2–4 of the new-key drill move quickly to having students type words, phrases, and then sentences.

Throughout the unit, stress (and demonstrate, if possible) the importance of good technique to the students. Ensure that no parts of lessons are skipped. Indeed, some parts may be repeated if needed for number-typing mastery.

NUMBER-TYPING PRACTICE

GDP provides ample opportunity for students to maintain and increase their number-typing skill in every unit following the number-key introduction.

MAP+. MAP+ provides an opportunity for students to review the typing of numbers in any lesson throughout GDP.

Progressive Practice—Numbers. Every odd-numbered unit contains a Progressive Practice emphasizing numbers. (See the discussion of Progressive Practice on pp. GDP-15 and GDP-16 for further information.)

Sustained Practice—Numbers and Symbols. Three units (10, 16, and 22) contain a Sustained Practice emphasizing numbers and symbols. (See the discussion of Sustained Practice on p. GDP-17 for further information.)

Additional Practice. For instructors wishing even more number-practice exercises, three pages of number drills that can be duplicated for classroom use are provided at the GDP Web site (www.mhhe.com/gdp11).

TEACHING THE NUMERIC KEYPAD

Most computer keyboards contain a separate numeric keypad located to the right of the alphanumeric keyboard. With a keypad students can learn to type numbers by placing the J, K, and L fingers on the 4, 5, and 6 keypad keys. This method can be very efficient if only numbers are being typed. If numbers are mixed with words, however, students should use the regular keyboard, with the numbers on the top row.

Building Document Processing Skill

The development of document processing skill is the *terminal* goal of keyboarding instruction (straight-copy skill is an *enabling* goal). Students must be able to apply their straight-copy skills to various real-life personal and office document processing tasks that they will encounter when their classroom days have ended.

Straight-copy skillbuilding, the study of technical information, and assessment strategies are the means by which the objective of possessing competent document processing skills is achieved. Both speed and accuracy are, of course, critical prerequisites (or co-requisites) of competent document processing skill. Students should be able to type at least 25 wpm on a 2-minute timed writing before beginning their study of document processing.

The instructor is *absolutely critical* in the document processing stages of skill development. Use the instructional techniques discussed later in this section to assist students in applying creative judgments in a correct and efficient manner.

Teaching Strategies

Table 2. A SKILLBUILDING SYSTEM

Routine	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Warmups (5 per unit)	[Solid dark brown]																			
MAP+ (1 per unit)	[Solid dark brown]																			
Progressive Practice	[Solid dark brown]																			
Alphabet	[Solid dark brown]																			
Numbers	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]	[Solid dark brown]
Pretest/Practice/Posttest	[Solid dark brown]																			
Vertical Reaches					[Solid dark brown]						[Solid dark brown]						[Solid dark brown]			
Alternate/One-Hand Words						[Solid dark brown]						[Solid dark brown]						[Solid dark brown]		
Common Letter Reaches	[Solid dark brown]						[Solid dark brown]						[Solid dark brown]					[Solid dark brown]		
Close Reaches		[Solid dark brown]						[Solid dark brown]						[Solid dark brown]					[Solid dark brown]	
Discrimination Practice			[Solid dark brown]						[Solid dark brown]						[Solid dark brown]					
Horizontal Reaches				[Solid dark brown]						[Solid dark brown]						[Solid dark brown]				
12" Speed Sprints (1–2 per unit)	[Solid dark brown]																			
Sustained Practice	[Solid dark brown]																			
Syllabic Intensity					[Solid dark brown]						[Solid dark brown]						[Solid dark brown]			
Numbers and Symbols						[Solid dark brown]						[Solid dark brown]						[Solid dark brown]		
Capitals	[Solid dark brown]						[Solid dark brown]						[Solid dark brown]					[Solid dark brown]		
Punctuation		[Solid dark brown]						[Solid dark brown]						[Solid dark brown]					[Solid dark brown]	
Alternate-Hand Words			[Solid dark brown]						[Solid dark brown]						[Solid dark brown]					
Rough Draft				[Solid dark brown]						[Solid dark brown]						[Solid dark brown]				
Paced Practice (1–2 per unit)	[Solid dark brown]																			
Technique Practice	[Solid dark brown]																			
SHIFT Key				[Solid dark brown]						[Solid dark brown]						[Solid dark brown]				[Solid dark brown]
BACKSPACE Key					[Solid dark brown]						[Solid dark brown]						[Solid dark brown]			
SPACE BAR	[Solid dark brown]					[Solid dark brown]						[Solid dark brown]					[Solid dark brown]			
TAB Key		[Solid dark brown]					[Solid dark brown]						[Solid dark brown]					[Solid dark brown]		
ENTER Key			[Solid dark brown]					[Solid dark brown]						[Solid dark brown]					[Solid dark brown]	
Timed Writings (2–3 per unit)	[Solid dark brown]																			

A DOCUMENT PROCESSING SYSTEM

As explained in Principle 10 on p. GDP-8, the sequence of document processing activities should be based on a systematic spiral approach. The major types of documents are cycled systematically throughout the GDP program. This unique organizational plan prevents boredom (lesson after lesson of the same type of document) and permits a smooth, easy-to-complex flow of learning. As illustrated in Table 3 on p. GDP-21, students first learn how to format letters

and memos in Unit 6. They then switch to learning how to format simple reports and tables in Units 7 and 8. They return to more complex correspondence in Unit 9 and again in Units 14 and 17.

Similarly, word processing commands are introduced systematically. They begin with the most basic commands in the first document processing unit (Unit 5). More advanced commands are then introduced systematically, on a need-to-know basis, as they are needed to format documents.

Teaching Strategies

STAGES OF DOCUMENT PROCESSING INSTRUCTION

When introducing document processing, the competent instructor does more than simply make the assignments in the text and turn students loose on their own. Students will develop their document processing skills most efficiently if the instructor supplements the text and software instruction with effective classroom instruction and management procedures.

The three stages of document processing instruction discussed below assume an in-class environment. Instructors teaching in a distance-learning environment will need to make appropriate adjustments. (See pp. GDP-46 to GDP-50 for instruction on teaching in a distance-learning environment.)

Directed Document Processing. When students are introduced to a particular formatting job (a business letter, for example), you should provide a good deal of control over the learning activities. Directed activities, therefore, are those in which you tightly control the learning experience. The goals and techniques are explained, and the pace, as well as the starting and stopping times, is established. You direct each step—to the point of dictating instructions, providing formatting commands, explaining the placement of the text on the page, and calling the beginning and ending times so as to force the pace while students type.

Students must be taught to form associations between one step and the next. For example, an association must be formed between typing the date for a letter and spacing down 4 times to type the inside address. These associations are most rapidly made when there is minimal time between the stimulus and the response.

Directed production is recommended for a new experience in any document processing activity. Disregard tasks that students have already mastered. Concentrate instead on what is *new*—for example, the first subject line in a letter, the first open table, or the first endnote in a report.

The primary objective for directed formatting activities is to teach students the proper format for each type of document processing task—for example, the correct layout for a letter or a memo.

These directed formatting activities are designed to increase the rate of document processing.

Guided Document Processing. Guided document processing activities are a natural follow-up to the directed document processing activities described above. With guided activities, all the information the students need to complete the task is previewed. The objectives are explained, the work to be typed

is previewed with the students, and the steps are discussed in detail. Then students are free to complete the formatting assignment.

It is vital that you observe the work process, reinforcing correct responses and offering suggestions as needed. One way that you can accomplish this is by walking up and down the aisles, making constructive comments while students work. (*Remember:* Competent keyboarding instructors teach from their *feet*—not from their seat.) Or, if you are teaching an online course, you need to communicate with your students on a continuous basis, sending comments to them through the detailed report in their portfolio or through individual or class e-mails.

In addition, you may want to instruct students to place a printed copy of each completed job on their desks. You continue walking about, reviewing the format of the document at each student's desk and indicating approval by initialing. If the format is not correct, you may either offer comments directly to the students or write corrective comments in the margins of their documents. (For this activity, there is no need to be concerned with keystroking errors.) If the students are online, you can share similar comments with them through their detailed report.

Guided document processing is the pattern for much of the work in the introductory stages of formatting. For example, in the lesson in which business letters are introduced, students first receive directed practice in typing the various parts of a business letter; then they receive guided practice in typing the first letter; finally, they receive supervised practice in typing the second letter in the lesson.

Supervised Document Processing. Students must have an abundance of independent practice as they develop formatting skills. Therefore, you should move away from guided activities into supervised activities, where students work under your observation and supervision but without detailed assistance. While using this technique, you need to be aware of performance results so that you can provide remedial guidance if difficulties arise.

Decision-making skills essential for real-life activities can be acquired only through unguided practice, so quickly and constantly encourage students to “look it up.” The *11th* edition of GDP contains a detailed Reference Manual at the beginning of the text—where students can find sample documents that they will be formatting.

By requiring students who have questions to reread the lesson directions or refer to the text or online Reference

Teaching Strategies

Table 3. A DOCUMENT PROCESSING SYSTEM

Unit	Content	Word Processing	Unit	Content	Word Processing
1	Keyboarding—The Alphabet		10	Reports	Margins Footnotes Headers Indentation—Hanging AutoCorrect—Hyperlink Tab Set—Dot Leaders
2	Keyboarding—The Alphabet		11	Employment Documents	Font Table—Change Column Width
3	Keyboarding—Numbers and Symbols		12	Skillbuilding and In-Basket Review	
4	Keyboarding—Numbers and Symbols		13	Skill Refinement	
5	Word Processing and E-Mail	Start Word Choose a Command File—Open Quit Word Navigate in a File File—Save File—Close File—New Switch Windows Select Text Bold Undo/Redo a Command Help Print Preview Spelling and Grammar Check Show/Hide Formatting Zoom Print E-Mail a Document	14	Correspondence	Sort Table—Shading E-Mail—Blind Copies Find and Replace
6	Correspondence	Envelopes View Gridlines Labels Email—Attachments Italic Underline	15	Reports	Footers Columns Hyphenation
7	Reports	Alignment Font Size Page Number Page Break Widow/Orphan Control Bullets and Numbering Line Spacing Cut, Copy, and Paste	16	Tables	Table—Text Direction Table—Insert, Delete, and Move Rows or Columns Page Orientation Table—Repeating Table Heading Rows Table—Styles
8	Tables	Table—Insert Table—AutoFit to Contents Table—Merge Cells Table—Borders Table—Align Bottom Table—Center Horizontally Table—Center Page Table—Align Text Right Table—Borders, Ruled	17	International Formatting	Paper Size Symbol—Insert
9	Correspondence	Indentation E-Mail—Copies Tab Set—Ruler Tabs	18	Formal Report Project	Styles Clip Art—Insert File—Insert Bookmarks and Hyperlinks Cover Page—Insert
			19	Medical Office Documents	Table—Tab
			20	Legal Office Documents	Line Numbering
			21	Using and Designing Office Forms	Templates—Correspondence Templates—Report Text Boxes Font—Small Caps Print Options
			22	Designing Office Publications	WordArt Table—Move Page Color Table—Borders and Shading, Custom
			23	Online Resumes and Merged Documents	Mail Merge—Letters Mail Merge—Envelopes and Labels
			24	Skillbuilding and In-Basket Review	

Teaching Strategies

Manual, you can help them quickly assume responsibility for their own correct document processing. Later units in the second course of GDP (for example, Units 21 and 22) require *creative* document processing, with students being asked to design office forms and office publications.

COMPONENTS OF DOCUMENT PROCESSING

The real objective of your class is the development of formatting skills that enable the learner to quickly and accurately accomplish realistic document processing tasks, whether for personal use or for vocational purposes.

As the instructor, you are responsible for planning the classroom activities and conducting them in a manner that results in the accomplishment of this objective. Basic straight-copy skills are essential, of course, for efficient formatting. However, whereas straight-copy typing consists solely of key-stroking, there are three basic components in performing a document processing task.

Planning. The first component is planning for the task. Because planning is a necessary part of the activity, instruction must be provided. Attention must be given to the need to quickly gather required materials. If a task deviates from the routine typing of copy, students must plan the formatting steps that will result in the correct layout of the finished job on the page.

Keystroking. The second component of document processing is the actual keystroking, or typing of copy. If proper attention has been given to planning, this step should proceed without undue delays and interruptions.

Proofreading. The third component is one that can be too easily overlooked. You should provide instruction and drill in proofreading.

Microsoft Word has a spell-checker to aid in proofreading, and the GDP software will score the document for keystroking and formatting errors. On the job, however, students will not have their documents scored for them. Right from the start of document processing, require students to assume final responsibility for proofreading all documents they submit. You can do this by limiting the number of attempts students have to complete a particular job. For example, the last document processing job in each unit is labeled a Progress and Proofreading Check. Here, students are allowed only one attempt to finish the job; that is, they cannot rely on the

software to locate their errors for them to correct. They must correct all errors before exiting the word processor.

Mailable copy is a term that is often used to describe formatted copy that, in the opinion of the author of the job, is acceptable and can be sent to the intended recipient or distributed as desired. In building mailable-copy skills, GDP systematically leads students through the progressive steps of typing from properly formatted copy and then typing from copy that reflects the nature of realistic office tasks—unarranged, rough-draft, and handwritten copy.

Building Language Arts Skills

As noted in Principle 11 on pp. GDP-8 to GDP-9, competent language arts skills are an essential component of competent document processing skills. If students can't *write* correctly, they can't *type* correctly. Thus, competent language arts skills are essential for success in the contemporary office. GDP provides systematic instruction in language arts rules, proofreading, spelling, and composing.

LANGUAGE ARTS RULES

GDP systematically teaches, practices, and reinforces 50 “must-know” language arts rules for business:

- 22 punctuation rules
- 14 grammar rules
- 14 mechanics rules

These rules are provided on pp. R-15 to R-22 of the Reference Manual. They are also systematically introduced two or three at a time starting in Unit 5. First, the rules are presented in the text lesson. Then, students practice the rules by editing sentences in the software.

Language Arts

D. CAPITALIZATION

Note: The callout signals in the left margin indicate which language arts rule from this lesson has been applied.

Capitalize the first word of a sentence.

Please prepare a summary of your activities.

Capitalize proper nouns and adjectives derived from proper nouns.

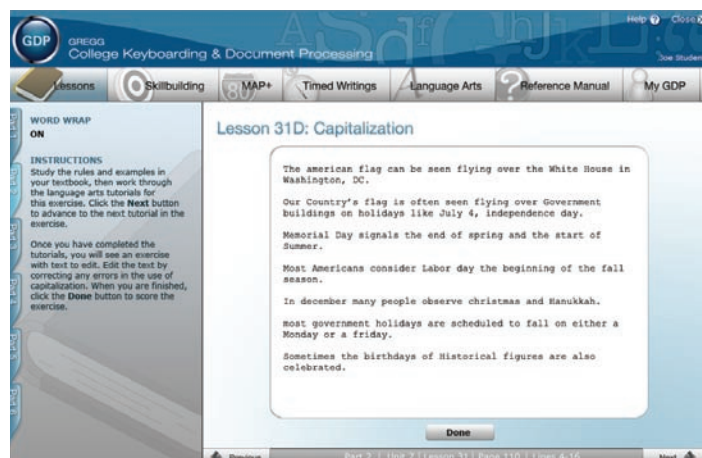
Judy Hendrix drove to Albuquerque in her new Pontiac convertible.

Note: A proper noun is the official name of a particular person, place, or thing.

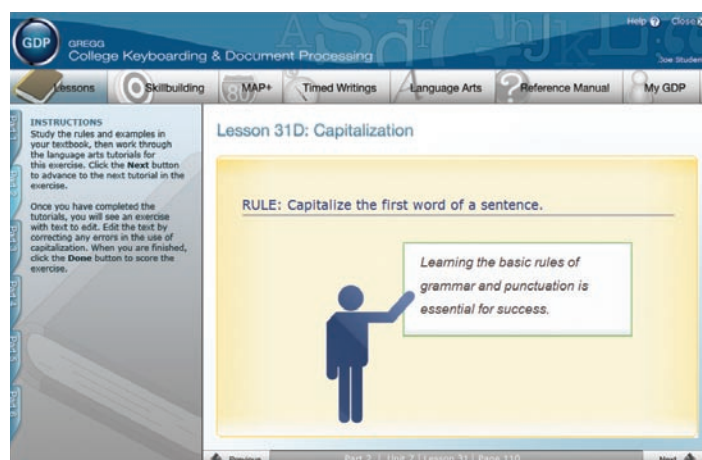
Capitalize the names of the days of the week, months, holidays, and religious days (but do not capitalize the names of the seasons).

On Thursday, November 25, we will celebrate Thanksgiving, the most popular holiday in the fall.

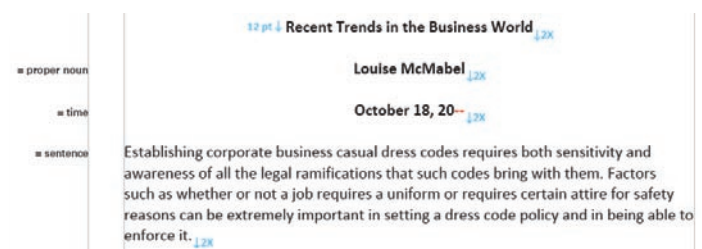
Teaching Strategies



If a student makes one or more errors on the exercise, a tutorial appears that provides an in-depth, graphic discussion of the rules being presented:



Finally, the rules presented in the lesson are reinforced in the document processing jobs in that lesson.

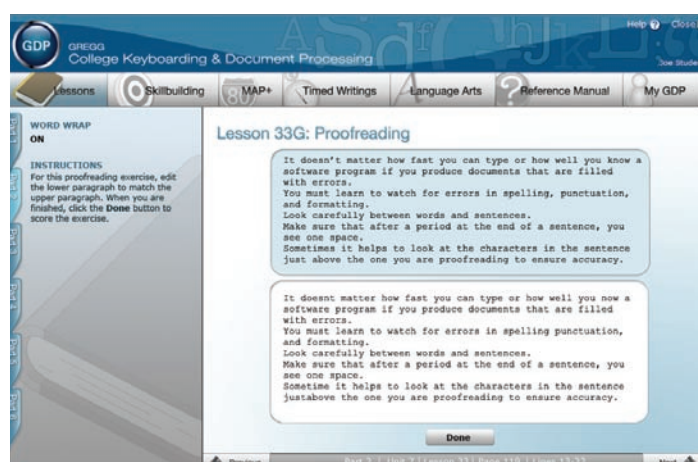


Ensure student competence on the language arts rules by requiring perfect completion of all exercises. When introducing the document processing jobs in lessons that present language arts rules, take the time to point out the application of each rule in the documents.

PROOFREADING

As stated earlier, competent proofreading skills are necessary for competent document processing skills.

In addition to proofreading every job they type, in every second unit in GDP (starting with Unit 5) students get an opportunity to practice their proofreading skills in special exercises in the Skillbuilding section of the lesson. These exercises alternate between *comparing* (that is, comparing a typed version of a document with the original version and correcting all discrepancies) and *editing* (correcting all typing and formatting errors in a paragraph):



SPELLING

The English language is notorious for its spelling inconsistencies. For every spelling rule, it sometimes seems as if there are as many exceptions as there are examples of the rule.

In an effort to provide the most efficient practice of spelling skills, every second unit in GDP (starting with Unit 6) provides a list of 30–35 commonly misspelled business words for students to type. The 328 words selected are taken directly from Ober's study of the most frequently occurring and the most frequently misspelled words in contemporary business writing (Scot Ober, "The Spelling Problems of First-Year Typewriting Students," *The NABTE Review*, Vol. 13, 1986, pp. 43–47).

Considering the importance of competent spelling skills, some typing instructors elect to give a spelling test, based on the spelling words covered in that section, along with each Part Assessment Test. As with the language arts rules, students first study the words, then practice them, and later encounter

Teaching Strategies

them in the document processing jobs in that lesson, where the spelling words are highlighted in yellow.

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A LANGUAGE ARTS SYSTEM

As shown in Table 4, the language arts rules, the proofreading and composing activities, and the business spelling words are presented systematically throughout the program. This cyclical approach prevents boredom by providing instruction in small segments.

Table 4. A LANGUAGE ARTS SYSTEM

Unit	Rules	Proofreading	Composing	Spelling	Unit	Rules	Proofreading	Composing	Spelling
5. Word Processing and E-Mail	, dir ad frag run-on	Comparing	Sentences (personal)		15. Reports	, non , adj	Editing	Paragraphs (business)	
6. Correspondence	, ind , intro			Spelling	16. Tables	≡ noun # ≡ compass			Spelling
7. Reports	≡ sent	Editing	Sentences (personal)		17. International Formatting	agr pro agr inter	Comparing	Documents (e-mail)	
8. Tables	' sing ' plur ' pro			Spelling	18. Formal Report Project	abb meas abb lc abb ≡			Spelling
9. Correspondence	" quote " title <u>title</u> , quote	Comparing	Sentences (business)		19. Medical Office Documents	: expl . req	Editing	Documents (e-mail)	
10. Reports	# gen # fig			Spelling	20. Legal Office Documents	; no conj ; ser			Spelling
11. Employment Documents	, date , place	Editing	Paragraphs (personal)		21. Using and Designing Office Forms	adj/adv agr near	Comparing	Documents (e-mail)	
12. Skillbuilding and In-Basket Review	# word - num			Spelling	22. Designing Office Publications	nom pro obj pro			Spelling
13. Skill Refinement	, ser , tran	Comparing	Paragraphs (personal)		23. Online Resumes and Merged Documents	≡ org ≡ course	Editing	Documents (business letter)	
14. Correspondence	- adj agr sing/plur abb no			Spelling	24. Skillbuilding and In-Basket Review	Word Usage			Spelling