Vol. 3 No.7   **October 1985**

Introducing Word Processing to Students

Helen J. Schwartz

There is no single way to introduce word processing in composition classes that will work optimally in all situations. The pace and method you adopt for teaching students should be suited to your particular setting and students—and to your goals and personal style. This article offers suggestions for assessing your situation and adopting a strategy for introducing them to word processing. The advice is based on my experience and that reported to me by other teachers who have used word processing in writing classes.

Assessing Your Situation

How you introduce word processing will depend on three important factors in pacing your assignments: (1) ease of using your word-processing program and equipment, (2) accessibility of that equipment to your students, and (3) aptitude of your students for word processing.

Ease

Assuming that you have no way to change the word-processing program and equipment available, there are several ways to gauge the ease of operation with your equipment. (If you have some say, check reviews in the *Research in Word Processing Newsletter* for suggestions.) You should also consider how you can ameliorate some difficulties of the program or equipment by arranging extra demonstrators at first and with good backup material—such as charts for use, step-by-step directions and fast-track summaries. (A sample form for the fast-track summary has been provided inside the front cover of my book, *Interactive Writing* [New York: Holt, Rinehart and Winston, 1985].)

A program is relatively difficult to use if it takes more than two hours to introduce a computer novice to the basics. (I'm defining basic functions as loading, saving, simple printing, inserting, copying, and deleting.)

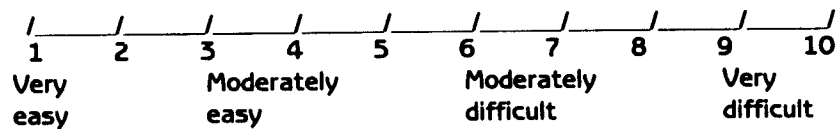The following questions give further suggestions for assessing ease of use:

■ How many function keys does the equipment have? Are there separate arrow keys to move the cursor? Are other keys reserved for functions like moving or searching or must the user push several keys at the same time?
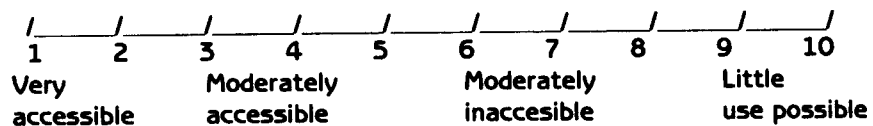
■ How many steps in succession are required to accomplish complicated maneuvers (like copying)?
■ How much documentation does the program make available on-screen? How helpful and clear is it?
■ Does the program protect the user from disastrous errors (for example, must the user verify commands to delete whole files?)
■ How close is the text on the monitor to the text as it will be printed out? (Can you review how the text will look before it is printed? Can you show double spacing on the monitor? Underlining? Or must the user rely on symbols or embedded commands?)

Now evaluate how easy the equipment and program are to use on a scale of 1 to 10 (with 1 being "easy to use" and 10 being "very difficult"), using the scale in Table 1.

EASE of learning word-processing program and using equipment:

```
/_____/_____/_____/_____/_____/_____/_____/_____/_____/
1     2     3     4     5     6     7     8     9     10
Very        Moderately        Moderately        Very
easy        easy              difficult         difficult
```

ACCESSIBILITY of equipment to students:

```
/_____/_____/_____/_____/_____/_____/_____/_____/_____/
1     2     3     4     5     6     7     8     9     10
Very        Moderately        Moderately        Little
accessible  accessible        inaccesible       use possible
```

APTITUDE of students for word processing:

```
/_____/_____/_____/_____/_____/_____/_____/_____/_____/
1     2     3     4     5     6     7     8     9     10
Very        Moderately        Moderately        Very
Adept       Comfortable       Fearful           Fearful
```
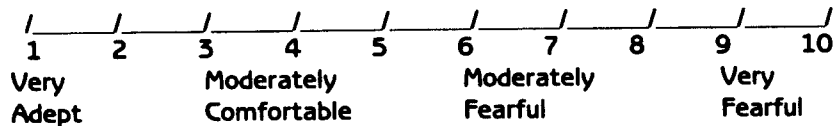
TABLE 1: Assessment of Ease, Accessibility, and Aptitude

Accessibility

When you gauge accessibility, you need to consider what facilities will be available to students and any restrictions on students' ability to avail themselves of these resources. That is, you should consider questions such as these:

■ Does the equipment belong to the university, to the students, or to other companies you or the students have made arrangements with (for example, if students have permission to use machinery at their job site)? How does this affect the amount of time available for student use?
■ How many micros or terminals are available for student use on campus?
■ At what times can students get access to these facilities? (Are evening and weekend hours available? If computers are available in the dorms, can a commuter student get into the dorms in the evening?)
■ How much lab time is scheduled for class use and how much is available on a drop-in basis? What have the waiting times and lines been like in the last year?

■ If off-campus computers are different from those available on campus, can students transfer textfiles through a telephone hook-up (that is, by using a modem)? If not, can you arrange assignments to accommodate a variety of computers?

■ Are your students generally living in the dorms? Do they have commitments to a ride-pool or family that restrict their time on campus? Is child care available on campus or are children allowed in the computer lab?

■ Is night-time use of the lab not only possible to arrange but also secure for students? Are students safe walking from the building to their cars at night?

■ If some individuals will have difficulty getting access to computers, can you help them schedule time or make exceptions about deadlines?

Now assess the accessibility of equipment to students by filling in the blank in the Table from 1 (very accessible) to 10 (little use possible).

NOTE: You may not know the answers to these questions before the class begins. I try to get answers early in the semester and readjust timetables as necessary.

Aptitude

Some students learn word processing faster than others. In general, the more people fear computers and the less they know about them, the more difficulty they will have learning to use the program and equipment. Also, on the basis of my observations and those of other teachers using word processing, it seems that students under 25 years of age learn more easily than older students, although attitude and experience make a difference here, too. In general, then, you can anticipate that your students (assuming they are generally younger than you) will learn more easily than you did. (Try not to hold this against them.) They will also be able to help you with advanced technical questions and, if appealed to successfully, will give extra attention and encouragement to the superfearful. The following questions may help you predict the aptitude of your students for word processing:

■ What is the background of your students with regard to computers? Do they generally come from high schools with computer literacy programs? Are they likely to know word processing from another college course? from their work experience? from availability at home?

■ Do students generally like helping each other or are they highly competitive? (That is, will they cooperate to teach everyone the basics or will the hotshots try to go as fast as they can?)

With these factors in mind, predict the aptitude of your students on the last scale in the Table from 1 (very adept) to 10 (very fearful).

Keep your three assessments in mind as you consider the strategies suggested in the next section.

Introducing Word Processing

You will probably have to introduce word processing to your students with some group activities. Even as you make up a plan for the group, try to keep the differences of individuals in mind. Try to let students enjoy their own way of learning. Some students want to learn more and more; they become impatient with the pace of average or slow learners. If you let them ask questions, they will scare everyone else, so try to have "work-ahead-on-your-own" materials for them. (If you are using the Activities in *Interactive Writing*, all you will have to do is prepare a list of commands that fill in the blanks left in the margins of the textbook.) Others pick up quickly and are happy to help others. Encourage them to do so.

If your students are working in teams at the computers, consider rearranging teams if you see a mismatch developing. Remember that people slow at learning word processing usually feel mortified. Try to give them special attention yourself, team them with a good helper, or encourage them to observe average learners. These people usually like to master a task at each stage. Patience and smiles really help at the beginning until they also master the essentials.

For group work, your three scales should help you assess your situation and see how to take or modify the guidelines given below. Modify or ignore this advice when your assessment of your particular situation warrants it.

1. *For students generally unfamiliar* with word processing, cover the most difficult maneuvers or introduce the hardest features in a class demonstration. The most difficult features of word processing tend to be:

- distinguishing the use of the space bar and return key from the cursor-moving keys
- distinguishing the text-producing keys from the function keys
- using multiple-stroke commands (like control key plus the L key)
- getting used to wraparound (so that users do not automatically hit the return key at the end of a line)

Then use do-it-yourself assignments with step-by-step directions.

- Have students work together (ideally in pairs) at a terminal at first—even if you have enough computers for everyone. People notice more and problem-solve better when they work in pairs or teams. This will also keep you (or the demonstrator) from going crazy, since students will experiment a bit more, especially as they alternate their time at the terminal.
  REBUTTAL: Ignore this advice if students are very computer-savvy, your word processing program is very simple to learn, and computers are widely available outside class.
- Have the most experienced (or least nervous) person go first. In that way, more nervous users can observe and can get help later from the first user (by then experienced).
- Demonstrate a bit before students start activities. Then act as a "trouble shooter," walking around the room. Try to have additional help at first (for example, another faculty member, a student monitor, or a student already adept at word processing).
- Schedule a back-up session within the next week in which students can practice what they've learned (but with someone else there to check with—even if it's another new learner). Ideally, schedule students for follow-up sessions when an experienced user is available to help (even if he or she is in a nearby room or available only through a phone call).
- Assure people early and often that they can't hurt the hardware unless they get vandalistic. Also, remind them that they will probably not "master" and understand the system at every step (initially) but should continue to experiment, especially if there is someone around willing to help.

2. *If your students are not very fearful,* try to teach the essentials at your first session (writing, inserting, deleting, saving, loading and, if you have enough time and equipment, also include printing). If you demonstrate printing, save it until the end.

3. *If your students are generally familiar* with computers and word processing already, you may want to have them start by transferring a short handwritten manuscript to the computer.

4. Whether you start with activities or transferring of previously written text, have students turn in a word-processed writing assignment by the end of *two weeks.* This will give them a sense of accomplishment. Even if your students are very fearful, taking more time will only encourage their fear. And taking more time will probably

discourage you if it makes you feel your class is becoming devoted to secretarial skills rather than composition. You may need to be more tolerant of format than you normally would be.

For the first paper, have students come in with a text already written out (unless they are already very comfortable with word processing). With a simple transfer of a draft to the word processor, students can get used to the way the program works without having to think very hard as they get used to the new technology. And inevitably, some revising goes on when this transfer occurs. A moderately long session with a prepared manuscript will get them used to all the basic commands and will transfer the lessons of the activities from their conscious command to their unconsciously correct fingertips.

Dr. Helen J. Schwartz teaches in the English Department at Oakland University in Rochester, Michigan, and is the author of numerous articles on using the computer to teach writing. Material for this article is adapted from the Instructor's Manual of her book *Interactive Writing*, recently published by Holt, Rinehart and Winston.

The Scholar's Software Library

Bryan Pfaffenberger

Program:	*Readability*
Available From:	Micro Power and Light Co. 12820 Hillcrest Rd. Suite 219 Dallas, TX 75230 (214) 239-6620
Requires:	IBM Personal Computer, IBM PC XT, IBM PCjr, or PC-compatible with 128K; text for analysis may be entered directly into the program or read from DOS-format text files
Price:	$49.95

"Sedulously eschew polysyllabic profundity," one is told, "and studiously eliminate pompous prolixity," all in the service of more readable writing. But you need not rely on mere human judgment to find out how well you're doing. Readability tests apply numerical measurements to written passages, looking at such factors as sentence length and the percentage of three-syllable words, and produce a *readability score*, often expressed in school grade levels. Readability, obviously, stems from more factors than the quantifiable ones measured by readability formulas. For that reason, some would dismiss the results of readability tests as meaningless. Yet, it's clear that readability tests measure *something*. For instance, the Flesch Reading Ease formula produces a readability index on a scale of 0 (unreadable) to 100 (very easy), with academic and scholarly writing falling in the 30 to 50 (difficult) range. One can sit down with a collection of texts, some more apparently readable than others, and get surprisingly consistent results. A passage from Veblen's wordy *Theory of the Leisure Class*, for instance, scores 48, while one from William James' more readable *Psychology* scores 60. A passage from Emerson's *American Scholar* scores 66. Popular magazines score even higher.

Until recently, the tedium of doing readability measurement by hand kept a lid on its use—to the relief of its opponents. But now you can test readability with a computer, and the future of such tests seems bright. It isn't difficult to write a program that measures sentence length and the number of syllables in a manuscript, performs the necessary calculations, and cranks out a score. With minimal effort, you can find out for yourself how your prose measures up to the marks set by Veblen and *People* magazine.

But which formula to use? The Flesch Reading Ease formula just described seems as exact as Newton's gravitational equations, but more than 50 competing readability formulas have been proposed. No one formula is universally accepted. Since a computer can handle the computations speedily and effortlessly, however, no obstacle exists to using several of them at once. This strategy promises—at least in principle—to yield a range of findings for a particular passage of text. One could, perhaps, get an overall picture from the several findings about the grade level for which the text is appropriate.

That is precisely the strategy employed by the program *Readability*, which uses *nine* formulas simultaneously to measure the readability of a test passage. *Readability's* screen output, reproduced in Figure 1, shows the results of a test run on a 307-word text sample.

CURRENT PASSAGE "B: example.txt"

307 Words	488.00 Syllables
46 3-Syllable Words	158.96 Syllables per 100 wds
12 Sentences	3.91 Sentences per 100 wds

16.23	Fog Reading Level
46.39	Flesch Reading Ease Score
11-12	Flesch Grade Level
7.02	Powers Reading Ease
7.39	Holmquist
14.67	ARI
13.14	Flesch-Kincaid
12.14	Coleman
11-12	Dale-Chall

Fig. 1: Readability indices for a 307-word passage

The results, as the figure shows, range all the way from the 7th grade to the second year of postgraduate study. (All but the Flesch Reading Ease Score are expressed in school grade levels.) The program also shows you, if you wish, a chart of these findings (which, unfortunately, you can't print).

Do these scores have any meaning? Perhaps the mean of the eight grade-level scores (11.7) or their median (12.14) suggests something. Yet the scores' standard deviation ranges over three grades. The overall variability of these scores inspires little confidence in their accuracy. The best one can say is that the passage resembles Veblen more than Emerson or that the typical reader of *People* magazine would simply pass over it, uncomprehending.

Despite the vague results, *Readability's* findings give writers yet another way to look critically at their work. That can't hurt, can it? Actually, it can. You can improve readability scores just by reducing the number of three syllable words and shortening sentences. But the result isn't necessarily more *readable*. A manuscript full of short sentences and simple words can still be unintelligible if the sentences and words are incoherently arranged. Sometimes a complex thought requires a complex sentence, and shortening it will destroy its meaning. Sometimes, too, there's no way around a three-syllable word.

A revision effort that single-mindedly strives for improved readability scores isn't likely to improve a text. When used with caution and concern for the text's coherence, however, a program such as *Readability* can play a fruitful role in revision. The above scores, for instance, inspire an abashed search for *needlessly* long words and sentences, the ones that could stand shortening without marring the text's coherence. If a computer program can stimulate that kind of constructive revision, it's a bargain at any price.

Contributing Editor **Bryan Pfaffenberger** is a writer and anthropologist who teaches in the Division of Humanities. School of Engineering & Applied Science, University of Virginia. He's the author of *The College Student's Personal Computer Handbook* and *Macintosh for College Students* (both published by Sybex Computer Books). His more recent *The Scholar's Personal Computing Handbook: A Practical Guide*, was published this fall by Little, Brown and Company; he is currently working on *Mastering Microsoft Word* for Dow Jones/Irwin. Comments and dialogue are welcome; contact Bryan at 218 Sunset Ave., Charlottesville, VA 22903.

A Cautious View of Computers in Teaching Writing

(Or, Computers Don't Teach Writing; People Do)

Susan Tyler Hitchcock

We have all come to believe, along with Marshall McLuhan, that the medium with which we communicate will influence the nature of the communication itself. That awareness informs the skepticism felt by some writing teachers as computers infiltrate the classroom scene. "Won't our students write differently on computers?" they ask. "Won't those machines tend to encourage a machine-like writing product? Won't they depersonalize the teaching of writing? Might they make the teacher (heaven forbid) obsolete?"

The use of computers as writing tools in the writing classroom will indeed influence both the students' products and the writing teacher's task, but perhaps not in the way that one would at first suppose. Coming to the computer as a seasoned writer, one revels in the ability to move large blocks of copy. But do young writers, those who never wielded scissors and tape, respond in the same way to the computer's potential? Writing teachers moving their classes onto word processors need to recognize how computers may lead students astray as well as help them with their writing.

The problems all begin with the screen image displayed as students write. On the one hand, the monitor's visual image helps young writers tremendously. No longer do they have to dicipher their own crabbed, start-and-stop handwriting. Instead, their thoughts and words instantly take a neat and consistent shape. Even insertions and deletions fall into place. When a draft is finished, it is as readable as it would be had it been typewritten.

But as the student writes, reads, and revises, he can only see 24 lines of text. Often that is not even a paragraph: a very small portion of the work as a whole. His words come out neat and uniform, but he can only see a hundred of them or so at a time: he sacrifices the big picture for the sake of a neat one.

A Matter of Vision

In a sense, any writer depends on his visual senses in two different ways during the process of writing. He perceives and responds to the shape of the letters and words on the page: the concrete visual image of his composition, so clearly enhanced as one writes on the computer. But he also must conceptualize and strive for a more abstract shape in the essay he is writing: the structure, as we writing teachers usually call it. We use a whole collection of metaphors to convey this important act of considering the whole essay visually, as if it were an edifice one could see. We encourage students to "construct" an argument. We say that one paragraph must "build" upon another. Even the word "outline" itself conveys the analogy between the writer as he plans and the artist as he sketches.

And yet the act of composing on the computer militates against this larger vision of the work, not only through the limited screen view but in other ways as well. All of the marvelous checking programs now coming available to students and teachers must by their very mature work at the level of minutiae: misspelled words, misplaced quotation marks, injudicious verb choices. Not only do checking programs only emphasize mistakes, as Richard Elias points out (1), quite in opposition to the more pedagogically sound practice of rewarding good writing choices. They also funnel the student's vision down to the level of smaller writing decisions to be made during composition. They encourage a student to dwell at the level of letters, punctuation marks, and words, rather than raising his sights to the level of sentences, paragraphs, and the essay as a whole.

Other teachers have noted such an effort in their students, once their composition classes began writing on word processors. Samilla S. Nickell at Brigham Young University reports that student essays are undergoing more drafts now that they are writing with the computer (2), and Eileen Schwartz of Purdue University at Calumet reports generally longer essays resulting from her students writing with the computer (3). But are more drafts and longer essays necessarily any better?

A Question of Quality

The question must be considered by looking at the quality, not the quantity, of writing being produced. Richard M. Collier of Mount Royal College, Calgary, Alberta, reports a disturbing study in which more changes did not mean better writing (4). Students were in fact making interlinear revisions, but their changes often took a turn for the worse: "he choked," for example, was rewritten "he felt a choking sensation." As any good writer or writing teacher knows, more is not better when we are talking about words adding up to strong expression. It is disturbing to think that computers, by encouraging student writers to think small, might in fact encourage wordiness rather than spare and direct discourse. Worse yet, it is unconscionable for us as teachers to let our students think that just because they have fussed around with punctuation and sent their text through a spelling checker that they have written an essay well.

In short, the presence of computers in the writing classroom is going to force us teachers of writing to work even harder to raise students' sights to the larger picture of things as they write. We must conscientiously compensate for the funneling effect that the computer will have on our students' consciousness. We can give over the smaller and more tedious tasks of writing to the computer programs themselves, thank goodness. We have every reason to expect that the number of misspelled words or subject-verb disagreements that we have to circle will decline. But as computers take over at the more mechanical level of writing instruction, we will have to strengthen our forces on the conceptual level, encouraging our students to make writing decisions with the bigger picture—the sense of the essay as a whole—in mind.

Word processing capabilities can help us in this battle, if only we learn to use them right. Although the screen may limit a student's view of his writing to a paragraph at a time, instant printing capabilities make it more easy than ever to use the paper copy over and over to demonstrate how all parts of an essay should work and fit together. Teachers should demand that students perform at least one revision on a printed paper copy of every essay that they write, because only with that paper does the entire essay unfold visually before them.

Outlining Techniques

The expandability of text written on a word processor invites another classroom technique designed to help students get the picture as they write. A student can easily sketch out a brief outline for an essay within the 24 lines available on the screen: the outline becomes an abbreviated vision of the essay as a whole. In that unified vision he can see the interrelationship of the parts; he can test and shape the structure of the essay as a whole. He may (as I am doing now, as I write this article) insert a paragraph after each outline heading, so that as he expands from a short outline to a longer essay he is assured that the shape he saw in brief remains intact in the longer product.

Outlining techniques can be used in reverse as well, to check for structure in an essay. Students can be quickly taught to create a new outline file into which they transfer, one from each paragraph, topic sentences. That file of topic sentences ought to read like a tight, logical argument. By drawing topic sentences out and making an outline of them, students can be encouraged to step back from the essay they are writing, to get a picture of it as a whole and to doublecheck its flow of ideas.

By using techniques such as these, teachers can begin to show learning writers that good writing demands a vision of the product as a whole. Word processing software now gives us both the vocabulary and the mechanical means to make big changes within a developing text. Sentences can be rearranged within a paragraph; paragraphs can be moved here and there throughout the essay; points originally made early can be tested as concluding points instead.

Those of us who came to computers already writing fluently see the benefits these machines can offer, because we have been performing such operations with arrows and boxes on manuscript copy, cutting and pasting for years. But we must not presume that since our students are coming into their own as writers in the computer age, they will automatically make the best use of these magnificent writing tools. Quite the contrary—given the influence of computers on the mind and vision, we will have to work even harder to teach our students to write.

References

(1) Richard Elias, "Micros, Minis, and Writing: A Critical Survey," *Research in Word Processing Newsletter*, Vol. 3, No. 3 (March 1985).

(2) Samilla S. Nickell, "Composition Students Experience Word Processing," *Computers and Composition*, Vol. 2, No. 1 (November 1984).

(3) Eileen Schwartz, personal communication ar Interface '84 (Humanities & Technology Association Conference), October 1984, Marietta, Georgia.

(4) Richard M. Collier, "The Word Processor and Revision Strategies," *College Composition and Communication*, Vol. 34, No. 2 (May 1983).

Susan Tyler Hitchcock is an Assistant Professor of Humanities in the School of Engineering & Applied Science at the University of Virginia in Charlottesville.

Bibliography Update

Bickel, Linda L. "Word Processing and the Integration of Reading and Writing Instruction." *Writing on-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 39-45.

Bridwell, Lillian and Ann Duin. "Looking In-Depth at Writers: Computers as Writing Medium and Research Tool." *Writing On-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 115-121.

Butler, Christopher. *Computers in Linguistics.* New York: Basil Blackwell, 1985.

Collins, James L. "A Writer Teacher's Guide to Computerese." *Writing On-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 11-18.

Daiute, Colette. *Writing & Computers.* Reading, MA: Addison-Wesley, 1985.

Dalgish, Gerard M. "Computer-Assisted ESL Research and Courseware Development." *Computers and Composition.* 2:4 (August 1985), pp. 45-62.

Day, Robert A. "The Electronic Manuscript." *How to Write and Publish a Scientific Paper.* Second edition. Philadelphia: ISI Press, 1983, pp. 102-104.

DeMarco, Tom. *Controlling Software Projects: Management, Measurement & Estimation.* New York: Yourdon Press, 1982.

Dickinson, John. "Lexical Electronic Filing: A Lexical, or Word-Oriented, Database Manager Organizes Document Files by Keywords—a Godsend When Searching Material from Public Databases or Maintaining Large-Scale Electronic Files." *PC: The Independent Guide to IBM Personal Computers.* 4:17 (August 20, 1985), pp. 137-144.

Edwards, Brian. "The Ubiquitous Wordprocessor." *Hardcopy.* 14:9 (September 1985), p.10.

Etchison, Craig. "Who's Making the Decisions—People or Machines?" *Computers and Composition.* 2:4 (August 1985), pp. 17-26.

Evans, John F. "Teaching Literature Using Word Processing." *Writing On-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 83-88.

Gerber, Carole Houze. "Adventure Game As Literature." *Online Today.* 4:8 (August 1985), p. 8.

Green, John O. "Computers, Kids and Writing: An Interview with Donald Graves." *Learning: The Magazine for Creative Teaching.* 13:1 (August 1984), p.12.

Hull, Glynda A. and William L. Smith. "Error Correction and Computing." *Writing On-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 89-101.

Lindemann, Shirlee and Jeanette Willert. "Word Processing in High School Writing Classes." *Writing On-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 47-53.

Lyman, Peter. "Introducing Computers to Humanists." *Scholarly Communication*. 1 (June 1985), pp. 6-8.

McAllister, Carole H. "The Effects of Word Processing on the Quality of Writing: Fact or Illusion?" *Computers and Composition*. 2:4 (August 1985), pp. 36-44.

Meilach, Dona Z. *Before You Buy Word Processing Software*. New York: Crown, 1984.

Mullins, Carolyn J. "Word-Processing Trends: Better Technology Means More Choices, Less Risks." *PC Week*. 2:28 (July 16, 1985), pp. 61-68.

O'Leary, Mick. "Gateway Software to the Information Stars: Database Search-Assistance Software Helps You Make Efficient Use of Your Valuable Time On-Line." *PC: The Independent Guide to IBM Personal Computers*. 4:17 (August 20, 1985), pp. 181-188.

O'Shea, John B. "Document-Oriented Vs. Page-Oriented Word Processors." *PC Week*. 2:28 (July 16, 1985), pp. 73-74.

Pearlman, Dara. "A Footnote to Word Processing: Sacrificing Footnote Management and Index Generation for On-Screen Editing Is No Longer Necessary. Some Word Processors Can Accommodate Such Complex Features with a What-You-See-Is-What-You-Get Approach." *PC: The Independent Guide to IBM Personal Computers*. 4:17 (August 20, 1985), pp. 177-180.

Pfaehler, Brenda. "Electronic Text: the University of Wisconsin Experience." *Technological Horizons in Education Journal*. 13:1 (August 1985), pp. 67-70.

Ross, Donald. "Realities of Computer Analysis of Compositions." *Writing On-Line: Using Computers in the Teaching of Writing*. eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 105-113.

Schwartz, Helen J. "The Confessions of Professor Strangelove: Or, An Apology for Literacy." *Computers and Composition*. 2:4 (August 1985), pp. 6-16.

Selfe, Cynthia L. "The Electronic Pen: Computers and the Composing Process." *Writing On-Line: Using Computers in the Teaching of Writing*. eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 55-66.

Selfe, Cynthia L. and Billie J. Wahlstrom. "Fighting in the Computer Revolution: A Field Report from the Walking Wounded." *Computers and Composition*. 2:4 (August 1985), pp. 63-68.

Software Digest. "Word Processing Programs with Spelling Checkers for IBM, AT&T, COMPAQ and other Compatible Personal Computers." *Software Digest Ratings Newsletter*. 2:1 (January 1985), pp. 1-76.

Sommers, Elizabeth A. "Integrating Composing and Computing." *Writing On-Line: Using Computers in the Teaching of Writing*. eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 3-10.

Sommers, Elizabeth A. and James L. Collins. "Microcomputers and Writing." *Computers and Composition*. 2:4 (August 1985), pp. 27-35.

Spitzer, Michael. "Selecting Word Processing Software." *Writing On-Line: Using Computers in the Teaching of Writing*. eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 29-36.

Stillman, Peter R. "A Writer (and Teacher of Writing) Confronts Word Processing." *Writing On-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 19-28.

Strickland, James. "Prewriting and Computing." *Writing On-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 67-74.

The, Lee. "Full-Feature Word Processors." *Personal Computing.* 9:9 (September 1985), pp. 163-173.

Wiswell, Phil. "Word Processing: The Latest Word: Eighteen Popular Word Processors Get a Thorough Workout as PC Magazine Puts Them through a Series of Rigorous Benchmarks." *PC: The Independent Guide to IBM Personal Computers.* 4:17 (August 20, 1985), pp. 110-134.

Womble, Gail G. "Revising and Computing." *Writing On-Line: Using Computers in the Teaching of Writing.* eds. James L. Collins and Elizabeth A. Sommers. Upper Montclair, NJ: Boynton/Cook, 1985, pp. 75-82.

Zintz, Walter. "Word Processing with Unix." *Hardcopy.* 14:9 (September 1985), pp. 59, 61, 64-71.

—BAM

American Society for Information Science

The 48th annual meeting of the American Society for Information Science (ASIS) will meet in Las Vegas on October 20-24, 1985. Headed by Ralph Dumain (NASA Scientific and Technical Information Facility, Baltimore, MD), the Special Interest Group for the Arts and Humanities (SIG/AH) is sponsoring the following presentations:

"Content Analysis" in the Humanities

■ Can There Be A Symbiosis Between Natural Language Meaning and Concept? Conceptual Analysis in the Humanities (Klaus M. Schmidt, Bowling Green State University)

■ Computational Literacy Thematic Analysis: The Possibility of a General Solution (Sally Yeates Sedelow, University of Kansas)

■ Semantics for Humanities Applications: Context and Significance of Semantic "Stores" (Walter A. Sedelow, University of Kansas)

Personal Databases, Online Organization of Text and the Future of Scholarly Work

■ Narration, Hierarchy and Autonomy: The Problem of Online Text Structure (T. R. Girill, Lawrence Livermore Laboratory)

■ Information Resource Management Potential Using New Microcomputer-Based Bibliographic and Textual Database Management Systems (Sidney Robbins, University of Georgia)

■ Microcomputer Software for the Scholar: Needs vs. Achievements (Bradford A. Morgan and James M. Schwartz, South Dakota School of Mines and Technology)

Other SIG groups have organized speaker clusters around such topics as the following: ■ Selecting Word Processing Software ■ Using the Microcomputer as a Learning and Searching Tool ■ Concepts and Principles of Online Documentation ■ Optical Disk and Electronic Publishing ■ Education and Training for Indexing ■ The State of the Art of Information Services to Education ■ Electronic Publishing in 1985

Contact the American Society for Information Science, 1010 Sixteenth Street NW, Washington, DC 20036.

SAMNA + : Integrated Word and Number Processing

Richard W. Slatta

Program:	*Samna +*
Available From:	Samna Corp. 2700 NE Expressway Suite C-700 Atlanta, GA 30345 Phone: 800-241-2065
Price:	$695.00
Requires:	IBM PC, XT or compatible; minimum 384K (DOS 2.xx); 448K DOS 3.xx); two disk drives; hard disk recommended

Most writers rely on a powerful, stand-alone word processing package, such as *WordStar*. But 16 and 32 bit chips make possible the integration of several useful functions into a single program. One highly successful blend is *Samna +* . Samna Corporation has upgraded its fine word processing program (*Samna Word III*) adding an easy to use spreadsheet, a powerful spelling checker, and a versatile data search capability called Word Manager.

Samna + offers virtually all of the advanced features that set apart today's state-of-the-art word processors. It relies heavily on function keys and thereby avoids the legion of multi-keystroke commands or successive menus that drive many programs. Many of its features are particularly attractive to professional writers. Among the notable conveniences are column moves, two-file windowing, footnoting, proportional printing, an undelete function, automatic outline numbering, mail merge, and a spelling checker. Technical writers will like its imbedded math calculator and integrated spreadsheet.

Program installation is made by following a clear menu-driven procedure. A wide range of printers and print features are supported. The documentation even explains specifications for a large number of popular printers. Because of the program's spooler function, printing occurs in the background, and the keyboard is freed up to continue editing other documents. However, printing does slow down program response.

To get a first look at the program, a new user boots a tutorial diskette with 2 levels of lessons. Even people who have never used a computer will be able to follow the simple, clear examples. Two drawbacks: 1) The session hangs up during the printing lesson if no printer is attached. 2) Lessons cover only word processing—not the spreadsheet and word manager modules.

Samna + includes most of the necessary components for sophisticated professional writing, except for graphics. Columnal data, imported from the spreadsheet, can be moved about with ease. It automatically places footnotes

(up to 300 per file) at the bottom of the page or removes them to a separate file. Windowing splits the screen horizontally so that two files may be viewed simultaneously.

While it does not include an ''idea processor'' (see *RWPN*, Jan. 1985, pp. 4-6), *Samna +* includes two features that help with the organization of information prior to actual composition. First, when the program is booted, a blank ''scratchpad'' appears that will hold up to 50 lines. Much like a trusty legal pad, it offers a ready place to jot quick preliminary notes. If the scratchpad is filled, the program requests a filename to retain the information.

Another feature is much more powerful and important to organizing one's writing—it automatically numbers an outline. Writers can develop outlines up to six levels deep in one of three different styles. This outlining is not nearly as powerful as the ''frames'' of Ashton-Tate's *Framework* (see *RWPN*, Apr, 1985, pp. 7-9), but it is still very useful. Longer articles and book chapters will benefit from having an easily constructed and modified outline at hand.
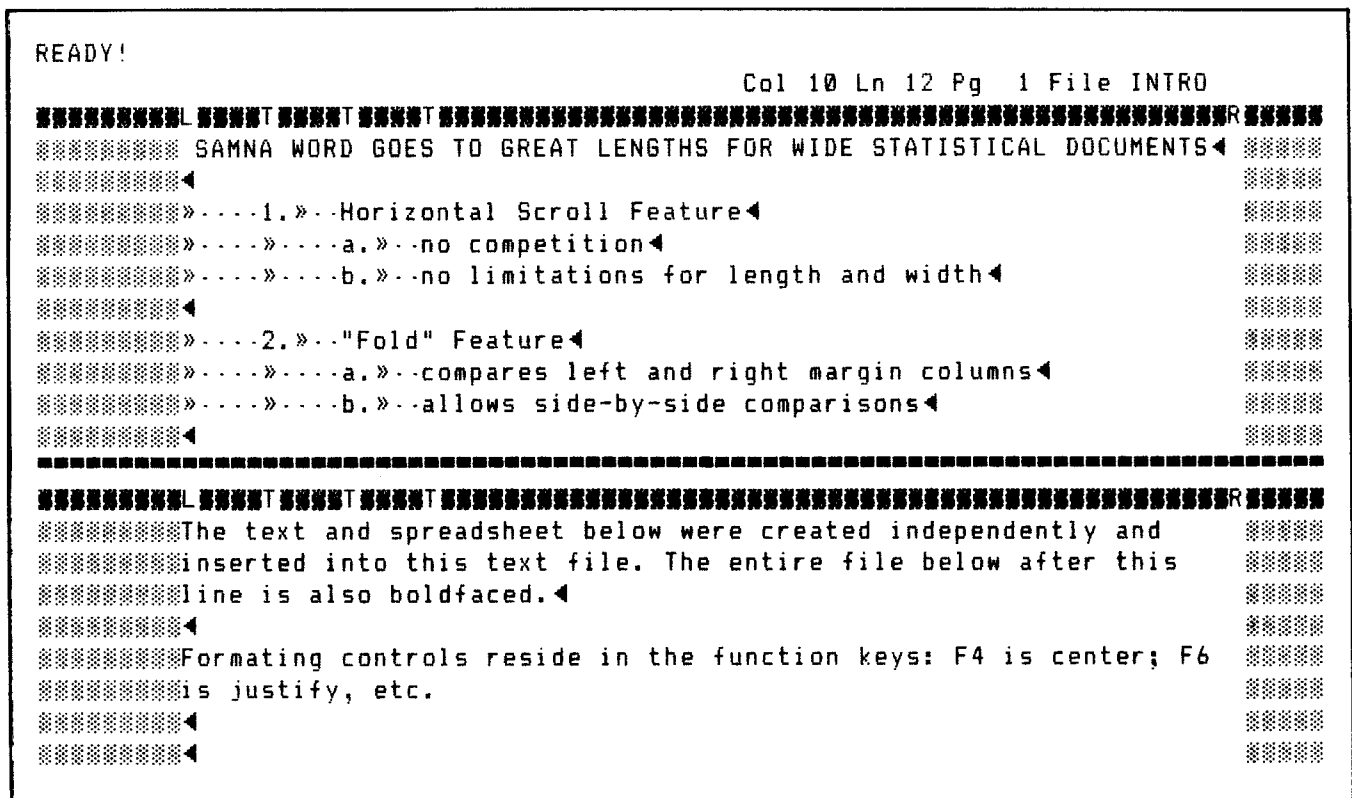
```
READY!
                                  Col 10 Ln 12 Pg  1 File INTRO
██████████L ████T ████T ████T ███████████████████████████████████████████████████R █████
░░░░░░░░░ SAMNA WORD GOES TO GREAT LENGTHS FOR WIDE STATISTICAL DOCUMENTS◄ ░░░░░
░░░░░░░░░░◄                                                                ░░░░░░
░░░░░░░░░»····1.»··Horizontal Scroll Feature◄                              ░░░░░░
░░░░░░░░░»····»····a.»··no competition◄                                    ░░░░░░
░░░░░░░░░»····»····b.»··no limitations for length and width◄               ░░░░░░
░░░░░░░░░░◄                                                                ░░░░░░
░░░░░░░░░»····2.»··"Fold" Feature◄                                         ░░░░░░
░░░░░░░░░»····»····a.»··compares left and right margin columns◄            ░░░░░░
░░░░░░░░░»····»····b.»··allows side-by-side comparisons◄                   ░░░░░░
░░░░░░░░░░◄                                                                ░░░░░◄
 ██████████████████████████████████████████████████████████████████████████████
██████████L ████T ████T ████T ███████████████████████████████████████████████████R █████
░░░░░░░░░The text and spreadsheet below were created independently and     ░░░░░
░░░░░░░░░inserted into this text file. The entire file below after this    ░░░░░
░░░░░░░░░line is also boldfaced.◄                                          ░░░░░
░░░░░░░░░░◄                                                                ░░░░░
░░░░░░░░░Formating controls reside in the function keys: F4 is center; F6  ░░░░░
░░░░░░░░░is justify, etc.                                                  ░░░░░
░░░░░░░░░░◄                                                                ░░░░░
░░░░░░░░░░◄                                                                ░░░░░
```

Fig. 1: *Samna +* split screen with two text files displayed at once.

Also of interest to academic writers, the program will index documents and create a table of contents. The index-creation process is a bit cumbersome and could be streamlined. The drawback is that one must enter a list of words to be indexed into a separate file. Other indexing systems require only that one mark words in a document without having to rekey them all. Once entered, the terms are sorted alphabetically and complied into an index. This is a rather slow process and it disables the keyboard until the index is completed.

Creating tables of contents is much simpler. Documents are marked to create a table of contents up to three levels deep. When a phrase appears for inclusion in the table of contents, one simply presses the MARK (BREAK) key, enters T (for table of contents), and a number from 1 to 3 to indicate the table of level.

For veterans of the *WordStar* multi-keystroke wars, *Samna +* is refreshingly efficient. No lengthy cheat-sheets of commands is needed. Most functions are carried out with only one or two keys. The program redefines all function keys as well as the numerical keypad as special Samna function keys. The arrangement of the keys resembles that of the Lanier dedicated word processor.

Some of the reassignments are a bit confusing. For example, the ESCAPE key becomes HELP (up to 3 different levels). Writers accustomed to escaping from an entered command with the ESCAPE key initially will find themselves getting lots of unwanted help. (The escape function is reassigned to the ALT and PRT SCN keys).

This redefinition disables the PRT SCN (print screen) function so that screen dumps cannot be made in the usual way. But the program provides an easy alternative for printing out all or part of a screen.

Users are not limited to only pre-programmed functions. The top row of numerical keys may be programmed as user-defined function keys.

Samna supplies a number of keytops, templates and reference cards to teach the new key functions. These aids (along with the ESCAPE/help key) guide the new user to correct command locations. Once learned, the key conbinations are very fast and convenient for editing. Using the redefined numerical keypad keys, one can quickly select a command and then act on a word, sentence, paragraph, or page with a single keystroke. The only problem is the end of a sentence is defined as a period followed by two spaces. One must either space twice between sentences or not use the sentence definition mode.

The screen is filled with useful status information. The text entry area is bounded above by help, status, and format lines. Each side of the work area is shaded to indicate left and right margin widths, although this shading can be removed. Formatting controls, such as justification, margins, page length, and other options are easily changed through menu prompts.

```
HERE IS YOUR DIRECTORY LIST
 - YOU CAN DISPLAY, PRINT, OR DO FILE FUNCTIONS ---- PUT CURSOR ON FILE NAME,
                                                  - TOUCH SAVE & DISPLAY,
                                                    PRINT, OR DO.
 - TO MOVE THE CURSOR TO SEE MORE FILES --- USE UP & DOWN ARROWS.
 - TO PUT YOUR CURSOR ON A FILE NAME ------ USE RIGHT & LEFT ARROWS.
 - TO PRINT THE DIRECTORY LIST ------------ TOUCH PRINT - PAGE - RETURN.
 - TO CANCEL & RETURN TO DOCUMENT --------- TOUCH CANCEL.
                                            Col  6 Ln 13 Pg  1 File d
```

SAMNA.OVX	5-21-85	2:00p	INTRO	5-25-85	9:41a
FIG1	5-21-85	2:02p	FIG2.BAK	5-21-85	2:11p
INTRO2.DOC	5-25-85	9:53a	INTRO3.DOC	5-21-85	2:22p
LEGAL	5-06-85	10:52a	WORDBASE.I	5-21-85	3:01p
WP	12-14-84	2:50p	FINANCE	5-06-85	10:46a
LETTER	5-25-85	9:49a	FORECAST.BUD	12-14-84	2:55p

```
              Samna Plus Integrated Word Processing Program

                 A quick review by Richard W. Slatta
```

Fig. 2: *Samna +* split screen with "help," file directory & text displayed.

With *Samna +*, "What you see is (almost) what you get." But exactly how printing enhancements appear depends on the graphics capability of the hardware in use. Writers who use foreign languages or those with considerable foreign correspondence can easily redefine the keyboard. In addition, for scientific writing, special math or Greek characters are available. The standard American English keyboard can be redefined for a number of other languages, including French-Canadian bilingual, Spanish, German, Italian, and others. As long as your printer supports the characters generated by the alternate keyboards, a wide range of languages and symbols may be printed.

While it lacks a full-fledged database manager, *Samna +* will automatically merge name and address information to print labels or personalized form letters. Mailing lists may also be sorted by ZIP code, name, and other criteria. *Samna +* permits importation of data from a number of leading database programs.

In lieu of a database component, *Samna +* offers a "Word Manager." With it, a user can perform simple or complex searches of all or some files. This means that notes or citations stored as text files can be searched for keywords, authors, or the like.

For writers who also need access to numerical calculation, *Samna +* provides two alternatives. First, a five-function math calculator is accessible from the word processing mode. However, for more sophisticated number-handling, one calls up *Samna's* spreadsheet mode. It will accommodate spreadsheets of up to 250 columns, totalling 6,400 cells.

The facility may not be as fast or powerful as stand-alone spreadsheets, but *Samna +* can link together cells in different spreadsheets. This capability makes possible larger computations that exceed the 6,400 cell limit on any one spreadsheet.

For both text and spreadsheets, two files may be displayed simultaneously with windows. Formatting commands, including double underlining, are also available in the spreadsheet mode, so output can be of presentation quality without further editing.

Perhaps the most inviting feature of *Samna's* spreadsheet is its ability to generate "floating cells." These numerical cells are coded into a text file. Complex operations may be performed on them in a "parent" spreadsheet, and their values are automatically updated in the linked text file. Writers who must insert changing spreadsheet data into other documents will grow to love these floating cells.

PROOF, the spelling checker, is based on the *Merriam-Webster Dictionary*. Beyond highlighting suspect words in context, it offers on-screen alternatives to the misspelled word. If one corrects the spelling from the keyboard, PROOF rechecks the new entry. The separate dictionary diskette must be inserted to use PROOF, unless the program has been installed on a hard disk.

Samna + provides for limited compatibility with the files of other programs. It can read or generate standard ASCII format with the TRANSLATE command. But it offers no direct conversion facility to read *WordStar* or any other program-specific files.

Documentation consists of two ring-bound reference volumns and a short introductory pamphlet. Instructions on command usage are listed briefly in boxes. Longer explanation follow under "help" sections. The text is reasonably clear, but the manuals suffer from very poor illustrations. While profuse, most of the screen photos and pictures are too small to be legible.

Even though *Samna +* does not include every essential microcomputing function, its capabilities are sufficient for most technical and professional writers. Anyone with demanding word processing needs should take a look at the program. Technical writing teachers might well find it an excellent classroom ally. Students can learn the program quickly, access special symbols with ease, and incorporate spreadsheet output into their technical reports (see *RWPN*, Apr. 1985, pp. 1-5, on micros and the teaching of writing). Its versatile handling of text and numbers, and its power, ease of use, and efficiency make it a very attractive competitor among high end word processing programs.

Richard W. Slatta is a writer and Associate Professor of History at North Carolina State University in Raleigh. He is author of *Gauchos and the Vanishing Frontier* (University of Nebraska Press, 1983), which won the Hubert Herring Book Prize for 1984. He has written on microcomputer topics for a number of publicatons, including *PC, Family Computing, Business Software, Electronic Education, Electronic Learning, Link-Up, Social Science Microcomputer Review*, and *The History Teacher*.

Manuscript Submissions Welcome

The *Newsletter* welcomes article submissions that pertain to word-processing, text-analysis, and research applications in professional writing situations. Also, hardware and software reviews are accepted, but please contact Dr. Jim Schwartz, Hardware/Software Review Editor, before submitting them (call Jim at 605-394-1246). Manuscripts either may be submitted as hard copy or on 5¼" diskettes using *WordStar* (3.xx), *Leading Edge Word Processor*, or standard ASCII code. If submitting disks, please make sure they are formatted either in MS-DOS, PC-DOS, or a popular CP/M format (Kaypro, Zenith, etc.) The Editors reserve the right to edit manuscripts, if necessary. If you want your manuscript or diskette returned, please send enough postage to cover the return along with a self-addressed envelope. Address all correspondence to the Editors, *Research in Word Processing Newsletter*, South Dakota School of Mines and Technology, 501 E. St. Joseph, Rapid City, SD 57701-3995. The Editors may also be reached on *CompuServe* (70177,1154) and the *Source* (AAH500)