

ELECTRIFYING THE COMPOSING PROCESS: ELECTRONIC WORKSPACES AND THE TEACHING OF WRITING

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Just ask any English teacher. Teaching written composition with a process approach is not easy. Taking responsibility for the written products of 120 to 150 students is a difficult task, but taking responsibility for the writing processes that lead up to these products is an almost impossible one.

English teachers we have spoken to have contributed the following concerns regarding their ability to implement a process approach to the teaching of writing:

It's downright impossible for me to give children the kind of individual attention they need to elaborate and refine their topics prior to writing.

My kids just don't want to deal with their compositions anymore once they're finished.

When I try to get my students to revise their compositions all they do is make some superficial changes! A few spelling errors get changed, and they make a neater "good" copy. That's about it.

I'd really like to publish my students' writing for others

to read, but it's just too much work for me to do more than one or two times a year.

With the number of students I have, it's impossible for me to give them the help they need at each step of the process. I still usually end up dealing with just the final product.

The writing process approach sounds like a good idea — it's just impractical. To really make it work requires too much one-on-one instruction.

The proliferation of microcomputers in the classroom and in the home has brought with it the potential for English teachers to use the powerful electronic learning environments inherent in this new medium to teach composition using the process approach. In so doing there is the added potential of avoiding the pitfalls implicit in the teacher statements above.

Microcomputers allow English teachers to introduce their students to a much more powerful extension of human composing than was ever provided by pencil, paper, dictaphone, or typewriter. With word processing software and a microcomputer, student writers are empowered to transcend the limitations of the paper page. Such software electronically facilitates their ability to compose, articulate, and revise while records of each stage of the process may be preserved for subsequent retrieval and analysis. In so doing they develop increasingly more effective heuristics for future written composition. When student writers face the blinking cursor and blank frame provided by a word processor, they face the most powerful workspace for writing since the advent of written expression. An infinite set of creative possibilities exists within this electronic workspace; the writer is challenged to compose, to edit, to play with ideas, words, order, and form, and most of all to write well.

A microcomputer with word processing capabilities facilitates and enriches prewriting experiences by encouraging electronic rehearsals for writing (Murray). As the ultimate drafting tool, the computer's electronic workspace allows for fluent transcription of ideas with a minimum of frustration. It equips the writer with a powerful new capacity for meaningful revision of content and organization and for greater editing accuracy. Additional computer capabilities such as printing,

disk storage, electronic mailing, and networking inherently clarify for the student writer the intent of communication, the rhetorical concerns of audience and voice, and the importance of manuscript format in ways that are simply not possible in the typical, non-electrified language arts classroom. Although writers do not engage in the process of writing in a linear fashion, it is, nevertheless useful to sequentially examine the effects of this new medium on the various stages of written composition — prewriting, drafting, revision, proof-reading, and publishing (Flower and Hayes; Petrosky and Bro-zick).

Electronic Prewriting

The prewriting stage of the composing process is the stage at which teacher intervention can most profoundly affect the quality of the subsequent composing stages and future composing experiences and products. Broadly defined, prewriting is everything that transpires from the moment students receive an assignment to the moment they write the first letter of the first word of the first draft of their paper (Long). A time of infinite promise, prewriting should be the occasion for inventing, incubating, elaborating, and focusing ideas which lead the writer to a higher level of readiness for the composition that will ultimately be created.

With a word processor student writers can preserve records of their brainstorming; list, sequence, and cluster these resulting ideas; and ultimately arrive at a tentative organizational scheme. Through hard copy printouts, exchange of disks, electronic mailing, or simply gathering about TV monitors, students can obtain feedback from various sources. Peers, teachers, or other audiences can react to ideas and request additional information or suggest direction.

Computer software is emerging which complements prewriting capabilities already present in word processing software and extends the writing instructor's capacity for dialogue with individual students. Such software is designed to engage students in motivational questioning sequences that encourage elaboration and organization of ideas. Other software has been created which assumes responsibility for form and liberates students to concentrate on content. For example, the software might arrange a student-supplied list of images into a haiku or cinquain format, or it might structure a story by providing the beginning and ending allowing stu-

dents to fill in the middle. Students then gradually assume responsibility for form as their confidence and skill increases.

Electronic Drafting

The goal of the drafting stage of the composing process is to simply get words on paper with minimal frustration, that is, to produce a rough draft without undue attention to mechanics or correctness. At this stage the writer further develops structures and relationships among ideas formulated during prewriting. New ideas and relationships are also discovered during the act of transcription itself.

The word processor can be a very effective drafting tool in that it provides an electronic workspace which acts as scratchpad or scrap paper without the inhibiting concerns of overall neatness and handwriting legibility. The rough draft composed upon the word processor with its greater legibility is more conducive to careful appraisal and reappraisal than the typical draft with its smudges, cross-outs, marginal notes, etc. Furthermore, student writers seem to find something intrinsically motivating about seeing their own writing in printed form — even during the formative stages.

Keyboard practice and instruction need to receive the same sort of attention in English classrooms that is currently directed toward handwriting. Students proficient at the keyboard will be able to engage in more fluent drafting than those who rely upon laboriously handwritten rough drafts. To facilitate students' proficiency with the drafting stage of the composing process, English teachers should begin to require regular keyboard practice with or without game-like software designed to provide drill and practice in keyboard skills.

With even modest keyboard mastery, students can acquire greater drafting fluency and skill through experiences on their electronic workspaces such as: free or stream-of-consciousness writing; journal, diary, or memory writing; copying from texts; and writing from the dictation of peers, teachers, or self-recorded tapes. For those who like to write from some sort of outline, drafting can take place within the lines of the outline (or list of writing ideas), and as the drafting is completed the outline can be deleted (Daiute & Taylor). Story starters and open-ended stories are also excellent ways to motivate students to begin effective drafting.

Electronic Revision

Revision is often preached but rarely practiced. English teachers urge their students to reexamine content and organization; yet, student writers rarely do more than cosmetic proofreading, correction of mechanical errors, or recopying for neater presentation. More often than not, when they are required to turn in their rough draft along with their good copy, the "rough drafts" are created after the paper is complete and embellished with cross-outs, various arrows, and dramatically effective but meaningless marginal "notes." Too often students fail to involve themselves in the mentally and physically tiring process of re-seeing content, re-thinking order, and rearranging text. They do not revise thoroughly because the adding, deleting, moving, and substituting which constitute revision demand more rewriting than they are willing to do.

A greater number of significant changes and a more facile mode of making these changes is possible through the use of computer technology (Daiute & Taylor). Word processing software enables students to play with the arrangement of words, phrases, and clauses within sentences; sentences within paragraphs; and paragraphs within the total composition. Any word processing program will greatly simplify the insertion, deletion, and rearrangement of words, sentences, and paragraphs. Freed from the tedium and distraction of recopying entire texts by hand, students can concentrate on meaningful revision of content, sense, order, form, and style.

Revision skills can be strengthened through teacher-made or student-made exercises consisting of passages in which words, sentences, or paragraphs have been scrambled; the students must then reassemble the passages in the originally intended order (or in any order which makes equally good sense). It is also extremely valuable for them to engage in professionally-made or teacher-made sentence combining exercises aided by word processing software.

Revision skills, however, are best practiced within the context of actual writing. At any point during drafting and certainly upon completion of a draft, students should be encouraged to engage in revision. Using hard copy printouts or the monitor itself, and possibly aided by feedback from teachers and peers, they should evaluate or reevaluate what they have written. They should do so with the intent of making changes that will often dramatically alter (and hopefully improve) their previous draft. Because of the physical ease with which these

changes can be made with a word processor, most students will soon be increasing the quantity and quality of such changes.

Most professional writers confess that only through endlessly revising their texts are they able to create satisfactory final products. The electronic workspaces created by word processing software are changing the way students write. For the first time in the history of writing instruction, it is feasible and indeed likely that student writers will engage in the sort of extensive revision heretofore only practiced by professional writers.

Electronic Proofreading

For proofreading to be most effectively done and understood, it must be considered as a stage separate from revision and occurring just prior to publishing. By keeping proofreading separate from revision, students are more likely to spend more time with each. The proofreading stage's proximity to the publishing stage emphasizes the importance of mechanical correctness to fulfill the intent of written composition, that being communication with an audience.

Aided by hard copy printouts or the monitor image, peer editing groups can be formed to help students analyze their written compositions for mechanical correctness and appropriateness of form and style. Errors of any kind are so easy to correct electronically that students who used to be wary of making corrections because of the necessity of rewriting are now more likely to keep proofreading until a text is virtually error free. This is especially true if they realize their final product will be shared in some way with an audience larger than their English teacher. It is worth noting that most students find errors easier to spot when the text is in printed form, and this also may be a factor in their increased willingness to spend time in careful proofreading.

An excellent way to give students further practice in editing with a word processor, without the emotional overtones often present when editing their own work, is through the use of unpunctuated texts. The text, from whatever source, can be entered on the electronic workspace and students, working individually or in small groups, can supply correct punctuation.

A new type of software is emerging that can complement the proofreading and editing capabilities of students and

teachers. This software, already developed or in the process of being developed, makes it possible for students to automatically and electronically check their texts for problems such as misspelled words, punctuation errors, repetition of words, wordy or inappropriate phrases, overuse of the passive voice, etc. (Suttles). Before long it will be commonplace for students to use software as automated dictionary, thesaurus, grammar reference, and style manual. In short, student writers may soon have unlimited access to a highly skilled, endlessly patient, impartial professional editor — albeit an electronic editor.

Electronic Publishing

The computer and printer make the student writers of today keepers of their own personal publishing houses (Skellings). The publishing stage of the composing process is an important, but often neglected stage. Instruction in the publishing stage should result in students' increased understanding of the communicative intent of written composition, the importance of rhetorical concerns, and their power to affect audience responses. Too often the logistics of the publishing stage are prohibitive; student writers' major and often only source of feedback remains the English teacher.

With a computer and a printer or electronic mailing, students may share their writing with a variety of audiences including peers, other classes, parents, community members, etc. More than ever they will realize their potential for expression in a multiplicity of voices (Coles). School newspapers, class newsletters, school literary magazines, cookbooks, catalogues, class anthologies of student prose and poetry, all may be readily produced to precise specifications. With its greater applicability, storage capacity, and ease of retrieval, the floppy disk may one day replace the student writing notebook or folder as the dominant means of recording and preserving student compositions.

Electronic Evaluation

Evaluation of the composing process may be both summative and formative. It involves both a response by an audience to the written product and feedback received at all or any stages of the writing process. The audience may be the student writer, the English teacher, peers, or other adults. Evalu-