

# USING A LOCAL AREA NETWORK TO TEACH COMPUTER REVISION SKILLS

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Computer writing can be a delight for skilled writers because it is so easy to tinker with words, insert new sections, cut out unwanted chunks, and rearrange parts. However, such manipulation of text, even on a local level, requires a wide range of abilities, including an awareness that it is possible and desirable to change non-mechanical problems in a text, some skill at detecting areas to be revised, strategies for revising, and knowledge of how to operate the computer commands to make any desired changes. Collaborative revision activities using computers with shared screen displays can help student writers to explore the possibilities of revising as they learn to manipulate their texts on computers.

Because of practical considerations, including limited class time and the difficulty of remembering text that is not on the screen, collaborative revision sessions generally focus on a screenload of text at a time, not an entire paper. While such exercises in local problem detection and repair will not cure novice writers' overall need to learn to "see" the text as a coherent, purposeful whole (Flower et al. 32), students do begin to understand that text is fluid, not fixed, and can be changed to suit the writer's will. Students also learn that computers make such changes easier which may, as Richard Gebhardt suggests, "help writers *want* to make changes" (86). Of course, any revision activity that focuses on local detection and repair must be part of an overall coherent revision strategy that includes printing out hardcopy drafts for analysis, reading for meaning, and responding to peer and teacher feedback.

At Northern Virginia Community College we are using a combination of a video switching device and a local area network to teach computer revision skills. This combination is part of the Electronic Networks For Interaction (ENFI) approach to local area computer networking which was developed at Gallaudet University to teach deaf students writing by means of writing. The video switching system (CT System 3) consists of a switch box, a second monitor at the teacher's workstation, and video cables connecting the teacher's workstation to all the computers in the network. There is no additional software involved; the video simply broadcasts whatever is on one screen to all other screens on the network. Although the video switch adds several thousand dollars to the cost of a local area network, it overcomes one of the major lacks of current network technology—the workstations on a typical network cannot share a single text while changes are being made to it.

The video switch allows a student text to be transmitted from one workstation to all the screens on the network simultaneously. The students can then collaborate to identify problems in the text and discuss possible revisions. Initially, this process needs to be facilitated by the teacher who types in text changes decided on by group discussion while the students observe the actual changes occurring on their own screens. Concurrently, the teacher can explain the computer commands she is using to key in the revisions, thus teaching the students how to operate the computer revision capabilities as they work on changing writing.

The lesson described in this paper could be simulated using a single microcomputer and a screen projector, such as a Datashow, so that the students could watch the projected text and discuss the changes being made to it while the teacher told them what computer commands she was using to change the text. The computer network does provide one distinct advantage: it makes it possible for all the students to watch the text at their own screens as they discuss possible changes; this condition most closely resembles their actual experience writing on computers.

To illustrate the potential of an ENFI type system for group revision instruction, we will focus on an actual lesson introducing a third quarter Freshman Composition class at Northern Virginia Community College to techniques of revising on computers. The students ranged in writing skills from weak to fairly competent.

For practical time reasons, since this was an introductory lesson designed to teach students how to use the computer for revision,

the teacher selected sections of the texts for the class to examine, in effect identifying problem areas that seemed to her suitable for discussing revision. She also briefly discussed the idea of identifying problems in a text in order to change them and showed the students a few simple techniques for working on a draft, such as separating the different topics into paragraphs by using the return key. The rest of the process was almost entirely in the students' control. They identified the specific issues that they wanted to work on within a section and revised each section in ways that satisfied them.

This local freedom with a screenload of text allowed students to practice detecting textual problems, to discuss ways of changing the writing in order to negotiate agreed-upon revisions, and to learn the computer commands needed to do revision. The teacher was able to facilitate the process by operating the computer and by explaining the commands. A more advanced lesson might let the students totally control the entire process, from operating the computer to selecting the draft text, reading it in hardcopy, identifying areas to revise and then putting it on everyone's screen to discuss revisions. This could be done in small groups or with the entire class.

First the students read a short story from their text, "I Stand Here Ironing" by Tillie Olsen; they then rewrote the story from a new character's point of view, working either singly or in small groups. They composed their drafts on word processors and brought the drafts to class on floppy disks. The teacher began the formal revision activities by inserting one of the student disks into the disk drive at the teacher's station. The video switching device broadcast the student text from the teacher's screen to all the other screens on the network so all the students could see the same text. Then the class discussed how to look for aspects to revise, depending on the particular needs of each text. The class suggested, debated, and decided on the actual changes to be keyed in at the teacher's station.

As each change was entered, the teacher explained which control keys were being used. Computer revision requires very few commands; insert, delete, block move and reform will take care of almost all student revision needs. Insert is usually done by simply moving the cursor to where new text is wanted and typing it in. Delete can be done with one key, often labeled "del." Block move is the most complex command, since it requires mark-

ing the beginning and ending of the section to be moved and then deleting the block from its original position and inserting it in a new position. Some word processing programs automatically reform jagged paragraphs, while others require a command, usually a single key.

The lesson began with Jane's draft, "Emily," written in one continuous piece with no transitions. First the class was asked to identify the different topics in the paper. As they did this, the teacher separated the topic sections into paragraphs, while explaining how she was putting the cursor under the first letter of each new topic and pressing the return key twice.

Then the class looked at the first paragraph of "Emily" where the narrator, Emily, introduces herself.

#### Emily, Version 1

[1] My name is Emily I have pale blue eyes, straight ash brown hair and a very weekly frame only weighing sixty five pounds. [2] In my free time I would play kingdom with my spoiled sister susan who always got her way. [3] Being the oldest out of five children and growing up without a father figure and my mother never being around I always felt out of place.

The class started with a problem in logical consistency: Emily only weighed sixty five pounds in Version 1, Sentence 1. How old could Emily be if she weighed so little? Jane's first response was that Emily was just very light, but several other students felt that Emily had to weigh more than sixty five pounds since she was narrating her own life's story retrospectively up through high school and, therefore, had to be at least in high school, if not older, when she told her story. After some argument with the other students, Jane agreed that Emily would need to weigh more. Jane then negotiated with the class over just how much Emily did weigh, and after a good deal of discussion they settled on ninety five pounds [V2, S1].

Next, the students considered Jane's first paragraph as an introduction to the whole text. One student commented that Emily never explained why she was telling her story. The class agreed and decided to motivate Emily by having her explain that since she is now in high school, she has started to try and understand her childhood. After the class agreed on the need for this infor-

mation, one student dictated the sentence which the teacher keyed in [V2, S4].

Next, the class looked at the sentence where Emily plays kingdom with Susan [V1, S2]. Although Emily did play kingdom, it was not the sort of central event that she would include in an introduction to her whole life; it was just one kind of incident. The class suggested changing it into a sentence about Emily's childhood being centered around "spoiled sister susan" [V2, S3]. Again, once the content of the new sentence was agreed on, a student spoke it aloud and the teacher keyed it in.

One student suggested reordering sentences two and three, moving the last sentence in version one [V1, S3] to the position of second sentence in version two [V2, S2]. He commented that Emily's feeling of being out of place was more important to the story than her relationship to her sister Susan. The students also modified the sentence about feeling out of place [V1, S3] to eliminate mentioning the number of children in the family on the grounds that it was not necessary information.

The end result of these revisions was an introductory paragraph that was longer, better reasoned, and more clearly motivated than the original.

#### Emily, Version 2

[1] My name is Emily I have pale blue eyes, straight ash brown hair and a very weekly frame only weighing ninety-five pounds. [2] Being the oldest child and growing up without a father figure and my mother never being around I always felt out of place. [3] My childhood was centered around my spoiled sister susan who always got her way. [4] Now that I'm fourteen and in highschool, I've been thinking about my past life and what it means to me now.

The students as a group were able to focus on revising for content without getting involved in proofreading. They had agreed at the start of the session to ignore errors for the present and work on proofreading another day. This helped them to focus on content and structure instead of surface mechanics. They did not comment on Emily's "weekly frame" or the initial run-on sentence [V1, S1], but made changes that improved the development, ordering and motivation of the paragraph, all difficult kinds of revisions for unskilled writers. They were actively involved dictating changes

to the text and able to watch the screen change as the revisions they suggested were entered.

The next paper we looked at was written by three students who had made their character, "Studs," tell his own story. When the authors were asked what problems they saw in the text, one said there were too many "I's." Another student, Marilyn, suggested several rephrasings to eliminate "I's," and I entered her suggestions with the approval of the story's authors and the rest of the class.

#### Studs, Version 1

[1] I did love my family very much but I thought then that because of my family I would never have the chance to amount to anything. [2] I went to the docks looking for a job when I met up with Captain Smith who said he needed a man just like me to help on his ship. [3] I knew that this was my chance to live my dream and to travel all around the world.

Marilyn began by suggesting that we simply remove an optional "I" from the first sentence. Next, she changed "when I" to "and," in the second sentence, substituting a coordinator for a subordinator and eliminating a second "I." Subordination was also her target in the third sentence. By eliminating the initial independent clause and changing the following dependent clause to an independent one, she was able to get rid of still another "I." It is interesting that she eliminated repetition of "I" in two out of three sentences by changing or eliminating subordination, since this is the reverse of what we normally would expect. We teach sentence combining to show students how to eliminate repetition. However, Marilyn did not combine sentences; she disassembled them with results that were smoother, less repetitious, and less syntactically complex than the original version.

#### Studs, Version 2 (Revised and Final Student Version)

[1] I did love my family very much but thought then that because of my family I would never have the chance to amount to anything. [2] I went to the docks looking for a job and met up with Captain Smith who said he needed a man just like me to help on his ship. [3] This was my chance to live my dream and to travel all around the world.

We only worked on one paragraph of “Studs,” since this class did not need extensive work on word level repetition. In a basic writing class, we might have spent the entire hour reworking this text to combine sentences and eliminate redundancy.

The last paper we worked on brought up a different issue. The author, Carol, said she was aware that she repeated herself over and over again. Responding to her request, we looked for parts that were repetitive and discussed editing them. For example:

Sister Teresa, Version 1

- [1] The bitterness began to show in her face as she mentioned having brothers and sisters in which she was responsible for.
- [2] They were much younger than Sister Teresa and she had the responsibility of being mother rather than sister.

Sister Teresa, Version 2 (Revised and Final Student Version)

- [1] The bitterness began to show in her face as she mentioned having brothers and sisters in which she was responsible for.

Various suggestions were made by the students, and Carol selected the one she liked best, deleting the second sentence and leaving the first. No one mentioned the clumsiness of the phrase, “in which she was responsible for” [V1, S1], so it was left intact and was still present when Carol turned in her final copy of the paper. The information in [V1, S2] about Sister Teresa’s being more of a mother than a sister to her siblings was also lost by this revision, but the students did not notice this. The teacher did not intervene because the purpose of the lesson was to encourage the students to experiment with revising text on a computer, not to teach them how to correct errors, or even work on style unless that seemed an issue to them at the time.

A summary of the kinds of revisions done during this session shows that all four major types of revisions have been used: addition, deletion, substitution and reordering.

| Summary of Kinds of Revisions |                                |                |       |
|-------------------------------|--------------------------------|----------------|-------|
|                               | Jane                           | Three Students | Carol |
| Addition:                     | sentence 4<br>paragraph breaks |                |       |

|               |                      |                                                     |            |
|---------------|----------------------|-----------------------------------------------------|------------|
| Deletion:     | "five" children      | 3 "I"s<br>1 subordinator<br>1 independent<br>clause | sentence 2 |
| Substitution: | Emily's weight       | 1 coordinator for<br>1 subordinator                 |            |
| Reordering:   | sentences<br>2 and 3 |                                                     |            |

These categories which Nancy Sommers has used to describe revision activities (380) can include both surface level and meaning level changes. Most of this session's revisions were done on the first paper, Jane's; changes made on it were generally substantive, meaning level revisions. More superficial word level changes were made to the paper written by the three students, and the dropping of the second sentence in Carol's paper was a clumsy stab at destroying redundancy, even if the story died with it.

The problems students detected and revised in Jane's paper and the "Studs" paper were typical of the kinds of writing problems these rather average students had been told to correct in high school—they were issues of careless logic or the thoughtless overuse of words. Carol's problems were not typical of this class—she was a returning housewife who combined intelligence and sensitivity with the awkwardness of a basic writer. The students may have felt embarrassed to revise her sentences; more likely, they were not able to, since that would have required unfamiliar revision strategies. However, Carol seemed to profit from having her text displayed and discussed; she claimed later that it helped her to write less repetitively.

This introductory computer revision lesson exposed the class to a variety of writing problems as they worked their way through parts of three different student texts. This in turn may have stimulated the use of a variety of revision strategies, including text manipulations which were unfamiliar to at least some of the students in the class. Because the revisions were developed collaboratively, the stronger students' insights were made available to the weaker students and the general discussion of each text problem provided a variety of ways of thinking about revising. The students were able to observe directly the text being changed at their own workstations, evaluate the revised text, and change it again if they pleased. Finally, the students were explicitly taught techniques for using the word processors to make changes in their writing within the computer writing environment.

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