

The Rhetoric of Technology and the Electronic Writing Class

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Since the mass production of the first fully-assembled microcomputer in 1977, technological change has influenced not only the ways in which we write but also, for many of us, the ways in which we teach writing.¹ Increasing numbers of writing instructors now depend on computer-supported classrooms and use on-line conferences that take place over computer networks as teaching environments. Writing instructors who hope to function effectively in these new electronic classrooms must assess ways in which the use of computer technology might shape, for better and worse, their strategies for working with students. Along with becoming acquainted with current composition theory, instructors, for example, must learn to recognize that the use of technology can exacerbate problems characteristic of American classrooms and must continue to seek ways of using technology that equitably support all students in writing classes. All too frequently, however, writing instructors incorporate computers into their classes without the necessary scrutiny and careful planning that the use of any technology requires.

Such scrutiny will become increasingly important with computers, given the considerable corporate and community investment accompanying this technology as its use expands within our educational system. Unfortunately, as writing instructors, we have not always recognized the natural tendency when using such machines, as cultural artifacts embodying society's values, to perpetuate those values currently dominant within our culture and our educational system. This tendency has become evident as we continue to integrate computers into our efforts at writing instruction. In many English composition classes, computer use simply reinforces those traditional notions of education that permeate our culture at its most basic level: teachers talk, students listen; teachers' contributions are privileged; students respond in predictable, teacher-pleasing ways.

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55

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With the new technology, these tendencies are played out in classrooms where students labor at isolated workstations on drill-and-practice grammar software or in word-processing facilities where computers are arranged, rank and file, so that teachers can examine each computer screen at a moment's notice to check on what students are writing. What many in our profession have yet to realize is that electronic technology, unless it is considered carefully and used critically, can and will support any one of a number of negative pedagogical approaches that also grow out of our cultural values and our theories of writing.

As editors of *Computers and Composition*, a professional journal devoted to the exploration of computer use in English classes, we read primarily of the laudatory influence of computers in promoting a social construction of knowledge. Scant attention is paid, either in the manuscripts we receive or in the articles we read in other journals, to the harmful ways in which computers can be used even by well-meaning teachers who want to create community and social awareness within their classrooms. If electronic technology is to help us bring about positive changes in writing classes, we must identify and confront the potential problems that computers pose and redirect our efforts, if necessary, to make our classes centers of intellectual openness and exchange. We offer our critical perspectives as members of the composition community who strongly support the use of computers and electronic conferences for writing instruction. Our objections lie not in the use of computer technology and on-line conferences but rather in the uncritical enthusiasm that frequently characterizes the reports of those of us who advocate and support electronic writing classes.

In this paper, we examine the enthusiastic discourse that has accompanied the introduction of computers into writing classes and explore how this language may influence both change and the status quo in electronic classrooms. We do this by looking at published reports of computer use that appear in professional journals, by examining data about computer use collected through questionnaires completed by writing instructors at the 1988 Conference on Computers in Writing and Language Instruction (sponsored by the University of Minnesota at Duluth), and by comparing these analyses with a series of on-site classroom observations. After comparing these accounts of computer use, described through what we call the "rhetoric of technology," and our observations of electronic writing classes, we discuss how electronic technology can intensify those inequitable authority structures common to American education. Finally, we argue that computer technology offers us the chance to transform our writing classes into different kinds of centers of learning if we take a critical perspective and remain sensitive to the social and political dangers that the use of computers may pose.

All too often, those who use computers for composition instruction speak and write of "the effects of technology" in overly positive terms as if computers were good in and of themselves. As editors of a journal devoted to stud-

ies in computers and composition, we are most often sent glowing reports that fail to reconcile the differences between a visionary image of technology—what we want computers to do—and our own firsthand observations of how computers are being used in many classrooms around the country. Indeed, this distinctive “rhetoric” of technology seems to characterize more conference presentations, as well as many articles on computer use in other journals. This rhetoric—one of hope, vision, and persuasion—is the primary voice present in most of the work we see coming out of computers-and-composition studies,² and it is positive in the sense that it reflects the high expectations of instructors committed to positive educational reform in their writing classes. This same rhetoric, however, may also be dangerous if we want to think critically about technology and its uses.

The Rhetoric of Technology and Electronic Conferences

For an example of what we call the rhetoric of technology and of how it influences our perceptions and use of technology, we can turn to one specific computer application: electronic bulletin boards and conferences (i.e., conversing over networked computers). Among the claims made about using these electronic conference exchanges in writing classes are the following representative examples:

Networks create an unusual opportunity to shift away from the traditional writing classroom because they create entirely new pedagogical dynamics. One of the most important is the creation of a written social context, an online discourse community, which presents totally new opportunities for effective instruction in writing. (Batson 32)

Although I thought I might resent students intruding into my own time after school hours, I find instead that I enjoy our correspondences [over the network]—that I get to know students better and they know me better, too, a benefit that transfers to our classroom. (Kinkead 41)

All the instructors in the pilot project [using an electronic conference for writing instruction] reported never having seen a group of first-year students, thrown randomly together by the registrar's computer, become as close as their students had. Students set up meetings in the library and in campus computer labs, came early to class and stayed late, made plans together for the next semester, and exchanged addresses. The computer, far from making the class more impersonal, fostered a strikingly close community in one of the nation's largest universities. (Shriner and Rice 476)

Once people have electronic access, their status, power, and prestige are communicated neither contextually . . . nor dynamically. . . . Thus, charismatic and high status people may have less influence, and group members may participate more equally in computer communication. (Kiesler, Siegel, and McGuire 1125)

On the network, students can work collaboratively to brainstorm, solve problems, experience writing as real communication with real people. . . . (Thompson 92)

Those people with powerful ideas will have more influence than those with powerful personalities. . . . The democratization fostered by computer conferencing has other consequences as well. Just as nonverbal cues are missing in conferencing, so too are clues about an individual's status and position. (Spitzer 20)

The above comments represent a number of claims about writing instruction and how it can improve in carefully designed electronic settings: students experience different kinds of intellectual "spaces" in which they can learn differently and sometimes more effectively than in more traditional academic forums; instructors can become better acquainted with their students; many of the status cues marking face-to-face discourse are eliminated, thus allowing for more egalitarian discourse, with greater attention to the text at hand. Collaborative activities increase along with a greater sense of community in computer-supported classes.

Although these remarks reflect claims that we have also made and emphasize pedagogical goals that we too are committed to as specialists in computers and composition, they foreground positive benefits of using networked computers without acknowledging possible negative influences as well. The preceding comments suggest what the use of such networks should encourage, and in the best cases *is* encouraging, but they do not necessarily describe the less desirable outcomes that networks are also capable of supporting. More importantly, we have observed that this highly positive rhetoric directly influences the ways in which teachers perceive and talk about computer use in their classes. When we ask computer-using teachers about word processing in their writing classes (with and without networking) more often than not we again hear echoes of these same optimistic reports.

The Rhetoric of Technology and Computer-Supported Writing Classes

At the 1988 Conference on Computers in Writing and Language Instruction, we distributed lengthy open-ended questionnaires to writing instructors in an attempt to learn how the environment of a writing class—its social structures, discourse, and activities—might be shaped by the use of computers. Although we cannot claim that the answers regarding teaching and technology are representative of the profession as a whole, when considered with other commentary from publications and presentations we have seen, they seem typical of the rhetoric of computer-using instructors and are similar to the language that we ourselves use when talking of our electronic classrooms.³

Specifically, the instructors responding to our survey were asked the question, "Do you prefer teaching writing with traditional methods or with computers? Why?" As might be expected at a computers-and-writing gathering, all the respondents preferred teaching writing with computers and gave the following as their reasons, listed in order of their frequency:

1. Students spend a great deal of time writing.
2. Lots of peer teaching goes on.
3. Class becomes more student-centered than teacher-centered.
4. One-on-one conferences between instructor and students increase.
5. Opportunities for collaboration increase.
6. Students share more with other students and instructor.
7. Communication features provide more direct access to students, allowing teachers to "get to know" students better.

These comments are remarkably similar to the published claims about the use of on-line conferences that we have already examined. Note that these writing teachers, like their colleagues, also concluded that positive changes such as increased student participation and collaboration occurred in classes when they are computer-supported.

These comments illustrate the commitment of the teachers we surveyed to establishing a new kind of cooperative activity in their writing classes, one in which teaching and learning are shared by both instructors and students and through which traditional notions of teaching are altered. These instructors consider themselves not primarily as dispensers of knowledge but rather as collaborators within a group of learners supported by technology. In this sense, we considered the rhetoric of these instructors to be a reflection of their commitment to positive educational change; the survey respondents used the rhetoric of technology to describe a new cooperative electronic classroom shaped by a theory of teaching in which we understand knowledge as socially constructed by both teachers and students rather than as traditionally established. These teachers had come to see and talk about their classrooms in terms of groups of learners-in-progress working with instructors who are also learners (Lunsford and Glenn 186).

As we continued to analyze the open-ended responses to the questionnaires, however, it became clear that when instructors foregrounded the beneficial influences of using computers, they often neglected to mention any negative effects of using the new technology. We recognized, as well, that this perspective was widespread and that the observations the survey teachers made were the same as those we had heard from writing instructors at our own institutions. Moreover, at workshops we have conducted during the past two years, we continue to hear similar, positive reports that correspond to these earlier, more formal analyses.

Teaching Practices and the Computer-Supported Writing Class

Neither the published claims nor the survey responses, however, helped us to explain the less positive, more problematic uses of computers that we encoun-

tered during the past five years as we visited many other electronic writing classes around the country and made informal observations. Notes from a sampling of computer-supported classes we observed more formally in 1988 provided us with information about some of the more problematic social and pedagogical changes in electronic classes.⁴ Both the formal and informal observations we made supported neither the teachers' responses in the questionnaires nor the published rhetoric of technology that had been our impetus for this study. In other words, we began to see that the language teachers used when they wrote about using computers sometimes provided incomplete stories that omitted other possible interpretations. Let us explain by using examples from those representative classes we formally observed in stand-alone computer classrooms.

First, however, it is important to note that our observations were limited and that we may well have missed day-to-day classroom dynamics. On other days, in some of the classes, the use of computers may indeed have fostered positive changes in the intellectual climate of the classroom. But we hope that by concentrating on some of the problematic aspects of these electronic classes, we can emphasize that computers do not automatically create ideal learning situations. This is not to say that electronic technology cannot encourage social interaction and cooperative undertakings but rather to stress, in Michel Foucault's words, that a technology cannot "guarantee" any behavior alone "simply by its nature" ("Space" 245); according to Foucault, the "architecture" of such electronic spaces is a highly political act in itself. Like the traditional classroom, the architecture of electronic spaces can put some students at a disadvantage, thwarting rather than encouraging learning.

In each of the ten classes we observed, with a few exceptions, there was a lot of writing going on. In fact, there was so much writing that we wondered sometimes why the time was set aside as class time, rather than as time that students could spend on their writing in a computer lab. We looked for exchanges and talk between instructor and student, and between students—but what we commonly saw were not careful, two-way discussions of the writing problems students were encountering in their papers. Rather the instructors answered a series of one-time queries often having to do with mechanics or coming from the "does-this-sound-right" category. There were exceptions: sometimes an instructor moved from student to student and spent several minutes with each, talking about specific writing problems highlighted on the computer screen. For the most part, though, instructors walked around the room, looking eager, we might add, for someone in the class to need them in some capacity. Although this observation seems to fit with one of the more frequent claims that teachers made for electronic writing classes—students do a lot of writing—the claim does not completely represent the classes we observed. The use of computers in these classes seemed to come between teachers and students, pre-empting valuable exchanges among members of the class, teachers and students alike.

Another kind of computer-supported class we observed reflected traditional practices of writing instruction in American classrooms. The instructor projected a student paper on an overhead projection system, and students critiqued various aspects of the paper. In each instance, classmates seemed to be searching for answers to the instructor's preset questions. And only three or four students were participating in these rather contrived discussions. This sort of class we saw as a variation on George Hillocks's presentational mode. Although the instructors were not lecturing, they had in mind answers that the students were to supply; hence, the discussion, in effect, became the instructor's "presentation." At these times we wondered about the advantage of having computers in the classroom. The use of technology in these classes, far from creating a new forum for learning, simply magnified the power differential between students and the instructor. Ostensibly computers were being used to "share" writing, but the effect of such sharing was to make the class more teacher-centered and teacher-controlled. Hence, describing technology as a mechanism for increasing the sharing of texts or bringing students and teachers together on a more equal basis again told only a part of the story.

Still another typical class we observed was one in which students were meeting in groups, often focusing on something written on the monitor or producing text on the screen. Yet the conversations we overheard only sometimes related to the task at hand—and often, once again, the effort put forth by students seemed to be one aimed at pleasing the instructor rather than one illustrative of active engagement with their classmates or the texts. This type of class seemed to fit with responses from the questionnaires that credited technology with encouraging "lots of peer teaching" or "more opportunities for collaboration." While such claims seemed outwardly to reflect the electronic writing class, they did not take into account the groups that we observed in which neither peer teaching nor collaboration among students occurred.

This realization, then, leads us to believe that it is not enough for teachers to talk about computer use in uncritical terms. We can no longer afford simply, and only, to dwell on the best parts, to tell stories about the best classroom moments, and to feature the more positive findings about computers. Rather, we must begin to identify the ways in which technology can fail us. We need to recognize the high costs of hardware and software, recognize that computers can, and often do, support instruction that is as repressive and lockstep as any that we have seen. We need to be aware of the fact that electronic classrooms can actually be used to dampen creativity, writing, intellectual exchanges, rather than to encourage them. We need to talk about the dangers of instructors who use computers to deliver drill-and-practice exercises to students or of instructors who promote the use of style analyzers to underscore student errors more effectively than they did five years ago with red pens.

How do we proceed then? We do not advocate abandoning the use of tech-

nology and relying primarily on script and print for our teaching without the aid of word processing and other computer applications such as communication software; nor do we suggest eliminating our descriptions of the positive learning environments that technology can help us to create. Instead, we must try to use our awareness of the discrepancies we have noted as a basis for constructing a more complete image of how technology can be used positively *and* negatively. We must plan carefully and develop the necessary critical perspectives to help us avoid using computers to advance or promote mediocrity in writing instruction. A balanced and increasingly critical perspective is a starting point: by viewing our classes as sites of both paradox and promise we can construct a mature view of how the use of electronic technology can abet our teaching.

Teaching Practices and Electronic On-Line Conferences

As a more specific example of how a critical perspective can help us to identify, and we hope avoid, the dangers that can accompany computer technology in writing classes, we turn again to the use of electronic conferences and bulletin boards. A critical re-examination of these on-line exchanges suggests that while conferences can help teachers create new and engaging forums for learning, they can also serve in ways that might inhibit open exchanges, reduce active learning, and limit the opportunities for honest intellectual engagement.

In the context of Foucault's description of disciplinary institutions as presented in *Discipline and Punish*, we can speculate as to how such conferences might work to the detriment of students and their learning. The electronic spaces created through networking, we learn by reading Foucault, might also be used as disciplinary technologies, serving to control students and their discourse. Of such technologies, Foucault writes:

[They are] no longer built simply to be seen . . . , or to observe the external space . . . , but to permit an internal, articulated and detailed control—to render visible those who are inside it; in more general terms, an architecture that would operate to transform individuals: to act on those it shelters, to provide a hold on their conduct, to carry the effects of power right to them, to make it possible to know them, to alter them. (172)

This particular theoretical perspective, while it is highly incongruent with existing interpretations of conferences and what goes on in them, may at the same time enrich and problematize those interpretations.

A powerful metaphor to help us critically examine the uses of electronic forums is further elaborated in Foucault's discussion of Bentham's Panopticon, the perfect disciplinary mechanism for the exercise of power.⁵ Originally designed as a circular prison building with a guard tower in the middle and the prisoners' cells arranged along the outside, the Panopticon, writes Foucault, is

a “mechanism of power reduced to its ideal form” (*Discipline* 205), making it possible for wardens and guards to observe the behavior of inmates without they themselves being observed. Foucault argues that within such a space, because inmates do not know when they are being observed or ignored, prisoners are constantly and unrelentingly self-disciplining. Moreover, because surveillance is “unverifiable,” it is all the more effective and oppressive. Although panoptic space differs from electronic bulletin boards and conferences in that students, unlike Bentham’s inmates, can converse with one another over networks, those who have conversed over computers will recognize how eavesdropping and watching are made easy through the architecture of an electronic network.

Writing instructors can use networks and electronic bulletin boards as disciplinary mechanisms for observing students’ intellectual contributions to written discussions. The institutional requirement of student evaluation contributes to this practice as instructors seek ways “to give students credit” for conference participation. Under certain conditions, without carefully thinking out the theoretical consequences, instructors enter conferences to read and monitor students’ conversations without revealing themselves as readers and evaluators. We know after all that electronic conferences are, in some ways, spaces open to public scrutiny, places where individuals with the power of control over technology can observe conversations and participants without being seen and without contributing. When instructors take samples from network discussions into the classroom and use these as positive or negative examples, they are employing electronic conferences to discipline, to shape the conversations and academic discourse of their students.

Such a theoretical perspective reminds us that electronic spaces, like other spaces, are constructed within contextual and political frameworks of cultural values, a point that Shoshana Zuboff makes in her study of computer networking in the corporate environment. As in corporate settings, the architecture of computer networking may encourage “surveillance” of participants. Writing instructors praise on-line communication programs for helping them “get to know” students better, a phrase that survey instructors used in a positive sense but that Foucault includes to describe an architecture of control. Teachers who have easy access to students through a network can also “keep tabs” on student participation, blurring the thin line between “evaluating” contributions students make to electronic conferences and “inspecting” conversations that occur electronically.

Instructors inspecting electronic spaces and networked conversation have power that exceeds our expectations or those of students. In addition, many students who know a teacher is observing their conversation will self-discipline themselves and their prose in ways they consider socially and educationally appropriate. Constructing such spaces so that they can provide room for positive activities—for learning, for the resistant discourse characteristic of students thinking across the grain of convention, for marginalized students’

voices—requires a sophisticated understanding of power and its reflection in architectural terms.

Conclusion

In this paper, we have suggested that the current professional conversation about computer use in writing classes, as evidenced in published accounts, is incomplete in at least one essential and important way. While containing valuable accounts of electronic classes, this conversation fails to provide us with a critical perspective on the problematic aspects of computer use and thus with a full understanding of how the use of technology can affect the social, political, and educational environments within which we teach. In making this point, we are not arguing against the use of computers in general or, more specifically, against the promising use of electronic conferences and bulletin boards. The central assumption underlying our argument is that writing instructors, by thinking critically and carefully about technology, can succeed in using it to improve the educational spaces we inhabit.

Our view of teaching and of how students learn invariably shapes our behavior in the classroom. The metaphors we build to house our professional knowledge exert powerful influence over us. Few of us, we would argue, construe our role as that of “controller,” “gatekeeper,” or “guard.” We are more likely in the context of the writing class to think of ourselves as “teacher,” “writer,” and perhaps “expert.” If we plan carefully and examine our integration of technology critically, computers have the potential for helping us shift traditional authority structures inherent in American education. We can, if we work at it, become learners within a community of other learners, our students. But the change will not happen automatically in the electronic classroom anymore than in a traditional classroom. We have to labor diligently to bring it about.

As teachers we are authority figures. Our culture has imbued us with considerable power within the confines of the classroom: we are the architects of the spaces in which our students learn. Although the use of computer technology may give us greater freedom to construct more effective learning environments, it may also lead us unknowingly to assume positions of power that contradict our notions of good teaching. Unless we remain aware of our electronic writing classes as sites of paradox and promise, transformed by a new writing technology, and unless we plan carefully for intended outcomes, we may unwittingly use computers to maintain rigid authority structures that contribute neither to good teaching nor to good learning.

Notes

1. We gratefully acknowledge the insightful comments and excellent advice provided by Marilyn Cooper, Michigan Technological University, and Ron Fortune, Illinois State University.

2. Exceptions to this optimistic discourse exist, of course, but these critical voices are less pervasive. For an interesting discussion of how an electronically networked writing class "mutinied" and lost "all sense of decorum about what [was] appropriate to say or write in an English class," see Marshall Kremers's article, "Adams Sherman Hill Meets ENFI."

3. The open-ended questionnaires we analyzed were completed by 25 instructors from 10 different states, in addition to Washington, DC. Seventeen of the instructors taught in four-year colleges, four in community colleges, and four in high schools. First-year college writing classes were most frequently given as the course conducted on computers, but instructors also used computers to teach advanced composition, technical writing, business writing, pedagogy courses in composition instruction, and high-school writing courses. Although the majority of the 25 respondents taught in classrooms where stand-alone computers were the rule, several taught in networked environments in which students and instructors shared writing through electronic mail and bulletin boards.

4. We observed ten first-year writing classes taught on computers during the summer and fall of 1988. All instructors had taught composition with computers for, at least one year, and several had taught composition for five years or more. Some were teaching assistants, and some were full-time composition instructors.

5. We are grateful to Vicki Byard, Purdue University, for bringing Foucault's treatment of Bentham's Panopticon to our attention at the 1989 CCCC in Seattle. In her insightful paper, "Power Play: The Use and Abuse of Power Relationships in Peer Critiquing," she suggested that even those approaches we use with the most liberating intentions may well prove disciplinary in nature.

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