IDEOLOGIES, TECHNOLOGIES, AND TEACHING

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When microcomputers became the rage in the late 70s and early 80s, I had many friends who resisted using the computer; they feared it would eat their papers; they had a fear of machines. Even now, at least two people in my department have yet to learn how to use a word processor. Meanwhile, I know people who immediately jumped on the bandwagon, making papers produced on word processors a requirement in their classes because ease of revision made the word processor a great motivator. Some ten years later, English teachers still view the computer with a mixture of enthusiasm and anxiety. Two texts recently published by NCTE within weeks of each other, *The English Classroom in the Computer Age* and *Evolving Perspectives on Computers and Composition Studies*, respectively reveal that while most of us understand on some level that the computer revolution is something with which we must cope, the majority of us have very little idea of computers' roles in the English classroom.

"Computers are a boon to teachers of English who survive the transition to using them"—so begins the publisher's release for *The English Classroom in the Computer Age*. Aware that some teachers fear that learning how to use computers may be hazardous to their health, William Wresch has compiled a volume of practical plans for those teachers who want to proceed cautiously in order to get used to the new technology. A teacher's manual that includes 30 lesson plans to show teachers ways to integrate computers into writing courses, its stated purpose is to provide support and mentoring that "teachers need while struggling to understand and to introduce the new technology in the face of classroom pressures" (publisher's release). Comprised of three sections of activities for students with little, moderate, or substantial computer

experience, almost all of its assignments are written by middle or high school teachers. Most assignments are also adaptations of traditional classroom lessons designed before the advent of computers.

Perhaps because its contributors are much more enthusiastic and optimistic about the computer's potential for writing instruction, *Evolving Perspectives on Computers and Composition Studies* has a much more theoretical and overtly progressive orientation. Its contributors seek "to identify some of the important questions that scholars, teachers and researchers in the field of computers and composition must address to develop new perspectives on technology and advance confidently into the twenty-first century" (1). Editors Gail E. Hawisher and Cynthia L. Selfe look to a wider audience than that of *The English Classroom* as well. They argue that theoretically sound pedagogy can only grow out of careful research. For this reason, they say, *Evolving Perspectives* will be indispensable to writing teachers, researchers, theoreticians, professional educators, administrators and graduate students. This book makes clear that one must not only learn how to use the new technology, one must also learn to develop new ways of using it. *Evolving Perspectives* encourages scholars and teachers to consider the ways in which "learning and more specifically writing, are changed by electronic environments" (4). Most importantly, both *The English Classroom* and *Evolving Perspectives* demonstrate that teachers must be aware of the political and theoretical implications of their teaching practices to ensure that all students have equal access to this technology.

I.

Our students are coming of age in a culture where sophisticated technological literacy is rapidly becoming a necessity. To achieve the promise of computer technology in the English classroom and to empower all students to develop the ability to read and write with authority using the available technologies, these two texts suggest that our priority as administrators is to provide strong teacher-training programs. As Kathleen Kiefer argues in *Evolving Perspectives*, teachers need to be educated to see the computer as "the spark for critical thinking and writing and the medium for teaching and learning" (125). Practically speaking, teachers need to learn how to choose and use software and how

to help writers use this software to gain control over both the verbal and visual aspects of their texts.

Some might argue, however, that pouring money into teacher training is putting the cart before the horse. They might argue that the most important problem facing English teachers who wish to integrate computers into their classrooms is the lack of adequate funding for the systems themselves. In order to get computers in writing centers and classrooms, institutions have to allocate a lot of money for additional computer-knowledgeable staff, service contracts, supplies, software, and maintenance of equipment (*Evolving* 310). Certainly *The English Classroom* brings home the necessity of hard cash for hard copy. Two of its lessons assume "there is projection equipment available for the teacher to display his or her work" (*Classroom* 37); three require network systems, which mean modems, "communications software, subscription on a network with conferencing software," and phone lines; several assignments require software with graphics and desktop publishing features. Chances are, however, many teachers who might use *The English Classroom* will not have access to the more up-to-date computer environments of some of its lessons (*Evolving* 133). As it is, in at least two of the lesson plans included in *The English Classroom*, there are only eleven computers available for sixteen or seventeen students.

As James Strickland points out, though, the problem of accessing computer technology is not simply a matter of economics, but one of politics (*Evolving*). Fiscal decisions about computers in writing programs are usually made by people outside of writing programs, "people who are uninformed about the theory of language and composition instruction" (*Evolving* 310). As the editor of *The English Classroom* points out, many of his contributors are themselves constrained by the politics of school systems in which they teach, particularly those who teach in primary and secondary schools; their worlds, says Wresch, are "prescribed by detailed curricula that delineate exactly what counts as knowledge and what counts as a skill. These curricula are reinforced by textbooks and standardized tests" (*Classroom* ix). While the editors of *Evolving Perspectives* argue that questions which address the influence of computers on students' writing are outdated and naive because "comparing products and judging them superior or inferior in one medium or another yields little fruitful information" (8), many teachers have to acknowledge that these questions are those

which parents, school boards and administrators most wish to be answered.

> No district can stray far from accepted procedures without paying an immediate price. Students who have spent a significant portion of a semester enjoying desktop publishing will be recalled quickly to accepted procedures if standardized test scores fall for the district . . . . Our standardized measures of learning do not include the new or make allowances for technology. (*Classroom* ix)

Views of knowledge and knowledge production are not the only factors which influence an educational institution's funding of computer-assisted instruction. Attitudes about race, class, and gender factor into policy decisions as well. The theorists in *Evolving Perspectives* point out that members of the public and private sectors "perpetuate stereotypic assumptions regarding the superior abilities and greater interest in technology, science and mathematics of males, whites and students of higher socio-economic status" (*Evolving* 322). Furthermore, research shows that parents are more willing to fund resources for males than for females who want to learn about computers.

II.

People are people; when they are making their lesson plans, teachers are likely to be influenced by the same factors which influence policy makers. Whether 25 computers are available for 25 students, or only one for 25, the way that the teacher uses his or her authority in the classroom will ultimately decide how the students learn or do not learn how to use these machines with authority for themselves. Because teachers are the most visible and potentially influential individuals in a student's education, teachers' attitudes must change first. Teachers are sometimes as constrained by their own ideological blindspots as they are by the ideological blindspots of those who are their supervisors. Given their central role in the classroom, teachers need training before schools even consider buying equipment.

Perhaps the first objective in teacher training programs would be to confront and allay whatever anxieties English teachers have about computers' impact on their roles as teachers. Again, as the opening statement in NCTE's announcement for *The English*

Classroom indicates, computers make teachers sense their own mortality. All workers have at one time or another feared their own annihilation in the labor force by the diabolical machines of tomorrow. Why should teachers be any different? When the October 1986 *CCC* published five articles about the computer's effects on writing and writers, at least four out of the five authors seemed plagued by this underlying economic anxiety.[1] They worried not only for students but for us English professionals. What if computers could teach writing? What if computers made it unnecessary for the teacher to exist? Many faculty also worried that using a word processor made their own writing too easy. What if the computer made work so easy we could not consider it work anymore? Our scholarship might be judged less rigorous. How would we get tenure?

Happily, the results of these early studies reassured both us and their authors that "[s]urely the English teacher counts too" (Rodrigues 339). Student writing did not drastically improve with the introduction of computers—"word processing does not, in and of itself, encourage student writers to revise more extensively" (Harris 330). After all, computers are simply tools.

The problem, however, with viewing the computer as just a neutral tool is that if teachers see the computer as at most a kind of sophisticated typewriter, then there seems to be no compelling reason for them to change their teaching practices. Certainly several of the contributors to *The English Classroom* remain entrenched in traditional methods of teaching writing: "Using computers has caused no change at all in my approach to teaching composition. After all, the computer is nothing more than a kind of pencil" (*Classroom* 33).

Wresch readily admits that most of the lesson plans in this teacher's manual "are adaptations of lessons used for years without computers" (*English Classroom* x). Many of the instructors who have submitted their lesson plans have little training; some say they are "familiar" with computers and word processors. Six out of ten contributors to the section containing "Activities for Students with Substantial Experience" admit to their own lack of experience. This section includes lessons by a "computer novice," by an individual with "minimal computer training," and by a teacher who has had "no formal education but [has] used one at home." Given their lack of experience with computers and word processors, these

teachers not surprisingly do not think of computers as being any different from other materials that they use in the classroom.

In the essay which opens *Evolving Perspectives*, however, Nancy Kaplan warns that writing instruction cannot continue to ignore the ways "tools implicate and are implicated in the power relations, or more broadly the ideologies, permeating reading and writing acts if it is to provide equitable education for everyone" (*Evolving* 14). Both collections demonstrate that teachers need to become more knowledgeable users of word processors and more knowledgeable about the ways in which word processors differ from other educational tools like pens, typewriters and blackboards.

On the theoretical level, *Evolving Perspectives* discusses the research which suggests that teachers must teach their students the ways in which technology and authority are related. According to Ruth Ray and Ellen Barton, English teachers have the opportunity to show students that "though meaning and the making of meaning through computers reflect the authority of the institution, this authority can be defined, analyzed, resisted and changed by the individual user" (281). They argue that adopting the "institutional imperative," a perspective from which the individual has little or no personal authority over the ways technology is used, may lead to negative results for the individual at the workplace. That is, as theorists like Richard Ohmann and Michael Holzman assert, computers may perpetuate and strengthen traditional lines of authority: "Computers in our age of monopoly capital simultaneously increase the literacy of the privileged managerial and professional class and decrease the literacy of the less-privileged working class through the 'deskilling' of labor" (*Evolving* 281). *The English Classroom* complements this theoretical discussion by providing evidence from actual classroom practices that illustrates the effects on students of teachers giving into "institutional imperatives." Both collections demonstrate the need for teacher-training programs that forefront issues of power and authority, negotiation of meaning, and issues of race, class and gender.

Most of us readily admit that poorer children probably have less access to machines, but not many realize that even in schools where machines are available, students of the lower classes are more likely to be exposed to cognitively lower-level software as well. In her essay on equitable teaching practices, Mary Louise Gomez examines the ways in which "teachers' assumptions about learners' abilities and interests guide the development of activities

for students" (*Evolving* 322). She points out studies that show poorer students are more likely to be trained to use computers for drill and practice types of activities while "computer use in majority schools is characterized by its emphasis on the use of computers to develop higher order literary and cognitive skills" (quoted by Gomez 323). *The English Classroom* seems to bear this out. Though the second exercise in the manual is entitled, "Responding to *Rumble Fish*," most of what the lower- to lower-middle class students do is answer a series of questions provided by the teacher and learn how to perform simple tasks like saving and deleting files and other types of drill and practice exercises. Lesson 4 has basic writers develop a mini-dictionary. In an exercise involving 25 juniors and seniors taking an American literature course, students from an economically depressed area used style analyzer programs on such writers as William Faulkner. Rather than performing writing tasks, this assignment calls upon students to "use packaged grammar and style programs to analyze authors' writing" (*Classroom* 118). The assignment basically requires a compilation of concrete facts; the teacher can only "[hope] that this awareness [of style] will transfer to the students' own writing" because the assignment itself does not ask students to do any writing (*Classroom* 121). Lessons like these do not allow students to develop awareness and control over their writing processes or over the technology.

English teachers have to become more critical of the ways in which their teaching practices might limit students' access to computer resources in other significant ways. Currently, our educational system continues to foster competition. Granted, competition can be a motivator. But it can also lead to certain students gaining privileges over others. Competitive practices in the classroom can unfairly limit students' access to available technology. That is, only those students whom the teacher identifies as the best and the brightest may be given the opportunity to make use of machines in classrooms with limited resources. For example, in four of the lesson plans contained in *The English Classroom*, students who get to use the computers are designated of above average ability or gifted. The writer of one of these assignments chose only the top 25% of his students, gave them all more individual attention than he gave to the other student writers, and then notes that their writing assignments came out better than those of the rest of the class. One might expect that the best students

who got the most attention would perform the best. The exercise does little to establish the usefulness of the computer—or the assignment for that matter.

Another detrimental side effect of competitive use of computers is that such teaching practices can foster adversarial relations among the students themselves, pitting the haves against the have-nots, or encouraging the students to develop biases or resentment toward one another. To that end, one author's comment is that one benefit to using the computers is that "Some nonliterary students are highly motivated by this logical, somewhat mathematical approach; it allows them to work with or **against** [my emphasis] students who have dealt more in the abstract" (*Classroom* 120). This attitude seems problematic, particulary if one considers that in our culture, boys are trained to be more competitive than girls.

For this reason, half of the population, women, may be at a disadvantage in the computer classroom taught by teachers unschooled in equitable task design or classroom practices. Much of the available software contains "competitive game formats more familiar and often more appealing to males than females," says Gomez (*Evolving* 324). Again, *The English Classroom* illustrates that it is very much worthwhile to examine more closely the gender differences in computer-assisted instruction. One instructor designed a lesson plan which asked students to create a multiple-ending adventure story (*Classroom* 137). In her evaluation of the assignment, the instructor notes that "the boys appeared to be more enthusiastic than the girls. This may have been because the assignment was on the computer" (139). She goes on to spend more time examining the evidence to show that the boys were more motivated to write on the computer, pointing, for example, to their increased willingness to edit spelling and punctuation. Interestingly, she does not provide a basis for her feelings about the girls; in fact she says that both boys and girls exhibited "the same computer skills." Moreover, "both boys and girls worked well together and helped each other." Nonetheless, she states that "I do not believe the girls' efforts were affected by the use of the computer in this assignment" (139).

On the one hand, she makes an implicit assumption that boys liked to use the computer more than the girls. On the other hand, she does not explain why she felt the girls were not as motivated by the assignment. Things we'd need to know before reaching

any conclusions are: were the girls writing at the same level as the boys before the assignment? Were they writing less too? Did they pay less attention to spelling and punctuation before they used the computer and after? Did it fail to motivate them to edit and revise in the same way it motivated the boys? Did the nature of the assignment influence the response, i.e., are boys more interested in adventure stories? If girls are trained to desire or prefer other types of narratives than adventure stories, are they operating at a disadvantage when asked to create an adventure? Since they demonstrate the same skills, why does the teacher assume the girls do not like the computer?

III.

Research suggests that teachers must evaluate their role if they are to find ways of giving students an equitable education, whatever resources are available or however limited they might be. Several contributors to *Evolving Perspectives* suggest that the computer's greatest potential lies in its ability to democratize the classroom, to decenter authority. But it cannot achieve this effect if teachers' roles do not become more democratic. Teacher-centered classrooms do not give students opportunities to see how computers can change writing, particularly if the only person in the room who has access to the machine is the teacher. As Nancy Kaplan puts it, "if the only machine, or the key machine, remains in the hands of the teacher, if the teacher's fingers are the ones on the keyboard, control over the production and reformation of text remains the teacher's" (*Evolving* 28).

An example of how this can easily happen may be found by looking at the first lesson plan in *The English Classroom*. For this lesson, a teacher attempts to "model effective ways to write a paper about literature" (*Classroom* 3). As the students brainstorm about the point of view in a short story, the teacher types, revising students' ideas as she sees fit. The students generate a thesis that halts discussion for a few moments; when the teacher "[realizes] that the focus was wrong," she types a new thesis beneath the first. She seems relatively unaware of the amount of control she has over what is being produced. "The students saw immediately how much easier the second statement was to work with," she enthuses. Armed with a printout, the teacher writes an essay at home that night and shares it the next day with her class, who

seem "genuinely interested in this essay, a paper they had a part in" (5). The students did have "a part" in the composition of the essay, but it was a relatively minor one. I think that the students probably also reaffirmed for themselves that if you wait long enough, teachers will do the work for you or give you the "right" answers.

As Kaplain explains: "If the teacher does not wish to share his or her authority, the computer can be used as a means to exert even greater control" (*Evolving*). To provide students with an environment in which to produce an "all-class" composition, this teacher might have given each student a sample printout so that they could themselves produce drafts of an essay. By not doing so, she suggests that they do not now have the means to write, nor will they until they copy her method, which remains mysterious ultimately because she writes the essay at home. She might also have devoted one more class session to this exercise so that the entire class could actually produce an "all-class" composition. Perhaps with someone else at the keyboard, to boot.

IV.

According to several scholars in *Evolving Perspectives*, computer technology currently being developed with the greatest potential to change products and processes of composition is hypertext and hypermedia. Several contributors deal with the issues raised by this new technology:

> Pure hypertexts need have no beginnings (at least none that are privileged by the label beginning), no static representation of information in a set order (every reader of a hypertext can create his or her own 'path' through a document and can change the representation of information each time a text is used and no set ending). Hence readers of hypertext have the potential to become readers-writers who construct meaning by accessing 'cards' and 'stacks' of information and assembling them in different ways and orders—all according to their own interests and associations. (*Evolving* 173-174)

While some might argue that we can already create our own paths through books and other media, these theorists respond, "True, books can be read out of order, but the printed word is suggestive . . . controlling: The fixed arrangement of pages always militates in favor of that 'automatic' reading from first to last" (*Evolving*

213). John McDaid asserts that hypertext promises to change profoundly the ways we translate, organize and share experience. Stuart Moulthrop, Henrietta Shirk, and Catherine Smith all point to ways in which, in a utopian hypertext environment, writers would no longer be able to distinguish between the activities of reading and writing; no reader of hypertext could be a passive consumer of texts. Moreover, they argue, hypertext has the potential to do away with linear hierarchies and give rise to more recursive, holistic methods of thought.

Before any of us become too enthusiastic about the potentials of hypermedia to alter our teaching practices, though, Smith points out that "[m]issing in most hypertext theory is acknowledgement that thinking is to some extent socially, culturally, and historically constructed and that thinkers, as a result, may differ in how they form ideas" (225). Using feminist theory, she argues that people do not all interact with the three-dimensional world in the same way and that hypertext has the potential to discriminate against individuals who do not think like those who design, and ultimately control, hypertext software.

The development of new technology necessitates training in other areas as well. Andrea Hermann argues that as the technology changes, so will the process and products of composition change. Hence,

> Not only do students need to be taught how to competently manipulate the hardware and the software, but research also suggests that computers make new literacy demands, particularly in terms of writing plans and reading strategies. Understanding the nature of these new literacy demands means that teachers will eventually be capable of designing assessments that take into consideration what computer-using writers actually do. (*Evolving* 155)

For one thing, teachers need to be trained in the visual literacy required for reading texts on computer monitors. Furthermore, they need to be trained to understand and to develop new assessment tools. Computers require more than keyboarding skills: they require the ability to use the computer's commands and software as well. Perhaps as a result of our own kind of "familiarity" with the computer, many teachers continue to resist grading students in terms of their ability to use the machine. In *The English Classroom*, one teacher encourages us to "keep in mind that not

all students have an affinity for computers. It is important to be attuned to these differences when grading" (87). The other criteria she provides imply that she means, don't take off points if the student has trouble with the word processor. But as contributors to *Evolving Perspectives* point out, ignoring the students' computer skills now may place them at a disadvantage later, particularly if it is true that the person who controls the machine has the power. In an assignment that calls upon students to design autobiographical newspapers, one author explicitly addresses this issue and evaluates his students on their ability to "make the format [of their newspapers] look as close to the real thing as possible" (116). Teachers who are not so journalistically inclined, however, may not take into consideration the need for students to develop other kinds of computer literacies than simple keyboarding skills.

V.

While I have been critical of several of the assignments in *The English Classroom*, others are notable for their ability to engage students in meaningful writing. In particular, I mean the lesson plans which involve one group of students with students of other cultures, ethnic backgrounds or classes, via computer networks (Lessons 20 & 21), the lessons on producing autobiographical newspapers, and two lessons (27 & 28) which use "visual teaching as a prewriting activity." These lessons show that when practice is informed by theory, teachers can design innovative and creative assignments to be used with computers.

In his foreword to *Evolving Perspectives*, Edmund J. Farrell tells us that "As the authors of this soundly conceived and richly rewarding volume make clear, computer technology indeed has the power to democratize existing power relationships, to broaden the base of privilege by opening discourse communities to those formerly barred access by gender, class or race" (xii). As *The English Classroom* makes clear, the computer does not have the power to democratize relationships; it is the people controlling the computers that do. If we as teachers do not understand how we might use the technology to accomplish this goal, if we are not given adequate training ourselves, certain individuals, including ourselves, may continue to be barred access to certain discourse communities. An important question that the contributors to *Evolving Perspectives* do not answer is how do we convince those

with the power of the technology to share it. Moreover, the number of questions that the contributors raise and the ways that they suggest that we might go about answering them are sometimes overwhelming to those who are only "familiar" with computers. I wish, finally, that some of them could have provided more detailed road maps to go along with some of the directions for future research.

The obstacles to providing informed and equitable computer-assisted instruction seem daunting. The anxiety these texts provoked in me caused me to regress to my old writing habits; I was unable to compose this review essay on my computer as I usually do. The prospect of change often makes us look for security blankets. For all its flaws then, *The English Classroom* provides teachers with low-risk methods of introducing students to writing on computers. I'd recommend strongly, however, that teachers who purchase the manual read it alongside *Evolving Perspectives* so that when they feel secure enough, they can modify and adapt the lesson plans to help students develop the necessary technological literacies, along with the power and authority for the knowledge they produce in the process. With these two books, we teachers can begin, as Nancy Kaplan encourages us, "to read ourselves, as teachers of English in a technological world"—to "actively appropriate the world-text, and thus [to] reinscribe . . . the technology of the world" (*Evolving* 38).

NOTE

[1]See Case, Catano, Harris, Rodrigues and Sudol.

WORKS CITED

Case, Donald P. "Processing Professorial Words: Personal Computers and the Writing Habits of University Professors." *CCC* 36.3 (October 1985): 317-322.

Catano, James V. "Computer-Based Writing: Navigating the Fluid Text." *CCC* 36.3 (October 1985): 309-17.

Harris, Jeanette. "Student Writers and Word Processing: A Preliminary Evaluation." *CCC* 36.3 (October 1985): 323-30.

Hawisher, Gail E. and Cynthia L. Selfe, eds. *Evolving Perspectives on Computers and Composition Studies: Questions for the 1990s*. Urbana: NCTE, 1991.

Rodrigues, Dawn. "Computers and Basic Writers." *CCC* 36.3 (October 1985): 336-39.

Sudol, Ronald A. "Applied Word Processing: Notes on Authority, Responsibility, and Revision in a Workshop Model." *CCC* 36.3 (October 1985): 331-335.

Wresch, William, ed. *The English Classroom in the Computer Age: Thirty Lesson Plans*. Urbana: NCTE, 1991.