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INFORMATION TECHNOLOGY AS OTHER

Reflections on a Useful Problem

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For a number of years, I have been troubled by what Richard Young, following Dewey, taught me to think of as a *felt difficulty*—a sense of dissonance, inconsistency, and inappropriateness. My difficulty dates to my initial efforts, shortly after I had become WPA for the first time (a curious reward for earning tenure), to expand the role of information technology in our composition courses. My work in computers and writing had convinced me of the benefits of using computers to make writing the focus of activity—as opposed to discussion—within our writing classrooms. It had also convinced me of the role network communication could play in expanding the classroom and improving communication among students and teachers.

As might be expected in an English Department with two computer classrooms and two open labs—one established in 1980—my colleagues strongly supported my efforts to increase our use of technology. Our curriculum was reconfigured to make better use of network communication tools and word processing software. We conducted workshops to acquaint our adjunct faculty with recent developments in the instructional uses of information technology. We expanded our emphasis on technology in the training program for our graduate TAs. And we developed instructional materials for distribution on our online writing center to support instructors and students.

Our efforts were largely successful. Over the past several years, the number of writers making use of our Web-based resources has risen dramatically (in the 2003–04 academic year, more than 1.6 million visits were made to our writing center Web site). Our instructors, as a group, now think of our course management software not as a novelty but as a necessity—to the point where problems with our server produce a predictable flood of concerned e-mail messages. And the competition for courses taught in our computer-supported classrooms continues to grow.

Despite this progress, however, I'm troubled. I'm troubled not by the extent to which our instructors have embraced information technology in their teaching—although some have certainly embraced it more than others—but rather by the manner in which they have embraced it. I am troubled by a sense that most instructors view technology as an add-on to their courses—something that is considered after the important work of planning a course and developing daily lesson plans is complete. I am troubled, most of all, by a sense that writing instructors as a group have not considered how information technology has changed not only the tools we use to produce writing but the context in which we write, read, learn, and teach.

In the graduate seminars I took with Richard Young, he taught me to value and nurture felt difficulties. He suggested that we should think of them as the first step toward defining a useful problem. Like many other good thinkers, Young saw problems as generative constructs. In fact, he envisioned rhetoric and composition—a field he helped found in the 1960s and 1970s—as a discipline based not on an arbitrarily defined set of foundational knowledge, but rather on the formulation, consideration, and solution of problems. That is, he articulated a vision of rhetorical studies—and, by extension, of writing pedagogy—that rejected a modernist, foundational approach in favor of a postmodern ideal of reflection, adaptation, and extension.

Perhaps it is my graduate training that allows me to feel an odd sense of satisfaction about the disconnect I'm seeing between the instructional promise of information technology and its impact on our courses and curricula. From my perspective, the more thinking we can do about its role in our teaching and writing, the better. I welcome this essay as an opportunity to focus my thinking about the issue.

FROM FELT DIFFICULTY TO PROBLEM DEFINITION

Although I've been uneasy for some time about how we—as teachers—approach technology, my felt difficulty came into sharper focus after I returned from sabbatical following my first three-year tour of duty as WPA. During a meeting in August, when our faculty met to plan our orientation for our new graduate TAs, we talked about the changes that had been made to the syllabus. With some concern, I pointed out that many of the technology-supported activities we had put into the syllabus while I had been WPA—such as the posting of drafts to class discussion forums and out-of-class peer reviews—had dropped out of the syllabus.

I was concerned that our new program director had made these changes in an attempt to diminish our reliance on technology. But that wasn't the case. She had simply forgotten to include them. I did not need to worry, she told me (or words to that effect). We could add the technology in later.

That exchange helped me begin to transform my felt difficulty about teaching and technology into a defined problem. Eventually, I came to the conclusion that resistance to technology was not the issue—at least among my colleagues. Far from it—over the past two decades our program had earned a reputation for its innovative work with technology. The issue, in contrast, was the perception among some of my colleagues—and, for that matter, among writing teachers in general—that technology is something that is added on to our curricula after we have completed the real work of designing curricula and developing syllabi.

In making this observation, I am not discounting the widespread use of word processing software (and its associated tools) or classroom management systems (e.g., WebCT, BlackBoard, SyllaBase). Nor do I want to suggest that the contributions that can be made to writing instruction by the World Wide Web and e-mail have been overlooked by our field. I am concerned, however, that as designers of writing curricula we seem to regard the integration of important technological tools in our syllabi and lesson plans as an extracurricular activity.

This conception of information technology is rooted deeply in our conceptions of what it means to be a teacher—and, for that matter, of what it means to be a learner. It serves to exclude consideration of technology-supported instruction as anything but *other*—that is, as an add-on, an embellishment, an extra. For many WPAs and curriculum designers, technological support is something that is added to a nearly finished curriculum, something that might extend the reach of a syllabus or lesson plan, or something that can help students and teachers extend a classroom. It is not, however, considered one of the foundational elements—and here I am thinking once again of a modernist conception of “foundational”—of a writing curriculum.

I could point out, of course (and I will), that a number of technologies *are* considered foundational by writing teachers: textbooks, pens and paper, classroom equipment, desks, chairs, and so on, to touch only the surface. These technologies, however, are not seen as technology per se. They are invisible parts of a teaching context that shapes the type and quality of instruction provided to our students. I could also point out that most curriculum designers use word processing software,

e-mail, and the Web as they create syllabi and lesson plans. In the end, however, I am forced to concede that even as they use them, most writing curriculum designers do not recognize how established and emerging information technologies—including interactive, Web-based instructional programs and network communication tools—might contribute to the teaching and learning of writing.

This lack of understanding is a problem, I think, because our conceptions of what it means to write, to be a writer, and to learn to write should take information technology into account. In particular, we should recognize that information technology makes possible more than additional—or even better—strategies for meeting our teaching goals. It also makes possible new teaching goals. Recognizing this possibility is important for all teachers of writing, but it is particularly important for WPAs, who often construct program-wide curricula and coordinate faculty development programs. Treating technology only as a new set of tools for achieving our existing goals allows us to think of it as something other than what it actually is—a critical element of our writing and teaching context, an element that we must consider as we develop not only our pedagogy, but our theories of pedagogy.

IF IT'S NOT RESISTANCE, WHAT IS IT?

My argument is tempered by my awareness of the important strides we have made in understanding how information technologies can support the teaching and learning of writing. Since the early 1980s, computers and writing scholars have learned a great deal about the design and pedagogical applications of word processing software, style and grammar analysis software, computer-aided instruction, network-communication tools, and hypertext technologies.¹ Equally important, computers and writing scholars have learned much about the effective design of technology-supported writing courses, including those taught in computer-based classrooms, traditional classrooms, online contexts, and hybrid settings in which classes sometimes meet face-to-face and at other times online.²

This work has contributed in important ways to our teaching and scholarship. It has not, however, led to fundamental inquiries into our goals as teachers and writers. Instead, it has tended to address the development of specific tools and, with the notable exception of some Multi-user domain Object Oriented (MOO)-based instructional innovations (Haynes and Holmevik 1998; Jordan-Henley and Maid 1995a, 1995b) and explorations of the use of hypertext (Bolter 1991, 1993; Kaplan and Moulthrop 1990;

Moulthrop and Kaplan 1991), the use of those tools to support instructional goals consistent with long-standing instructional practices.

Instead of using technology to transform writing and the teaching of writing, we remain in a transitional stage where new technologies have been used largely to improve upon earlier—and, one might argue, largely modernist—teaching and learning practices. Rather than reconceptualizing writing textbooks so that they take advantage of the latest interactive technologies, we have—using the Web—built bigger, better, and more accessible textbooks. Rather than considering how writing instruction might take place most effectively online, we have developed course management systems—such as WebCT and BlackBoard—that present analogues of those classrooms on the Web. Our teaching and composing practices, consequently, remain firmly shaped by the legacy of the printed page and the institutional models of classroom instruction that dominate traditional education.

My analysis is likely to seem at odds with the perceptions of computers and writing scholars who rightly consider themselves an adventurous group. Our field, as the scholarship I've referred to above indicates, has been nothing if not innovative. I am not arguing, however, that we have stood still as technology has marched on. Instead, I am suggesting that we have failed to capitalize on a number of opportunities to rethink the way we teach and our students learn.

More specifically, I am not concerned that our field has suffered from a general resistance to education reform (Evans 1993) or a reluctance to consider how technology might contribute to instructional innovation (Albaugh 1997; Clegg, Konrad, and Tan 2000; Cox, Cox, and Preston 1999; Crawford and Gannon-Cook 2002; Groves and Zemel, 2000; Herling 1994; Lee 2001; Mumtaz 2000; Noblitt 1997; Persichitte, Tharp, and Caffarella 1999; Stocker 1999; Surry and Land 2000). Nor am I concerned strictly about problems with the diffusion of innovation through our field (Reigeluth and Garfinkle 1994; Rogers 1995). Instead, I am worried that our commitment to a particular conception of what it means to teach—a way of seeing, a terministic screen, to use Burke's terms—has made it difficult to discover how technology might change what we try to accomplish and how we accomplish it. As Szabo and Sobon (2003), citing Cuban (2001), note, teachers use instructional communication technology “to support their existing teaching strategies, rather than explore its transformative potential.”

In a similar vein, Dooley (1999) observes, “The greatest single educational system barrier for an innovation is the system itself. Teachers

teach in the manner in which they themselves were taught.” The power of the “system” is difficult to overstate. Durrington, Repman, and Valente (2000), for example, found that the extent to which individual instructors are embedded in a social network is negatively correlated with their willingness to adopt technological innovations. That is, the more instructors are involved in their profession, the less likely they are to innovate.

RESISTING THE MOVING AVERAGE

Perhaps it is the system—or, more accurately, the systems—that deserves blame. The educational structure in which most of us work makes it difficult to find time to reflect and reconsider. In the name of making educators more “productive,” “responsive,” and “efficient,” we are pressed to do more with less, to pack far more into our days (and we might as well add mornings, evenings, and nights) than is reasonable or appropriate. In the midst of this pressure to produce, we are bombarded with claims about the values of various technologies. Reasonably, many of the most thoughtful members of our profession resist. Leslee Becker, one of my colleagues at Colorado State University, recently confessed that she has been a longtime resister. For a time, she said, she had viewed our department’s plan to distribute its newsletter via e-mail as a small part of a grand scheme to dehumanize us all. Once our electronic newsletter had been forced into her inbox, however, she found that she didn’t mind reading it on the screen (and that it wasn’t all that bad that a few more trees were left standing). Reflecting on the experience, she observed that her resistance might have had more to do with lack of time to learn the possibilities of a new technology than with anything inherently problematic about that technology.

The time demands associated with learning new technologies certainly contribute to the problem with which I’ve been wrestling. A rich understanding of the capabilities and characteristics of a given technology is an essential prerequisite to careful thinking about how it might change our teaching and learning. When we lack the time to do all that we’re asked to do, however, we can’t learn the new technologies as fully as we might like, let alone carefully consider their pedagogical implications. Instead, we put in the time needed to return graded drafts to our students, plan our next classes, carry out the myriad activities associated with life in the academy, and (when we can) piece together a working knowledge of these new tools for writing and teaching.

Clearly, directing my criticisms concerning a lack of reflection about technology toward writing teachers who work far more than is

reasonable would be both inappropriate and ineffective. Instead, allow me to express my concerns about a higher education system that, despite its goal of reflective engagement with ideas and issues, seems far too susceptible to the pressures of economy, efficiency, and productivity. Although there are significant differences among institutions of higher education, individually and categorically, some of the shared values that cross institutional boundaries work against the kind of reflection and innovation that might allow these institutions to become more economical, efficient, and productive. These values include a commitment to scholarly excellence and funded research that all too often distracts faculty and administrators from a commitment to excellence in teaching.

Consider the rewards structure at our leading comprehensive research universities, as well as at a growing number of private and public four-year institutions, where faculty teaching responsibilities are set at a level that—at least in theory—should allow them the time to reflect on their teaching methods. The rewards structures at these institutions lean heavily toward publication and funded projects. Savvy faculty, and in particular savvy junior faculty, see all too quickly that innovation and reflection about teaching is valued far less than other forms of academic work such as publication, service, and outreach. Teaching, even in programs where it is highly valued and carefully evaluated, is often rated in such a narrow range (80 to 90 percent of the faculty in a given department, for example, might be evaluated as “above average”) that faculty quickly learn that putting additional effort into developing curricula and rethinking their teaching activities will do little to differentiate them from other members of the department. To ensure tenure and promotion and to increase their salary, they learn, it is best to publish, obtain funding for projects, or engage in distinctive forms of service.

In more concrete terms, a faculty member might be faced with deciding how best to spend a set amount of time—say forty hours over the course of an academic term. The choices might include writing an article, developing a funding proposal, serving on a committee for a professional organization, and revising the curriculum for a course. At many universities and colleges, publication or a successful grant project will do far more to enhance an annual evaluation rating than will service on a committee, and service on a committee will do far more than redevelopment of a curriculum. In advancing this argument, I am not suggesting that teaching is not taken seriously at these institutions. In fact, many of these institutions use a wide range of strategies for evaluating teaching including peer observation of classroom teaching, review

of teaching narratives and portfolios, evaluation of course curricula, and review of student evaluations. When indications of problems are found, programs put significant effort into addressing those problems; when those problems are not resolved, the impact on retention, promotion, and salary can be significant. However, beyond these extreme cases, the *differential* contribution of teaching evaluations, at many institutions, can be quite minimal. If twenty out of twenty-five faculty members receive the same teaching evaluation, those evaluations will play little or no role in determining differences in merit among those twenty faculty.

In far too many cases, we work within a rewards structure that supports and rewards the perpetuation of proven teaching methods at the expense of reflection, reconceptualization, and innovation. If we are to make progress in considering the impact of information technologies on the teaching and learning of writing, we must begin with efforts to alter that rewards structure so that efforts to transform our teaching methods are viewed in the most favorable light during merit, promotion, and tenure decisions. Those efforts might include direct support for teaching innovation (already in place at many institutions) and funding for experimentation with information technologies in instructional settings. They should also include the recognition that innovation will not necessarily lead to improvements in teaching and learning. Taking reasonable risks—that is, risks that are calculated on the basis of careful thinking about teaching and learning—should be rewarded even when the outcome is something other than what is desired.

The bottom line—to borrow a phrase from those who so highly value economy, efficiency, and productivity—is simple: if we begin to reward reflection and innovation concretely—that is, with increased salaries and favorable decisions concerning tenure and promotion—we will see more reflection and innovation.

IS THERE A CONCLUSION IN HERE?

Changing the rewards structure in higher education is a daunting task. It may well be that none of us can make a difference—but that all of us can. We may need to rethink our understanding of how information technology can transform teaching and learning not one by one, but as a field.

WPAs can—and should—play a critical role in this process. At many institutions, WPAs are charged with setting the direction of writing programs through curriculum development and faculty development activities. They are often seen as leaders within their local institutional

context and, in such cases, are typically well placed to make arguments about the importance of taking seriously the role of information technologies in teaching and learning. WPAs might, for example, consider the growing number of tools offered in conjunction with new writing textbooks, such as interactive Web sites and exercises, commenting and review tools, and information management and analysis tools. They might explore the implications of technologies such as hypertext and network collaboration tools for writers and writing instruction. They might consider the role productivity software—such as word processing, desktop publishing, and Web editing packages—can play in enhancing students' understanding of visual rhetoric and the design of written documents.

Although much of the thinking I'm calling for is something that would of necessity be done by individual WPAs, it need not be viewed as a solitary activity. WPAs have the backing of a strong national organization, the Council of Writing Program Administrators, and can contact other WPAs relatively easily through the WPA listserv e-mail list; the WPA Web site (www.wpacouncil.org/); regional and national conferences; and *Writing Program Administration*, the council's refereed journal. Moreover, WPAs can take advantage of the work of colleagues who have already been considering these efforts, such as those who converse regularly on e-mail lists such as TechRhet. By working in collaboration with other WPAs and with writing scholars who share an interest in exploring the role of information technology in teaching and learning, we can affect not only our own instructional efforts but also—through our work as program leaders, curriculum developers, and faculty development coordinators—those of the faculty and administrators with whom we work. Essentially, we can work as agents of change not only at our local institutions, but also within the larger field of writing studies.

We might begin this process by reexamining a maxim many of us have lived by since computers first made an impact on writing instruction: technologies should not drive instruction; instead, each technology should be considered in terms of how it might be used to accomplish our teaching goals. In calling for a reconsideration of this maxim, I am not advocating the widespread adoption of curricula that valorize digital communication over print communication, as is suggested by some interpretations of the remediation argument advanced by Bolter (1991; Bolter and Grusin 1998). As important as these arguments are, I am confident that, just as writing did not replace speaking and television did not replace radio, digital texts will not fully replace print texts

(or, perhaps more to the point, hypertexts will not replace linear texts). I want to argue, instead, that we should carefully consider how new information technologies—such as the Web, virtual reality, and online collaboration systems—can expand our understanding of what is possible in writing instruction.

This argument is not based on a rejection of what has been learned by past generations of writing instructors. As Johndan Johnson-Eilola (2002) observes, “At the risk of sounding middle of the road, I want to suggest that postmodernism is not about replacing the old with the new” (438). Instead, I am arguing for a postmodern sensibility that allows for openness to new possibilities. I am arguing that we should continuously challenge our (pre)conceptions of teaching and learning in an effort to strengthen the work that we do.

Paul F. Velleman, 1998 winner of the Educom Medal for outstanding contributions to improving undergraduate education through information technology, suggests a framework within which we might consider the role of information technology in our teaching and learning. “I think that IT [Information Technology] has great potential to improve teaching and learning,” he observed, “but only if and when the necessary investments are made to ensure that the technology actually enhances education rather than its simply being used to deliver the same old course or to substitute for face-to-face teaching” (Rickard 1999).

Making those investments will enable us to consider how the contexts within which we teach and learn are altered by innovations in information technology. It will also help us recognize how our instructional goals might account for those innovations. Most important, it will help us continue to help our students participate in and contribute to the discourse made possible by those technologies.