Strategies and Challenges in High-Tech Teaching

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In speaking of the futures of American Studies, it would be hard to exaggerate the importance of electronic media in the transformation of how and what we research and teach. One could argue that the Internet will have a greater impact on the future of American Studies than any development since, say, the Civil Rights and Women's Liberation movements or the advent of multicultural studies and postcolonial criticism. The Internet makes a meta-disciplinary intervention, given that its impact affects these past developments as well as every portion of the disciplinary field, and does so at multiple levels—of conception, of methodology, of pedagogy, of institutional formation, of dissemination, and of public perception. This technological transformation, however, may only be the surface effect or instrumental tool of a more basic effort to commercialize education (see, for example, the infomercial video about distance education narrated by the President of Southwestern Missouri State University featured on the university's home page). The Crossroads experiments I will highlight suggest that the use of technology for critical pedagogy can be a real alternative to this commercialization, as well as to more traditional banking pedagogies.

At dinner recently with some of my favorite English and American studies colleagues at another university, I casually mentioned having web sites for all my courses. They looked at me with a combination of puzzlement and amusement. Why would I do this? What's it for? And how can this be a priority when students still don't know the basics of intellectual argument or close reading? I have had enough of these encounters to expect them now, even as I continue to be surprised at the slow pace of change. Those of us experimenting with the use of computers and the Internet in scholarship and teaching can easily forget that even as

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our numbers steadily grow, there are still relatively few of us. Many if not most of our colleagues comprehend only vaguely the what or why of our doings, despite the thunderous media attention given to the Internet and the pervasive drone of campus administrators championing its use.

I like to compare this situation to that which developed around what we now vaguely call the "theory" revolution in the humanities. By the early 1970s there were early adopters of feminism, deconstruction, postmodernism, and antiracist scholarship posting their results in scattered sites around the country, often occasioning anger or dismissal from their colleagues and the media. Even as theory became a standard interface by the late 1980s, there were still many work stations that resisted it completely, many departments and courses and books and articles that showed no discernible influence of its impact. To this day there are theory Luddites who continue to condemn its advent and use, longing for the mythical days of uncorrupted aesthetic pleasure and unpoliticized intellectual labor. Though we may safely say that at the dawn of the millennium, theory has been mainstreamed into the disciplinary network, theory has also undergone relentless self-critique and self-transformation in the process of its uploading and dissemination, even as the resistant programs have in some cases remained impenetrable to its virus. Information technology is following a comparable path of self-critical institutionalization, while computer-phobic critics look back to a mythical past when technology did not play a role in the production, distribution, and interpretation of culture. In the borderland, some practitioners (one thinks immediately of George Landow) have insisted on the inherent confluence of poststructuralist theory with new media, hypertext, and cultural globalization. The discipline of American Studies is, as we all know, conducting a loud debate about which theory revolutions to advance, and how, in its future. That debate will have to include the information technology revolution as part of its agenda or watch as the future it imagines turns into a dead link.

Collegial incomprehension comes up regularly in many of the Crossroads case studies, documenting that a huge gap persists between the early adopters or cautious converts, on the one hand, and the mainstream of their institutions on the other. My colleagues' remarks about basic skills, however, point to a particular dimension of this gap, also cited by many of the case studies. Many faculty see information technology as at best an entertaining "add-on" that produces learning which could be done more easily and more cheaply through traditional means, and at worst, some-

thing that takes time and attention away from the essential pedagogical mission. No doubt the latter can happen. But the case studies regularly show a different, more complex and largely positive picture. Carefully conceived, high-tech teaching (for want of a better shorthand) increases the student's involvement in the key activities of our disciplines, from research and writing to critical analysis and close reading. High-tech teaching, however, is also time-consuming and expensive. Worse, or even better, it can force teachers to rethink just about everything they are doing in their courses.

The Crossroads case studies may be of great help in demonstrating to colleagues and administrators how intellectually and pedagogically valuable high-tech teaching can be. This recognition, however, will only succeed if it breaks through the common misperceptions about what high-tech teaching can and cannot do, or what it promises and does not promise. The confusion may be worse, moreover, because what many administrators want from high-tech teaching (lower costs, higher enrollments, centralized control, distance education) may be the wrong things, and what faculty fear high-tech teaching means is something they learn from the administrators who advocate it. As Mary McGuire sees it, "technology is being viewed all too readily as the classroom of the future by institutions and administrations quite willing to envision a future without tenured faculty, with low overhead, and with a huge return on investment" (335-36). No wonder faculty see a future of Internet pedagogy as an alienating nightmare or as a prescription for their own downsizing and eventual elimination. In other words, administrators and faculty may both envision the advent of "www.yourdiscipline.com," though the first group imagines this as an enrichment (in every sense of the word) while the second group sees it as a sell-out.

The case against the online onslaught has been famously and incisively made by David Noble in his 1997 essay "Digital Diploma Mills: The Automation of Higher Education" (widely available on the Internet, of course). Noble and his colleagues at York University went on strike to win control over the university's attempts to turn their courses into "courseware" and steal their intellectual property rights. For Noble all the rhetoric about improving the quality and access of higher education serves as a mask for the naked, profit-driven greed of commercialization. Companies help universities become purveyors of commodities through, not coincidentally, selling universities costly information technology products and services that eat up an increasing propor-

tion of budgets and student fees. Technology's appeal, in this account, lies in its capacity to turn universities into markets, intellectual capital into real capital, courses into commodities, and faculty into anachronisms. Noble sees the battle in Manichean terms: "On the one side university administrators and their myriad commercial partners, on the other those who constitute the core relation of education: students and teachers." This important critique deserves a wide audience, though I think it overstates the case and misrepresents what many teachers are doing in their classrooms. It also romanticizes traditional pedagogy, which is often nothing more than a low-tech version of clicking and downloading. Noble's account conflates all uses of information technology with the drive to commercialization of online courses, and thus ironically mirrors the administrator's dream. Meanwhile faculty and students have been busy creating alternatives that tend toward a different future.

In part I want to argue, on the one hand, that administrators need to learn much more about the difference between the use of technology for "delivering instruction" and the use of technology for education. This may, unfortunately, lessen some administrators' enthusiasm for high-tech teaching, especially when they find out what excellence really involves and costs. On the other hand, I want to argue that many faculty will embrace high-tech teaching when they find out that it does not mean what administrators say it means, and that it can in fact serve rather than enslave their pedagogical energies. I especially want to draw attention to the potential that computers and the Internet offer for revolutionizing the teaching of research. In case study after case study, the Crossroads projects show a remarkable realization of the often-deferred dream of making undergraduates partners, even leaders, in researching such fields as American history and culture and American literature. This development transforms students from receivers of information into producers of knowledge, radically altering the day-to-day practice of the classroom. The result can be the fulfillment of a long-sought change in pedagogical norms, away from hierarchy and passivity and regurgitation and toward a student-centered structure of active learning.

Let me begin with the agenda of administrators. I realize the term "administrators" involves a hopeless generalization across differences of institution and personality, but bear with me. I have attended enough conferences and meetings and read enough professional literature to have, I think, more than an amateur's understanding of the mission of the administrator. Don't get me wrong,

I don't hate administrators. Some of my best friends are administrators. Today's academic administrator, however, especially at the public college and university level, is under tremendous pressure to increase enrollments (and thus tuition revenues), cut costs, and attract outside funding. Technology holds out the promise of doing all these things, and so becomes a priority in and of itself, separate from any grounding pedagogical justification. The administrative mission, in short, differs markedly and increasingly from that of the average faculty member. This missionary position of administration orients much institutional policy towards information technology, whereas many early adopters of high-tech teaching begin with the mantra "pedagogy must drive the adoption of technology, and not vice versa."

From an administrative standpoint, technology promises the capacity to "deliver instruction" to huge numbers of students at a substantially lower cost, or to deliver instruction to student "markets" not accessible otherwise. Hence the boom in "virtual universities" and distance education. Early failures in the use of cable television seem not to deter the present excitement; indeed, I know of colleagues who are returning to the studio, now with courses enhanced by web sites where the viewing student can log on to commercially designed workbooks to do exercises related to the broadcast lectures. These experiments replay the problems inherent to distance education, specifically its tendency to rely on passive forms of instruction and its limited ability to create an interactive learning environment. (See the case study by Robbins and Pullen, whose critique of interactive distance video learning is sobering.) Counter-arguments rightly point out that much traditional classroom teaching has the same flaws, but this seems like a weak excuse for repeating those flaws over the networks. The Crossroads case studies repeatedly warn that high-tech teaching must be accompanied by transformations in pedagogical philosophy, for example, away from a delivery-of-instructional-commodity model and toward a student-as-active-researcher-and-learner model.

Administrators should be told, over and over, that faculty do not "deliver instruction," and that students are not "customers." What makes the student-customer analogy faulty? Unlike the customer who purchases a commodity or even a service, the student pays tuition and fees as part of a contractual arrangement whereby the student also agrees to perform certain tasks and to be measured by certain standards. When I buy a car or hire a lawyer, the salesman or attorney does not have the option of grading my part of the trans-

action or giving me an "F" when it is over. My obligations towards them are quite limited, and not subject to evaluation or criticism. But perhaps I am just hopelessly naïve, given the marketplace today in student applications and enrollment and the burgeoning of online courses. Who could deny that education has become commodified to an extent and degree unparalleled in history? Even if the student-teacher relationship governing the individual course does not resemble the supplier-customer model, this relationship nonetheless takes place within a larger context wherein the academic institution markets and sells such courses as its products. The Internet and distance education tend toward the conflation of these two dimensions, reducing the space between commodification and instruction until it sometimes disappears. Yet within many courses, information technology can work to subvert the commodity model and reinforce the student's activity as a producer rather than a customer of knowledge.

A strong contrast to the instructional commodity delivery model may be seen in Ivy Schweitzer's account of her women's studies course at Dartmouth College. Here the principles of interactive learning were enhanced by the principles of feminist pedagogy, with its emphasis on empowering voices, creating learning communities, recognizing diversity, and relating personal experience to scholarly inquiry (see also Barbara Ewell's study for similar comments). As a supplement to face-to-face teaching, virtual classrooms and online discussions expand the possibilities for student expression. "There are enormous advantages from a feminist perspective," observes Schweitzer, "to doing away with the traditional, physical classroom as the privileged site of academic instruction where a masculine ethos has, for a long time, held sway" (353). The course web site became, in Schweitzer's punning phrase, "a location of our own" where students posted reading responses, added new research links, and engaged in an optional open discussion forum. The "asynchronous interaction provided enough mediation to allow for more frank and energetic confrontations" and reciprocity than often occurs in a face-to-face classroom. Rather than merely delivering content, Schweitzer and her collaborators constructed an active learning experience in which the students bore much of the responsibility for the final result and engaged in sustained critical analyses of social and political conventions. Buckmire, Foreman, and Maeda's course on "Race, Gender and Justice" likewise adopts "new pedagogical tools that enable students to be conscious of their own roles in perpetuating or changing social inequalities" (319).

I fear that the kind of learning exemplified by Schweitzer's course is not what many administrators have in mind when advocating the use of information technology. When a new "state-of-the-art" building went up for our School of Business Administration, I was excited to hear that it contained many high-tech classrooms. Imagine my disappointment when I visited and found beautifully appointed lecture halls equipped with computer projectors. The pedagogical model behind these rooms clearly belongs to a very different pedagogical philosophy than that developed by Schweitzer and the other contributors to the Crossroads project. This built-in environment presumed the delivery-of-instructional-commodity model and the "banking" concept of pedagogy. There was not a single high-tech teaching classroom in the building where each student could work at his or her machine or in collaboration with peers and the instructor (there were very nice "computer labs" adjacent to the lecture halls, but these were open access units to be used outside of class). They now have a "teaching-classroom lab" set up in front-facing rows with an instructor's podium that can control all the machines if necessary.

My colleagues and I went back to the English department and designed our own space, based on models and criticisms available from early adopters in other humanities and writing programs. To make a 25 person high-tech teaching classroom, with computers for each student as well as a seminar table in the center for low-tech discussion, we needed a large space. Eventually we had to persuade the administration to give us two conventional classrooms, tear down the wall between them, and reconfigure the result. Those two rooms normally seated a maximum of 50 students total. Thus the new room represented a 50% reduction in capacity, hardly good news to administrative ears when classroom space is at a premium. After an expense of $125,000 we could deliver instruction to half as many students, plus incurring the long term cost of maintaining the computers. Since money to staff the room with an adequately trained monitor is not available, the room is closed when classes are not in session except if an instructor holds his or her office hours there, further increasing the overall inefficiency of the space from a bottom-line standpoint. Fortunately our administrators were particularly keen to fund high-tech proposals, listened carefully to our justifications, and fought hard in the end for our grant. In this case the promise of a "showpiece" project and of jump-starting high-tech teaching on campus helped our cause and pushed to the background the economics of the situation.

I give this example in part because many of the Crossroads projects either require or wish for such a teaching space. If high-tech teaching is to go beyond "delivering instruction" to become a truly interactive, student-centered, collaborative enterprise, it will mean building many more such facilities and transforming what we do on a day-to-day basis in our classes. The pedagogies now being developed (including online discussion, Internet research, web page construction, project presentation, writing to learn, etc.) cannot take place in a high-tech lecture hall or in a seminar room equipped with a single large computer monitor or screen. I have heard some administrators dreaming of the day when every classroom is wired, and faculty can just bring their laptops to class and show high-tech materials, as if this were a big improvement over lecturing from yellowed note-cards. Perhaps more importantly, providing each student a computer in the classroom overcomes the barrier of unequal access that still prevents many students from enjoying the fruits of the high-tech revolution; distance learning, in contrast, only reinforces inequalities.

A fundamental phenomenological change takes over when the students begin working in a hybrid lab-classroom. As more than one Crossroads investigator found out, students normally arrive before class, waiting to get in, and go immediately to the machines to check email, bring up a project, check the library catalogue or a web site, or hastily type up some notes before class. They naturally become curious about what the machines can do, become more relaxed with them, and often develop far more positive, and realistic, attitudes about technology. Their position toward learning becomes active, outward, and relational. The classroom becomes a place for getting things done, for learning skills, for exchanging information, for group work, for tutoring. A variety of activities can take place over the semester in the room, or even on the same day. Contrast this to the rows of largely silent students sitting before the talking teacher, or listening to those four or five students who always dominate class discussion.

One of the most interesting experiments I have designed involves what I describe as an "asynchronous, real-time online discussion." Students come to class and log on to a discussion forum hosted on the course web site, typically to find an assigned discussion question or to post their own questions. The writing part is much like email, with the student composing in a window, citing passages from the readings, editing, reflecting, and finally sending in the result. This compositional process, with students working at their own pace, makes the discussion technically asynchronous. But the

discussion is also simultaneous and real time, since everyone is writing within a prescribed period in class, posting frequently, choosing from and reading each other's postings, and creating an interactive archived discussion. Thus the structure of this activity borrows in part from the simultaneity of a "chat room" but mediates the process through the kind of compositional process typical of email or word-processing.

One of the first recognizable advantages of this exercise is that in an asynchronous but real time, in-class, online discussion we get 100 percent participation, often including eloquent compositions from students who are otherwise silent. As Ewell notes, "students frequently participate in these asynchronous discussions with greater involvement and more equality of access than in the classroom, where the extroverts and quick thinkers have distinct advantages over those who prefer to formulate their ideas more slowly or those who do not relish the spotlight" (107). Granted, when I first heard the idea of an online discussion in class, I thought it was crazy. The whole point of class, especially in an English or humanities course, was to get together to discuss things face-to-face. Of course this is largely an idealization except in very small seminars, and even there a minority of students actually speak regularly. I suspect that we often feel reluctant about cutting down on face-to-face exchanges not because this would deprive our students of a special learning opportunity, but because it would remove us, as instructors, from the center of attention or from the position of directing the discussion. After a few experiments, my students and I came to see the enormous advantage of these sessions (which we held about eight times during the semester). People came prepared with postings (usually because I gave them some kind of assignment in advance), read one another's with care, and wrote back at length (illustrating the virtues of a "writing to learn" pedagogy). Students who had rarely spoken in face-to-face situations wrote frequently, persuasively, and with a force that often changed the direction of class inquiry. Friendships developed in these exchanges that then blossomed outside of class. Women students in particular felt more free to express themselves. And students had the experience of creating an intellectual discussion largely in the absence of direct professorial intervention.

When I have made presentations about this discussion forum exercise, faculty have usually seen its virtues but objected to its taking place during class time. Why not use class time for face-to-face discussion and presentation, and reserve these online forums for out-of-class activities? Certainly this can be done, and successful-

ly (as a number of the Crossroads case studies show), and I have also experimented with email to accomplish some of the same goals. Yet there are real differences. Distance asynchronous discussions held over a protracted time lack the flow, spontaneity, pressure, and interactivity of real time discussion. They give the teacher relatively less control over the pacing of student learning, since they do not assure that everyone is prepared on the same day with the same material, as happens (ideally) with a classroom-based assignment. If conducted during a standard one hour and twenty-minute class, a real time asynchronous discussion of one hour or so can be followed immediately by a live twenty minute analysis of the conversation. For our forums I used a threaded, web-based discussion tool that produces a convenient table of contents that we can then review afterwards. As a teacher I can comment on the directions, strengths and weaknesses, and horizons of the conversations that developed. We can, as a group, agree (face-to-face) on what we need to spend more time learning, and what we don't need to cover again. Since the discussions are archived on the password-protected course web site, students can return to them anytime for review, and I have them available at grading time. I do not use such online discussion to the exclusion of "live" talk; indeed, we use about an equal number of days in which small group workshops discuss the readings and produce reports for discussion. This small group work can also be done in the computer classroom, with each group writing collaborative postings. In this way novice users of technology learn from others, just as keen readers teach the less perceptive.

I admit that some of these techniques and exercises, like many in the Crossroads case studies, could be adapted to a strictly online course or to classes that meet in conventional rooms. I would hope in those cases, however, that the lessons about the kinds of pedagogy that high-tech teaching can enable would not be forgotten. But what I have meant to emphasize with this story from my own teaching is, again, the gap between administrative models for high-tech teaching and the student-intensive, high-cost pedagogy that early adopters are pursuing. This gap may be further explored by looking at the way that high-tech teaching brings the pedagogy of research into the learning experience in radically intensified ways. I suspect that the most fundamental effect of information technology on teaching, at least in the humanities and social sciences, will be a dramatic increase in the teaching of research, and thus in the re-union of teaching and research. This development appears to be accelerating rapidly in the field of American Studies, where the

focus on primary materials—documents, diaries, photographs, statistical records, literature, etc.—fits almost too well with the Internet's capacity to deliver an overabundance of information from sites all over the world.

As John McClymer emphasizes in his case study, the ability of high-tech teaching to involve students in research allows us to assign what he calls "authentic" tasks, projects basically the same in aim and method as those undertaken by scholars. These would include tasks such as gathering primary materials, images, and statistics on a Civil War battle or women's poverty in Appalachia or the advent of the Beat Poets. McClymer dubs as "ersatz" learning the kind of snippets asked on exams, where students are pressed to give what they and their teachers know are stupendously reductive and clichéd answers. Such regurgitation presumes the existence of a secondary source narrative, usually a textbook in combination with faculty lectures, that presents an already synthesized account that may give little direct access to primary materials and demand little if any student analysis of them. Such pedagogy grew out of an educational past when primary materials were unavailable except to scholars, and even then often only to those who had the time and money to travel to remote locations where, with only a pencil allowed, they took notes on the precious originals. Today the information superhighway allows anyone with a decent machine to surf the archives of the Smithsonian, to view the artworks of hundreds of museums, to scrutinize the original manuscripts of authors such as Walt Whitman, to read and hear WPA collections of slave narratives, or to construct their own concordances through digital versions of hundreds of books freely found a click away.

As others have suggested, this abundance of material, combined with increasing access, means that the faculty member becomes less a deliverer of content than a designer of educational projects. The Crossroads case studies are notable for this project-centered approach to pedagogy, as students are directed to undertake, singularly and in groups, a variety of research activities involving authentic questions and authentic tasks. A good example is McClymer's course on "Women in the American Experience," in which students examined the online collection of *Godey's Lady's Book* in search of a poem and an illustration to help in analyzing the theory of the "woman's sphere." McClymer began the activity by first touring the site with the students, discussing with them methods for analyzing both literary and graphic sources, and providing them traditional background readings. Here he essentially

shared with them the work of the researcher and brought them into the process as partners, rather than lecturing them about the results of his own thinking (or someone else's) on the subject. He then gave them a guided exercise that combined technical skills and critical thinking with presentation design. Similarly, Melinda de Jesús led her students in the researching and designing of web site projects on Asian American Culture, culminating in a two-person collaboration on aspects of Asian American aesthetics. Her students gathered all kinds of literary, artistic, and historical primary materials, which they had to closely analyze in constructing the argument of their sites. Carl Schulkin made "novices in the archive" out of high school history students by assigning them the analysis of data on free antebellum African Americans found on the Valley of the Shadow site. These and other Crossroads projects (see for example Tracey Weiss's account of teaching the history of women's activism) consistently show that the rewards of becoming active producers of knowledge motivate students to learn information technology skills more quickly and, indeed, to see information technology as properly subordinate to learning rather than an end in itself.

The implications of these projects for course design and curriculum in American Studies (and elsewhere in the humanities and social sciences) are large, especially combined with the theoretical and critical debates of the last decades over the new history, the canon, and the social history of underrepresented groups. Scholars have made the case for a new history based on previously marginalized classes (women, laborers, rural workers, slaves, et al.), while literary critics have deconstructed and reconstructed the canon of "masterpieces" in similarly fresh directions. The result has been an explosion of hitherto unanalyzed primary material and the challenge of interdisciplinary study. Even as students and scholars were becoming exhausted retraining themselves and keeping up with the avalanche of scholarship, newly reprinted works, and proliferating fields of inquiry, along comes the Internet to accelerate the pace exponentially. The scholar's traumatic cry—"How can I keep up? And what interpretive stories can link this dazzling array of detail?"—is fast becoming the student's complaint as well. As we draw our students into an apprenticeship to research in our fields, we must expect that they will experience the same anxieties, frustrations, and intellectual and theoretical bafflement common to our disciplines. Our courses will become more self-conscious and self-reflective to the degree that they move away from the regurgitation of platitudes and toward the active investigation of problems.

Students will have to think along with the faculty about issues of method and analysis and access, about modes of interpretation and documentation, about originality and synthesis and presentation of evidence. Courses of instruction at the undergraduate level will move more away from "covering" prepackaged historical times, authors, and events and toward interdisciplinary projects of investigation revolving around currently disputed issues in the understanding of such things (and indeed, toward critical reflection on how we constitute these things which are our subjects of study).

In the teaching of literature, my own approach to the undergraduate introduction to criticism and theory now looks very different. One of my long-standing pedagogical goals has been to teach students to find and use secondary sources when they write essays in literary criticism. There are still many faculty who object to the use by undergraduate students of any outside sources or critical articles, and many students who prefer simply to "write what they think or feel" about a book or a poem or a play. I still get many students, many of them seniors, who have never used a secondary source in a literature paper and do not know how to find them. The reason this becomes an issue in a theory and criticism course should be obvious: the secondary sources demonstrate that there is no one "right" way to analyze a text, and that reading becomes more rewarding when we have a variety of methods at hand for interpretation. Students need to see and evaluate the differences produced when a critic employs a New Historicist or Marxist or Feminist or Psychoanalytic method. Learning about these methods in the abstract is of limited value to the literature student without some sense of their practical application. Thus the literature major needs to know how to "work up" the text at the library and, increasingly, on the Internet, finding primary and secondary sources as part of the project of the text's interpretation.

Once upon a time, the annual bibliography of the Modern Language Association appeared in hardcover annually, taking usually one to three years in documenting a publication. Scholars or students investigating critical approaches to, say, Louisa May Alcott's *Little Women* would take days to search these volumes, laboriously retrieving each heavy book, scanning its tiny fonts, writing down that year's possible entries, finding or missing related entries, returning the volume, retrieving the following year's, and repeating this search until dread or exhaustion defeated them. More likely they would work through the local library card catalogue by hand, and then comb the shelves for what might be in the stacks. Access would sharply determine what was found, unless

they had a huge budget of time and a very helpful interlibrary loan assistant. Finding collateral material on the Alcott family, on the condition of women in 19th century America, on girls' education in New England, on the history of the domestic novel, would involve parallel debilitating exercises. The successful scholar might well write a study or textbook eventually assigned or referred to in class, or become the indirect target of an exam question (such as "How did images of the machine and the garden display social tensions in the works of at least three major American authors of the nineteenth century?") In this paradigm students were the recipients, ideally, of the fruits of scholarship, and not workers in its fields.

Today my students can log on to the MLA Bibliography from campus or from home, and complete the compilation of a basic Alcott bibliography in a matter of minutes. They need to learn search strategies, some of which are specific to the content and field (for example, you'll do better to search for "Alcott and women" than for "Alcott and feminism," which says something about the continuing struggle of feminism in the discipline). They need to learn which journals are peer reviewed, what relative status publications may have, and, of course, which ones are at the library. They need to go to the library and actually find what is on their bibliography. Teachers know that getting students to go to the library remains a headache, even when working with senior English or humanities majors. They have been taught by many instructors that such research is not really necessary for the study of the humanities, which only requires an open mind, a good heart, and the willingness to talk eagerly about what interests you. Never mind that your conversation may be woefully uninformed, your analysis superficial, and your topic already well-discussed in a half dozen easily accessible places. Thus the importance of guided research assignments requiring the compilation and annotation of critical sources. Moreover, this kind of critical inquiry constantly foregrounds issues of authority, and so heightens student awareness about not taking any text—creative, critical, theoretical, electronic—at face value.

Rather than sending students back to the stacks, however, the Internet is fast taking another toll on library attendance, as more and more full text versions of critical articles and primary documents appear online. Our library web site includes the Academic Search/Ebsco database collection, which gives students access to thousands of essays and articles in the humanities. We also have Project Muse, the Johns Hopkins University Press collection of

electronic journals. Just using these two sites, students can, again in a matter of minutes, usually find and print out three to six good articles on most well-known authors and texts, often by excellent scholars in the field. Why drive to campus or walk over to the library to find additional hardcopy materials when these others are instantly available on the screen? My experience is that, of course, the amount of student use of secondary materials is in rough proportion to their ease of availability. The only way to prevent this kind of arbitrary sorting is to train students in the history of a text's or author's reception, so that they come to appreciate the tradition of scholarship, including what may only be at the library or, infuriatingly, available only through interlibrary loan (and how long until much interlibrary loan material is exchanged exclusively in electronic format?). With technology distorting the sample of research materials the student gathers, the teacher must redouble efforts to emphasize issues of authority and critical inquiry.

This is where a good project on the history of the scholarship on a particular issue in the interpretation of a work or author comes into play. This exercise reinforces a number of points. The variety of critical opinion has a history directly tied to history itself—to the events and issues of the time in which the interpretation or study was written. Differences in interpretation, then, may be more historical than personal. Certain methods of interpretation becoming standard today (such as feminism or critical race studies) make no appearance in prior standard treatments, leading students to question the authority of interpretive methods and the disciplinary history to which they belong. In sum, student researchers learn to think of the history of criticism and scholarship as a sustained conversation taking place in the real world, with actual interested and fallible participants. Such histories, moreover, cannot be understood only in the context of their disciplines, but rather also in reference to the politics of knowledge and the larger social struggles and historical developments conditioning intellectual inquiry. Students also learn not to enter the conversation blindly and brazenly, but to listen a bit first to what is being said before they speak up. They get a sense of what the conversation has already covered, and thus of what does not need to be said again, as well as of what the conversation keeps failing to notice. Perhaps they also learn why anyone would want to join this conversation, and what changes it can effect in themselves and others. And if in passing they learn to surf the World Wide Web, download the results, and put their analysis into a page with graphics and links, well, all the better too.

Knowing the history of the scholarship on a subject will prevent students from uncritically repeating "information" gleaned from nonauthoritative web sites. It will provide students with the expertise they need to judge the value of what they find on the information superhighway, much of which is road kill. Yet I feel I must add that this process could become a roadblock to innovation and a restraint on new knowledge, especially if we too quickly discount materials produced by people outside of mainstream institutions or authorized venues. This is a point stressed by McGuire in her case study, which shows that students perceived Internet materials as more accessible cognitively as well as technically, and as representing a much wider spectrum of views than were available from scholarly or authorized media sources. While we are constantly warned that the Internet is full of sites created by ordinary people with no scholarly expertise, we might remind ourselves that the ideological rhetoric of progressive American Studies champions the history of the ordinary, the overlooked, the marginalized, and the excluded. We busily hunt the archives of the past for their diaries, letters, memoirs, poems, tombstones, eating patterns, and all manner of data from which to reconstruct their experiences. Today some of them are on the web archiving their own experiences, thank you, though, of course, the inequality of wealth still mitigates against a whole democratization of the means of technological self-representation. In approaching the explosion of research and expression on the Internet, we ought not to contradict our progressive disciplinary rhetoric by instituting a set of limiting parameters that would arbitrarily stamp as "authorized" only those materials posted by dominant or traditional organizations or groups.

Now for some final reflections on the future questions posed by the Internet's impact on higher education. Even before we have finished agonizing about the imposition of a "corporate model" on the administration of institutions of higher education, and even as we fight against revenue-driven budgeting that assigns priorities largely on the basis of enrollments and outside funding opportunities, we now find ourselves facing the prospect of the university.com, which is to say, the development and marketing of higher education over the Internet. Take a look at the thousands of courses listed by TeleCampus or in Yahoo's directory of distance education sites or its online learning section (which also contains a blinking banner ad for the virtual University of Phoenix). Companies such as eCollege.com have already been hired by dozens of reputable campuses to manage the offering of their

courses and degrees in cyberspace. Campus officials are busy looking for faculty willing to be the resource officers for these enterprises, though, since this is the world of dot.com, marketing surveys have initially determined which courses and degrees will go online.

While I hate to feel left out, I am not at all sure we want to be in the business of www.americanstudies.com. Yet we are already part way there in the proliferation of Internet-assisted courses and web sites generated by teachers around the country. As it increases its use of information technology, American Studies needs to think of itself as having a two-faced relation to the world of dot.com. In one direction, many of us are already participating in the movement toward pedagogical incorporations of technology that resemble those advocated by the administrators of the university.com. How will our application of technology differ, if it does, from the managed and corporate inspired strategies of the for-profit enterprises now laying claim to cyber education? This practical and theoretical puzzle has its other face in the direction of American Studies' tradition of social critique. What kinds of critical analysis of Internet culture and Internet education will American Studies scholars produce? And how will American Studies methodologies and perspectives contribute to understanding and redirecting the force of information technology and computers as they spread ever more pervasively throughout American life? Along with the wonderful kinds of case studies the Crossroads project gives us, then, we still need studies of Internet culture that critique its social, political, and epistemological effects, especially in educational settings. These critiques, in turn, should become part of our pedagogical practice and reflections, turning the two faces of our concerns into a single, multiplatform interface that challenges the code of the operating system. Will American Studies 2000 run on the current system? The resolution isn't clear, so keep your search engines running.