
Case Study Using the Internet to Teach Communication Skills to the Novice

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Abstract

In addition to teaching students the value of collaboration and team concepts as preparation for the global economies of the 21st century, we also need to teach them effective use of new technologies. This article describes a semester project which used a three-faceted approach to introductory classroom Internet activities: electronic mail (e-mail), gopher search, and UNIX functions. Our purpose is to create an interest for further classroom activities, to describe how novice learners (ourselves included) progressed, to portray what we learned from this experience, and to offer some suggestions and caveats for other interested participants.

Introduction

As numerous commentators have noted, the importance of directing our instruction to the needs of students in the next century has become a paramount obligation of higher education. It is particularly compelling in the agricultural sciences and natural resources area. Students who once might have had clear expectations about returning to their rural communities and a predictable future, now must contend with the uncertainties and unpredictabilities of a career path that often is less clear and certainly more formidable than in past years. In pedagogical terms, this has meant that many students have had to rethink their academic priorities and have had to prepare themselves more broadly and globally for their future careers.

For instructors, the new challenge is to enhance student awareness and abilities in the new technologies, creating a classroom environment that is supportive, non-threatening and based upon an experiential approach to learning new material. Unfortunately, many instructors, desirous of incorporating new technologies into their classrooms, are themselves operating from a position of some discomfort. Introducing a new technology to students can be intimidating and a little disconcerting, especially when the teacher is more in

the learning mode than in a position of approaching the material from full knowledge and high confidence. Thus, the challenge for the instructor in getting started is to redefine the student-teacher relationship so that both students and teachers can approach these new applications as co-equal and simultaneous learners.

The proliferation of Internet technologies is so recent and explosive. Many instructors are no longer in the position of knowing more than their students. However, situations such as this can be treated as invitations for more open classrooms where this sense of "mutual novice" status becomes an opportunity ~ for considerable interactive learning among all members. Crucial to our notion of success, however, was never to lose sight of our relationship as co-learners with our students in a new learning adventure. Clearly, it re-defined the purpose of our assessment strategies in that we needed to become more fully sensitized to learning as a process largely achieved through repetitious practice and with a high tolerance to mistakes.

Project Goals and Objectives

The overall goal of our project was to introduce our students to Internet technology involving the use of interactive e-mail communication, gopher searches and limited UNIX commands. More specific classroom goals included:

1. To create a classroom climate that encouraged vigorous discourse communities.
2. To facilitate and improve student-instructor/student-student communication practices.
3. To empower students through assisting them in developing knowledge and abilities in the area of Internet technology.
4. To encourage students to examine their attitudes about technology and its role in a global society.

The objectives by which we hoped to achieve these goals included:

1. Development of assignments that focused on the integration of related skills: locating information, analysis of significant data, reporting in appropriate written formats and for specific audiences, and drawing relevant conclusions/recommendations.

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2. Creation of tasks that were realistic with practical applications and value issues incorporated.

Our pedagogical approach tended to be both pragmatic and eclectic but borrowed, as appropriate, from a social constructionist theory of knowledge. That is, we operated from the assumption that the matrix of thought is produced through the shared language of a community of peers. Stated more simply, we believe we are participants in an on-going, continuous "conversation" through which our participation actually facilitates what we come to experience as reality and experience (Bruffee, 1986; Faigley, 1986).

Project and Assignments

The project was conducted with approximately 60 undergraduate students enrolled in a basic technical communications course. Assignments covered three basic Internet functions: electronic mail, gopher search and UNIX commands. Through a pre-instruction survey, we learned that most students would come to the course with computer experience, but most had little or no experience working with the Internet. Taking this inexperience into account, assignments were designed to progress developmentally from basic tasks (exploring various system menu items) to more complex tasks (revising and redesigning an e-mail/Internet manual for other technical communication students who would work with Internet). Each student was assigned an individual account on the campus computing system for use throughout the semester.

Electronic mail (E-mail)

The first component introduced in the course was e-mail, which has been called "the communication tool of the 90's" by McCaslin and Torres (1992). We provided basic in-class instructions on how to access e-mail but did not provide for much in-class practice time. Students were expected to practice at various centers around campus at their own convenience. We did design exercises which encouraged students to explore the Internet on their own terms; the e-mail journal became a critical tool in encouraging independent exploration of the system and student attitudes about the technology. The following excerpt from one student entry demonstrates how a vigorous discourse community could begin at the same time individuals became more empowered to participate:

In class, it was almost as if people were afraid to let others know their feelings on our discussion topic. However, when reading everyone's journal entries, I saw a wide variety of opinions written in great detail. It is sad to say, but some people communicate better through e-mail than face to face. . . . E-mail does add a lot to the communication process in class. . . .

The E-mail journal was set up with a distribution list similar to a listserver. Each week the instructor prompted a topical discussion related to various aspects of technology, rang-

ing from newspaper opinion pieces, for example, which advocated pen-and-paper writing over word-processing to discussions about technology creating a new underclass in our society. Once topics were assigned, students had one week to make their response and forward it, via the distribution list, to the class and the instructor.

We did not overly concern ourselves with evaluating these journal entries for grammatical and surface-feature correctness (spelling, punctuation, etc.). E-mail, generally, assumes a more casual standard than other types of documents. Rather, our criteria applied to length and timeliness. Credit was given for the weekly entry to be completed and distributed by specific dates according to prescribed screen lengths.

Important to the distribution process was our insistence that discourse in this class was, by definition, public rather than private. E-mail documents, once distributed, take on the nature of public rather than private discourse, which implies, of course, that one must practice a degree of caution and circumspection with respect to content and style - as is appropriate to any professional work-place situation. And, in order to facilitate a degree of interactivity, we asked our students to make some reference to other student comments as part of their own response. We found that this practice continued throughout the semester and tended to give students a growing confidence in their own voices and opinions as the semester progressed. We suspect one reason for these vigorous interactions had to do with the non-threatening social contexts we had created for the construction of new ideas.

E-mail was also used as a communication tool among students and between students and the instructor. Students would communicate anticipated absences, request clarification of assignments or exchange greetings. There was a distinct, increased interest in communicating with friends on other campuses via this method. Frequently, students were complimentary and appreciative of receiving instructor-responses to inquiries on a same-day basis. One instructor, using a modem, was able to access her on-campus messages from home and respond accordingly and at her convenience.

Gopher search

Gopher search was the second Internet component introduced to students in the project. As an initial assignment, students were provided with step-by-step instructions for accessing U.S. census data about their home counties stored on a University of St. Louis (MO) gopher system. Once the data was accessed, the students were instructed to identify salient statistical data, analyze its potential meaning and significance and then, drawing appropriate inferences and conclusions, produce a memorandum report that reflected both useful generalizations and suggested predictions about their home county demographics. Obviously, such an exercise as this challenged students in several important areas of cognition as well as gave them good practice in the preparation of formal written reports.

Again, two student's journal entries reflect something of the added insights we were hoping to see demonstrated:

One of the facts that surprised me was the number of poor people in my county. In 1980, there were 83 people living below the poverty line. In 1990, however, there were only 53. I was surprised that there were even 53. It's difficult to tell the 'poor' people in [my] county because every one looks after everyone. I have never known of any homeless or unemployed people in the county. If people there do have a lot of money, it doesn't show. They invest most of it fight back into their ranches.

The part of the census data that I felt was interesting, but yet I wasn't shocked by, was the numbers of minorities living in my county. I have always known that there were not too many minorities in my community. When I saw that we were 99.5% white, it just basically proved that fact to myself. In a way that saddens me because the people that never leave the area and experience the world will always have certain bias [sic] towards other people.

UNIX Commands

A third area of Internet activity which we introduced involved basic UNIX commands, specifically "finger" and "talk." When used in combination, these two commands allow you to determine who is logged on to any Internet system, then to connect with someone for a real-time, on-line discussion. These tools proved valuable for instructors because we could "finger" our home system to see if any of our students were logged on, then connect with them for a brief on-line conversation.

Major Project: Designing an Internet Manual

As a means of encouraging students to synthesize their new knowledge of the Internet with principles of technical communication, students spent much of the last part of the semester writing a manual which will be used for students in future sections of our course. This project involved students working as collaborative teams (three or Four students per team). Initially, teams critiqued an existing manual developed by staff in the Computing Resource Center (CRC) for Internet users. Then, using the CRC manual as a resource, and drawing on their own experiences, each team produced a more user-friendly and coursespecific document for beginning technical communication students. This project was encouraged by the CRC staff, who expressed a strong interest in reviewing these student manuals for the purpose of helping make their own documents more relevant and audience-centered. We continued to emphasize the project's practicality and usefulness to our students, encouraging them to think in terms of a product that would be actually used by other novices like themselves.

Analysis

Based upon course evaluations, careful observations and other kinds of anecdotal evidence, we believe the project met the stated goals and objectives. The creation of a vigorous

discourse community was clearly evident; students had opportunities beyond the classroom, with its primary emphasis on orality, to engage in another forum for conversation. One noticeable observation we made was the identity people develop over E-mail in conjunction with the roles they assume in the actual classroom: that is, the persona reflected via electronic media can stand at considerable variance from that reflected in the classroom. Students also tended to write longer journal entries via e-mail than had been our experience with more traditional journal writing. Most entries averaged two-to-three screen lengths in lieu of the required one screen length. And students also tended to turn entries in earlier than the due date, suggesting perhaps an interest and enthusiasm in simply working the new technology. Our observations here are consistent with what other researchers have reported from work in computer-assisted learning (Montague, 1990; Holdstein and Selfe, 1990; Handa, 1990).

Learning and writing about the Internet was the most valuable component of the course to most students,. However many expressed a ready willingness to experiment beyond the parameters of the syllabus and an eagerness to explore other gophers and listservers within their own disciplines. One student, initially fearful of computers, mentioned his gratitude for the opportunity to become more knowledgeable about computers and Internet through this course. Not one computer science course was required in his major.

Throughout the course we consistently examined technological issues through multiple frames. We felt it essential to have students contend with larger ethical and values issues at the same time they were learning the basic skills. For example, students debated the confidentiality issues relating to the uses of e-mail versus other forms of communication. They were disturbed to find that e-mail provided little assurance of privacy and confidentiality. Again, this merely emphasized the need for caution and a sense of professionalism in their messages and underscored the public nature of much of our discourse.

Strategies and Implications

While our own technical knowledge of the medium was initially cursory, we discovered that technical assistance through our campus computing resource centers was readily available. We would suggest that anyone interested in replicating our experience should include computer-resource staff in the planning stages of the project. Establishing these early relationships will, in all likelihood, help avoid certain glitches and lessen others. Our experience was always positive in our frequent use of these services. Our classes were not taught in a computer lab, though labs were available to us on an as-needed basis.

Another advantage of integrating Internet technology into your course plan, is that it is readily adaptable to nearly all disciplines. Internet resources provide a valuable research tool which extends well beyond most library resources for up-to-date material. The Internet allows immediate access to many experts in numerous disciplines, library resources at better

equipped colleges and universities, and texts which are in the pre-publication stage. Discipline specific assignments which are similar to the Internet/e-mail manual our students produced might include preparing a guide to gopher data bases which hold valuable information for students studying corn production, compiling a list of listserver devoted to horticultural topics or developing a guide to news groups which focus on biotechnology.

By taking advantage of Internet technology, students also have the ability to take a more active role in their learning. Rather than passive recipients of knowledge, assignments which place students in the role of instructor are easily developed. For example, rather than having students merely report on a topic they have researched, students can instead lead an instructional session where they teach other class members how to access subject-specific information via the Internet. The key is to use the technology to enhance the subject matter you usually teach, not to allow the technology to become the focal point of the course.

References

- Barkley, A. (1991)"What Skills Do Graduates Need?" *NACTA Journal* 35 (1), 5357.
- Bruffee, K. (1986)"Social Construction, Language, and the Authority of Knowledge: A Bibliographical Essay" *COLLEGE ENGLISH* 48 (8), 773-790.
- Faigley, L. (1986)"Competing Theories of Process: A Critique and a Proposal" *COLLEGE ENGLISH* 48 (6), 527-542.
- Foster, R. and Joost J.J. Pikkert (1991)"Perceptions of Agriculture College Faculty Regarding Integration of Higher Level Thinking Skills in the Curriculum" *NACTA Journal* 35 (4), 23-25.

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- Handa, C., ed. (1990) *Computers and Community; Teaching Composition in the Twenty-first Century*. Boynton/Cook, Portsmouth, NH.
- Holdstein, D. and C. Selfe, eds. (1990) *Computers and Writing: Theory, Research and Practice*, Modern Language Association of America, New York.
- McCaslin, N. and R.M. Torres (1992)"Computer Network Use Expands Teaching and Learning Opportunities" *NACTA Journal* 36 (2), 20-22.
- Montague, M. (1990) *Computers, Cognition and Writing Instruction*, State University of New York, New York.
- Whaley, D, J.C. Heird and J. Pritchett (1994)"Taking the Pulse: A Case Study of Undergraduate Agriculture Students' Opinions" *NACTA Journal* 38 (1), 37-41.
- Williams, C and J.G. Harper (1994)"Case Study: Strategies for Creative Writing and Team Activities" *NACTA Journal* 38 (1), 19-22.
- Zimmerman, A. (1991)"Journal Writing for Technical Courses in Writing Across the Curriculum" *NACTA Journal* 35 (2), 24-29.

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