

12 E-mail in an Interdisciplinary Context

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Introduction

Cynthia Selfe and Gail Hawisher have argued that the stories we tell one another about our successes using new technologies in the classroom tend to blind us to actual or potential failures, as well as to the possibility that all this new technology can serve in many ways merely to reinscribe the worst aspects of traditional education. Selfe and Hawisher worry especially that the plethora of success narratives found in the literature might forge an unconscious link in our minds between, for instance, networked classrooms and progressive or liberatory goals (Hawisher and Selfe 1991, 56). They are quick to point out that there is nothing inherently progressive or liberatory in these new technologies, and, in that light, they call both for continued critical reflection on how we use computers in the classroom and also for more balance in our storytelling. Accordingly, in this chapter, I will describe using e-mail in a writing-across-the-curriculum setting—a use, I think, that failed—and offer critical reflection from my and my students' perspectives on why e-mail did not work for us and how we might improve its use in educational settings.

The Class(es)

During the past two years, humanities and biology faculty at Michigan Technological University (MTU), with support from their departments and the university administration, have twice tested what began on the drafting table as a version of writing-in-the-disciplines—intensified writing instruction in conjunction with a first-year biology course—but which later evolved into a more fully interdisciplinary educational experiment. Initially, the idea was to link five sections of Humanities 101 (our first-year rhetoric and composition course) with Biology 101 (a lecture and lab course required of all first-year biology majors), and to place all of the first-year biology majors into both classes, in order to

create more space and time within which to study—with the biology students—how biologists write and communicate. But as we worked through our reasons and motivations for engaging in the project, we began to see broader connections—as well as “productive tensions” (Leff 1987, 35-36)—between our respective disciplinary goals, which led us to realize that we were integrating more than the skill of writing with the study of biology (Mahala 1991; Russell 1992). We were, we found, integrating two worlds of activity: two ways of teaching and learning, and two sides of campus with different histories. In the spirit of our shift into working more consciously with those broader connections, we decided (the second time we offered linked classes) to connect our students via e-mail in order to create a social space with the potential to enhance the interdisciplinary atmosphere.

Since our courses were not computer-based by design, the possibility of, and possibilities for, using e-mail came to us slowly and incompletely. Past research in computers and writing had suggested to us that an e-mail list might serve several useful functions, especially in an interdisciplinary context (Hawisher and Moran 1993, Herrington and Moran 1992): a list might broaden and complicate the social dimension of the educational process, enhance collaboration and invention (Herrington and Moran 1992), provide a less threatening forum for some students—especially those who are traditionally underrepresented in the sciences (Spanier 1992)—and create a flexible, ambiguous space in which students could discuss questions such as what it means to “become a biologist.” Computers were neither our original nor our primary focus for these courses, however, so our goals stayed within that list of possibilities, but not as clearly articulated as they should have been—the consequences of which will be discussed below.

The First E-mail Assignment

We gave two assignments connected with the use of e-mail: (1) an assignment that linked a small group of students from one section to another small group in another section, via a “list”; and (2) an assignment that asked the biology students in the “honors” section (HU 101H) to act as participant-observers and to evaluate the successes and failures of the e-mail discussion format. We based the grades for the first assignment on the frequency of each student’s entries—we asked for at least two a week—and on the quality of their entries—we asked them to turn in, at the end of the quarter, four entries they felt represented their most thoughtful contributions to the list-discussion and to briefly explain why they chose these four. The students in the honors section were told that their projects would be graded on the design of their evaluation procedures and on their follow-through, analysis, and recommendations. I will here describe the

first assignment, and in the following sections I will describe the second assignment and what we learned from it.

Since we wanted e-mail to serve as a forum within which students could talk about the connections between humanities and biology, or about issues that might come up in biology lectures or in their humanities classes, we kept the groups small enough to allow sustained discussion of the issues, and we linked groups from different sections to encourage them to compare experiences from what might be different classroom perspectives. We had arranged for biology lab groups to stay together in their humanities classes, so each of our five humanities classes was composed of four or five lab groups, depending on enrollment. We then set up twelve e-mail lists that linked each lab group in one class to a lab group in a different class. As biology majors, the students have access to a computer lab on campus, so all they had to do was to stop in regularly, check their mail, and respond. Some of them were already online; others had to learn how to open up e-mail and join a list.

Once everyone was securely online, the instructors then offered a series of prompt questions, a new one each week, in order to facilitate discussion but with the explicit proviso that students should “feel free” to move beyond the prompt questions into other areas that concerned them. We tried various kinds of prompts, from specific questions asking why students thought scientists used the passive voice so much, to more open-ended questions about the ethics of secrecy (governmental and economic) in scientific research and about what it means to “contribute” to science.

As said, we instructors were new to the pedagogical uses of e-mail, and we were redesigning other aspects of our integrated program at the same time we planned this first e-mail assignment. We thus made what seems to us now some bad decisions, such as to initiate discussions ourselves and sometimes either to “lurk” or to participate on the lists. That those decisions were problematic became clear during the quarter as some students complained or resisted the assignment, but the full extent of the problem only emerged as the honors section prepared their final reports, the conclusions of which will be discussed in the following sections.

The Second E-mail Assignment

The idea to have the honors section perform an evaluation of the e-mail assignment came about indirectly. Students in honors sections at MTU are required to do a research project in order to justify the extra units they receive for the class (and to justify their exemption from further first-year writing requirements). We wanted to make sure the added project would not interrupt the goals of our course, and it occurred to us that if we asked the honors students, as their project,

to evaluate the effectiveness of the e-mail assignment and make suggestions regarding changes, they could contribute to the experimental nature of the course and stay engaged with the other sections. We were careful, needless to say, to explain that they were evaluating the assignment, and not the other students.

From the start the evaluation assignment went well because the students, as one said, “had complete authority over its design and operation.” The authority I exercised was to ask them to work collaboratively in their lab groups: they were to invent a way of assessing or evaluating the effectiveness or usefulness of using e-mail as we used it; to write up a proposal describing their planned assessment and present it to the class for feedback; and to then perform the assessment, write up their results, and turn them in at the end of the quarter. When they asked me how to start, I suggested they might “brainstorm” as many different possible goals that might be accomplished by using e-mail in this way, and then invent different ways they might go about determining if we achieved those goals.

The Second E-mail Assignment: Student Evaluation Procedures

The most pivotal moment in the evaluations assignment turned out to be when I refused to articulate my version of the goals for which the students should test. As I explained, this was their assessment and by articulating the goals for themselves and by coming up with their own ways of measuring success, they would determine how we see and understand the results and thus ensure, as best they could, that we make the changes they deem necessary. I hoped they would discover as a group the connection between choosing one’s objectives and defining the range of possible outcomes.

The first indication that the evaluations assignment would be successful came when the groups first presented their proposals in class, and we listened to the range of potential goals and the different, creative ways they suggested for testing their achievement. The groups quickly focused on dimensions of the e-mail assignment we instructors had overlooked or assumed were unimportant. For example, their lists questioned the quantity, quality, and pacing of the prompts, the weekly time frame we had established, the effects of teacher participation, and the virtual isolation of students at their terminals. The students also proposed to investigate the quantity, quality, and pacing of the responses, the role that different student backgrounds might play, the nature of e-mail as a medium of communication, and the connection between the e-mail assignment and our interdisciplinary goals.

The methods the students used to answer the above questions also varied. Some groups relied primarily on numerical data. For instance, one group joined all of the e-mail lists and counted the number of responses per prompt, per week, per person (no names were used), and then looked for discourse markers

to determine the degree of disagreement present on the lists and the extent of cross-referencing. The groups sent questionnaires out over e-mail (which had them questioning whether their actions would affect what they were trying to observe); they designed intersubjective ways to judge the “quality” of the discussions (such as “intensity of expression” and “connection to what had been said by others”); and they conducted written, oral and online interviews (and designed “before and after” surveys) to inquire into the backgrounds of students, their previous experience with e-mail, their evolving interest (or disinterest) in the assignment, whether e-mail helped with shyness, and so on. Finally, one group chose an extreme participant-observer strategy: they joined in various discussions and used charged language in order to test the effects of strong emotional display on e-mail discussion.

The Second E-mail Assignment: Students’ Results, Conclusions, and Suggestions

The students’ results reconfirmed observations by now familiar in the literature on networked classrooms and e-mail. The students reported that when they conducted their interviews, other students quickly said they felt less pressure or in a better position to respond over e-mail than they did in face-to-face classroom discussions, even though in some ways they missed the responsiveness of face-to-face conversation; the other students also said they were uneasy about their instructors’ presence on the list. The students’ results questioned the parameters of e-mail exchange in other ways, as well: they reported the trouble some students had finding a balance between emotional display and intense engagement, their trouble deciding how much or how little to write (what the “essence” of an e-mail message is), and their frustration with having to wait “sometimes days for a good response.”

The students’ strongest conclusions directly targeted our use of prompts, including their form, content, pacing, and above all, the way they positioned students. The evaluation reports all indicated that students across the lists felt stymied by the prompts. Students felt out of control, able only to respond to what instructors had initiated, yet somehow “expected” to do something more. They felt the instructors’ presence(s) everywhere and nowhere, and so our intentions to use e-mail to free the students not-so-paradoxically placed them under even greater burdens—what were they to do, given that they were still “just students”?

In response to these problems, the honors students made two suggestions: first, that e-mail participants play more early on, perhaps exchange names and create “faces” or persona for self-conscious exploration of different communicative possibilities (for instance, one student said she “kind of enjoyed” being “the mean one” for a change); and, second, that we find ways to encourage “spill-over”, a chance to move discussions beyond the bounds of e-mail: “an-

other reason we believe the secrecy prompt [one of the prompts used to initiate discussion and mentioned earlier] was so successful was the discussion about this issue in class.”

Instructors’ Results, Conclusions, and Suggestions

There were serious flaws in our use of e-mail (though fortunately we did not base the success or failure of the entire humanities/biology project upon it). The instructors agreed, in other words, with the conclusions reached by the honors students. We had anticipated that students would collaborate, working thickly through questions, issues, and matters of concern connected to class. Instead, as the assessment groups reported, the interactions between students on e-mail were caught somewhere between “epistolary” and off-the-cuff, neither of which were conducive to what we had hoped for. The students felt out of control because they *were* in fact out of control—because we thought e-mail in and of itself would provide the proper social and interdisciplinary space within which they could come to terms with our course(s).

But what we had hoped for did indeed show up, through the second assignment, and in several ways. First, the second assignment contributed to the interdisciplinary goals of our curricular experiment: the assignment encouraged the students to merge their methodical tendencies and previous scientific training with a subject matter—social and academic communicative interaction—that did not easily adapt itself to quantitative or scientific methods of measurement. As one student explained to me, “This was difficult because we could not just measure success like we could measure data in our experiment. We had to change the way we thought about what experimentation was before we could even start.” We had several good discussions about the desire for, problems with, and limitations of “outcomes assessments” throughout the quarter, as an unexpected byproduct of the assignment.

The first suggestion I pull from this experience, then, is that “. . . a pedagogy that includes e-mail will be inevitably project oriented and perhaps cross-disciplinary . . .,” as Hawisher and Moran predicted in their article “Electronic Mail and the Writing Instructor” (1993, 633). The connections between cross- or interdisciplinary education and project-based instruction have already been worked through at a number of educational sites, as Julie Klein so thoroughly documents in her 1990 book, *Interdisciplinarity: History, Theory, and Practice*. Many of the problems that our Humanities/Biology students stumbled across (as a result of our decisions)—problems regarding the loss of face-to-face orientation and the odd intimacy of e-mail exchange, problems stemming from the awkward timing between “send” and “reply,” and problems with placing the whole e-mail exchange in a larger picture—can be alleviated in part by integrating the use or uses of e-mail into a larger project.

But there is also a second set of observations I would like to make, coming out of the second assignment. The instructors—and the students—all agreed that the students' evaluation process embodied, in several ways, what we finally came to see was most missing from the first assignment. The second assignment gave students a stake in the assignment itself and a critical angle on what was happening. There were of course flaws in the evaluation assignment, but they were more self-correcting than the flaws in the e-mail assignment precisely because the evaluation assignment, in its goals and design, elicited from the students a greater degree of critical involvement. The worst overall mistake we—I—made, then, was to limit access to such a critical angle only to “honors” students, thereby reinforcing what is already more than a questionable institutional division.

The main suggestion I make for any use of e-mail, then, is to build a critical dimension into any project or assignment involving e-mail, not necessarily as we did here, but in one fashion or another. It might be as simple as beginning the course, as Ira Shor in *Empowering Education* (1992) so passionately argues we do, with a critical discussion of the educational choices being made, i.e., the assigned use of e-mail. Perhaps this could become the basis for the first e-mail exchange—just so that it becomes clear to the students that what they, together, say they want to happen can happen, if everyone is willing to think it through together, listen, and adjust.

The conclusions we all reached, students and instructors together, thus show us even more what Selfe and Hawisher were arguing, that e-mail in itself, or in isolation from other teaching and learning strategies, is not necessarily empowering or liberatory. E-mail, in short, is a means to an end, not an end in itself, pedagogically or otherwise; it can, as we originally assumed, provide a less threatening forum within which students produce knowledge together; it can become a flexible, creative space within which students invent solutions to problems; and it can enhance the social dimension of the educational process; but it can just as easily become a tool for education as usual, by positioning students passively, uncritically, and without ways to resist or respond imaginatively to the assignment or to the framework within which the assignment unfolds. E-mail, in other words, is a possible strategy within an experimental or liberatory educational program, but not a strategy for empowerment in itself.

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