The idea of setting up a computer center in the Creighton University English department was conceived in 1982 shortly after the department chair purchased his first computer. A committee on the relationship between the computer and English composition was established. In 1987, a proposal for 30 computers and 15 printers was turned down by the administration, as were later proposals. In the fall of 1990, a director of composition and chair of the composition committee was appointed to develop yet another computer plan. This plan for an English Computer Lab (ECL) which would focus on the teaching of writing involved the development of a composition program centered on the computer and located in a dedicated, networked classroom. A new Dean of the College was computer literate and enthusiastic and ready to put discretionary funds into the program. However, educating other communities in the university about the program was difficult and their interference in the form of lack of understanding, lack of cooperation, and general distrust of the new ECL community was maddening. Despite this, the project, with the Dean's approval, has gone forward. A computer room was found which, while not ideal, is functional and (most important) is under the department's control. A consultant was engaged whose usefulness lay in acquiring prices for the workstations and installing the network software, not in choosing applications software and pedagogical approaches. Many quick lessons were learned about the functioning of such a computer room. Hardware and software problems also occurred. After the first week, the students and faculty reacted enthusiastically to the computer writing classroom. Concerns for the future include: mundane repair and replacement, administration, expansion, extrapolation, and spreading the word to the rest of the university. (RS)
While computerized classrooms are no longer unheard of in American higher education, such facilities are still far from the norm, and ones dedicated to the teaching of composition rarer still. Having in the last year established such a facility at Creighton University, we would like to share our insights and conclusions which might be useful to those contemplating a similar move.

We have divided our presentation into nine parts:

1. The Growth of an Idea
2. Softening up the Administration
3. Writing a Proposal (Reshaping the Concept)
4. What Happens When You Get the Go Ahead
5. Surviving the Building of the Facility
6. Now You Are Up and Running
7. Now You Are Not
8. It Works! Student and Faculty Reactions
9. Where Do We Go From Here?
In each part, we'll discuss what impact we were trying to have on the University community, the elements of that community we interacted with, and how we dealt with--and are dealing with--those communities. In doing so, we'll try to show you that the process of creating a facility devoted to the creation of texts is very much like the creation of the text itself--recursive, full, as Peter Elbow states, of stops, starts, dead ends, and aimless rambling (on the part of others). We'll also try to show that, like a well-crafted text, it ultimately gives pleasure to more than just the author(s).

1. The Growth of an Idea

The idea of setting up a computer center in the Creighton English Department was conceived in 1982 shortly after I purchased my first computer, a KayPro CPM machine, which was a wonder in its time, and which worked so well that I have found it difficult ever since to think about writing in any conventional fashion. The advantages of composing on a computer were immediately apparent to me: a) the speed of recording ideas and correcting mistakes, and b) the ease and speed of revision. These basic characteristics alone were enough to make a permanent convert of me, and I went about preaching to my fellow faculty members the desirability of acquiring a computer.

A. Read as much as you can about hardware, software and
Shortly thereafter, the necessity of introducing our students to the same advantages of using the computer in the composition process became apparent, and during the winter of 1982-83, the English Department established a committee on "the relationship between the computer and English composition," which proceeded to steep itself in hardware and software information.

Recognizing a need and establishing a committee are, however, not the same as actually doing something to introduce students to composition on a computer, and in the winter of 1983-87 this same committee was still drafting proposals, which we felt at the time still placed us behind the curve in the development of computer writing skills.

B. Give the idea time to mature; don't commit to a system too soon in the process.

Still, although this may seem an inordinately long maturity time, given the state of the technology in the beginning and the recent acceleration in development, I believe we would now be unhappy to have committed too early to an inadequate system. Reading and classroom visits revealed the fact that systems existing at the time amounted to little more than exercises in keyboarding and that there was little useful instructional material.
2. Softening up the Administration

Our first proposals were modest: we merely wanted to establish a small center consisting of a half-dozen or so 8088 machines on which students could be introduced by their instructors to word processing as a part of their composition program. It was intended that the center should be available to students at other times for their use in writing English compositions. We wanted to get the administration accustomed to the idea that composition, just as much as accounting, could be enhanced with technology. At the time, most administrators had little, if any hands-on experience with computers and tended to see them as frills in such areas as composition. Nevertheless, administrators are of necessity an intimate part of the development process and need to have compelling reasons for going along with you. They must be convinced that they should divert money from other programs to yours--money is always diverted from a competing program; there is no such thing as free money. At this time, our College of Business Administration had its own computerized classroom for the teaching of accounting and the University had established a computer user room with some 30 IBM compatible machines with hard drives, but our writing students had no access to the Business College center and instruction on the use of computers in composition was next to impossible in the
By spring 1987, we had raised our sights; the proposal which we then submitted to the administration involved 30 computers and 15 printers. Allowing for down time, this would make it possible for entire classes to be introduced to computer work at one time. The total estimated outlay was in the neighborhood of $25,000. This proposal was received kindly by our Academic Vice President, who complimented us on its quality but declined to fund any part of it.

We reacted by scrounging as much as we could from our departmental budget, which in fact did not even have an equipment line. The then Acting Dean of the College also donated several machines. Over a period of three years, we did manage to accumulate six computers and three printers which were used by some of us to introduce our students to Word Processing techniques. In fact, I had been requiring my composition students to buy an inexpensive word processor, usually Norton Textra, since 1987, and to turn in all their compositions on disk.

In 1989, we wrote up a grant proposal which was not funded, principally because granting agencies no longer regarded such computer centers as being on the cutting edge. In January of 1990, one of our Computer Committee members proposed in
desperation that we divert $5,000 of our library budget to the purchase of computers for a period of four years. I was not wildly enthusiastic about this, and the department did not pursue it.

At this time, we were in the process of filling three new tenure-track lines, one of which, it had been determined, would be in rhetoric and composition. At the time, we had no Director of Composition, and it was my intention to appoint this new faculty member to that position in the fall of 1990. It was my belief that direction of the composition program in general and computer development specifically was not being done adequately by a committee. Part of our failure I suspected was in not devoting enough time and attention to this task, which was just one more job to the members of the committee who were already heavily committed in other areas. Thus, when Bob Whipple joined us in the fall of 1990, I appointed him Director of Composition and Chair of the Composition Committee, and charged him with the task of developing yet one more computer plan.

3. Reshaping the Concept

By this time, I had begun to suspect that we needed to be bolder in our approach. Up to this time, we had been looking at a Computer Classroom facility as an adjunct of the regular classroom to which classes would be brought for occasional
instruction. What happened next was a major reshaping of the concept. One of the obstacles to development of a Computer Classroom was that we didn't really have room for it.

Classroom space on the Creighton Campus is at a premium, and the space available in the department, while adequate for a small demonstration laboratory, was completely inadequate for a full-scale classroom. Furthermore, neither the Dean of the College nor the registrar would consider taking a classroom out of the current pool and dedicating it as a Computer classroom. It dawned on me, however, that the space problem was more apparent than real, an artifact of our modest approach which envisioned us using the usual number of classrooms for composition and requiring an additional dedicated classroom into which our students could be shuttled on occasion. There would be no space problem if our computer classroom was our composition classroom.

It was true that we couldn't teach all our composition classes in the computer classroom but we could teach twelve to fourteen classes a week there and make the use of the computer the centerpiece of at least one strand of our composition program. The space problem evaporated at once, and I began scouting for a suitable room.

Second, Developing Technology: Networking had at this time grown from being esoteric to being within the reach of a program
such as ours which could not afford to maintain a full-time
computer professional, and some specialized composition software
had been developed to take advantage of this progress. This
dovetailed with my shift in thinking concerning moving the
computer from the margin of the composition program to its
center. I was especially intrigued by the Daedalus program, of
which I had seen a demonstration tape. I asked Bob to consider
this possibility.

Third, Developing the Community: Perhaps the most important
change in the concept was our awareness that the first two
changes led inevitably to a change in the constitution of the
classrooms and of the over-all composition program. The change
was in the direction of community formation.

What are the characteristics of a community?

1. Communities communicate. In the traditional
composition classroom, students communicate with their
teachers but not to any great extent with each other.
In the collaborative classroom, students do communicate
with each other, but such communication requires
careful advance preparation (e.g., the duplication of
papers), interaction is slow (suggested changes in text
can't be shared at once), those less conversationally
aggressive find themselves left out of the dialogue,
and it is difficult to keep a record of the interactions. In the networked computer classroom, many of these limitations are reduced or eliminated, and spontaneity is enhanced.

2. Communities help themselves. In the traditional composition classroom, it is every student for him/herself. In the collaborative classroom, there is more peer interaction, but, once again, in the computerized classroom, the process can be as open and interactive as the instructor and the students want it to be. For example, collaborative authorship of writing assignments becomes much more possible on such a system.

3. Communities have memories and traditions. In the traditional classroom, as atomized as they tend to be, there are few collective memories and no recorded memories and traditions. In the collaborative classroom, a record of interactions exists in the fragmented form of drafts of papers and notes which are shared among some members of the class. In the computerized classroom, it is possible to preserve not only drafts and notes, but entire computerized conversational exchanges. Nothing passing through the
medium of the computer need be lost. In sophisticated systems, the students may have direct access to databases, catalogues, and other community resources through their classroom terminals. Resources developed by one class can easily be made available to other classes. In this way, not only can community within the individual class be enhanced, but a degree of community can be established between and among classes and instructors.

Thus, we had moved since 1983 through four stages:

1. Introducing the faculty and staff to the productivity advantages of computer word processing;
2. Introducing students to the use of Word Processors in the University Computer User Facility and urging students to use a Word Processing Program;
3. Establishing a small Computer facility in the English Department for the use of composition students;
4. Requiring students to purchase an inexpensive Word Processing Program and turn their work in on disk.

We were now, in the fall of 1990, poised to move into a fifth stage, the development of a composition program centered on the computer and located in a dedicated, networked classroom. Several
things now came together: The higher administration had been
alerted to our needs and a number of trial proposals had been
floated by them; better technology had been developed; and,
perhaps most vital of all, we had a new Dean of the College who
was not only computer literate but enthusiastic and ready to put
College discretionary funds into the program.

4. What Happens When You Get the Go-Ahead

1. Planning the Real Thing: Listen to everyone, but don't

lose your focus.

When I came to Creighton as Director of Composition in Fall 1990,
I knew that my primary immediate charge would be to plan,
supervise the building of, and administer the new English
Computer Lab. During my first term at the school, I wrote the
proposal that specified just exactly what we wanted. I was guided
by two ideas: first, that we had to have the facility in 1 year,
and secondly, that we had to go for as much technology as we could
buy. We had to decide what we wanted--what the requirements of our
immediate user-community were. Many--salespersons, administrators,
consultants--told us what they thought we should have. We accepted
their ideas, added them to the mix, distilled them, and came up
with the proposal that, with very minor changes, represents what we
actually have.
How did we get it? We remembered the community that spends most of its time in the lab--350 first-year composition students. These are half our composition program's clients, and the last thing we wanted to do was show them a room with pc's in it and turn them loose. We wanted a lab built to teach writing the best way we knew how, because we are a writing community.

Thus we had to educate other communities in the University about our mission. Our Dean, as Mike has indicated, believed in us from the first. But those persons in the university whose job it is to tend to the campus's computers--that was a different story.

2. Running (from) Interference: Listen to everyone, and listen to yourself.

We learned about interacting with other communities existing with us in the larger University community. Communications for some time were what progressive educator Ira Shor calls "vertical dialogue"--hierarchical pronouncements from above about what we could do, what we could not do, and how we should do things. In retrospect, we now see that one of our biggest obstacles was the initial attitude of other communities in the University and outside. This is, to us, sad. We were very much aware that we were the standard-setting computer facility. We therefore felt our obligation to conform to University standards concerning wiring,
workstation configuration, network software, and other specifications. Yet it's very difficult to work with other communities when they won't work with you. Part of this problem was lack of help. Simply, because we were the standard-setting computer lab on campus (and the first networked) there were no standards for us to follow. Yet we were held up time and again by an administrator telling us to contact the computer center for advice. We did, but none was forthcoming.

The second type of interference was maddening. As humanists, writing teachers, and literature scholars, it was very difficult for us to convince others that we knew what we were talking about when we planned the lab--when in reality we were the only ones who knew what we were talking about. Part of this is the now-classic problem many people have figuring what it is writing teachers do, anyway. Part of it, though, is a lack of willingness to build community. Call it a fiefdom, call it self-interest. Communities need to retain power, too, but not at the expense of other communities. I'd hesitate to think that were an object of fear to other communities on campus. But the communication Mike just said is necessary for a community wasn't immediately forthcoming.

5. Surviving the Building of the Facility: If you build it, it (may) run.
To summarize: we had a proposal. We were approved by the Dean. Now all we had to do was find a room, find a price, ship the machines, and plug them in.

A. The Room: There's no place like home.

It's imperative that one have a room under one's control. We were fortunate—we even got one in our own building. And it was big enough. But it wasn't a computer room; it was, and remains, an overheated former law school courtroom. We had no money to renovate it, to put in wide tables or comfortable chairs. We have not, as Cindy Selfe remarks, had to rob the cafeteria for chairs and tables (124). But we had to decide what we had to have to create the community. Sometimes communities have to compromise; we did, too. We'd like to find grant resources to provide us with a way to tear out the theatre seating, and purchase wider tables, padded chairs, and carpeting. But as a neighborhood doesn't have to have flowers in front of all the houses to function as a community, neither do we have to have all the luxuries at first. But we're working on them.

B. The Consultant

Consultants can help bring communities together, or they can confuse all communities involved. The former happens when the
consultant knows what he's supposed to do, and why the facility is there in the first place. The latter, though, happens when consultants forget the primary users of the facility. We would suggest, therefore, that with applications software and pedagogical approaches, you are your own best consultant. Why? Because we feel a community can best solve many of its needs by looking inward. They are the community's needs, and the community can best articulate those needs. Our community spent time in workshops with a computer writing consultant and each other in formal and informal workshops. We learned from others and from each other. Sometimes we found that those anxieties we were reluctant to discuss with an outsider we leapt upon, hollered out, and solved in five minutes among ourselves.

Where you may need other persons' help is in getting the hardware and the system software. We found that the usefulness of our consultant lay in acquiring prices for our workstations and in installing the network software.

But perhaps the most important advice I can offer about getting one's computer facility running is not to do what I did--buy a new home, move into it in mid-July, teach two summer classes--one in each summer term--and oversee a room renovation and a bidding war in the absence of both a Dean and a department chair.
6. Now You Are Running: Early Lessons

Any new community will have a difficult time starting up as a viable entity. We're not exactly like the early settlers building towns on the plains. But we did learn some quick lessons. We learned that 27 computers generate an awful lot of heat in even a large room with a 20 foot ceiling. We learned that we generate twice the amount of discarded draft paper that we anticipated, and consequently use twice the toner cartridges and twice the reams of blank paper. We learned to tap into the recycling effort on campus. We learned how to interact with the campus police community regarding lockup at night for our investment. We learned that students love to talk and therefore will talk through writing via E-mail. We learned how to channel that talk to develop the students' tasks. We learned that simply having invention or revision heuristic programs does not mean that students will always use them. We learned that realtime conferencing is a dramatically powerful discussion tool. We learned system and application passwords are not inviolable. We learned that it takes 1/2 hour to turn on and log in the computers every morning. We learned that we became more preplanned in our activities when we had to post the next day's activities on the electronic bulletin board the day before. We learned to take no hardware or software for granted; we learned to
work through, not on, the hardware and software. We learned more about our students and their writing processes, and they learned more about us and about writing. In sum, an enormous amount of learning has happened. It's too early to put it into neat categories. But it's made us better teachers.

7. Now You Are Not--What Goes Wrong

A. Hardware

It's axiomatic that hardware breaks down, and our machines get more use than anyone dreamed they would. We've had to replace 6 monitors, two keyboards, two disk drives, two system boards, and a disk drive door. This has yet to keep a student from being able to use a machine; as noted earlier, we have three spare machines.

B. Software

But it's the software that's given us restless days and vexing evenings. Network software is a complex system, no matter how simple the InfoWorld ad makes it look. We found out quickly that we were no island when we couldn't perform any instructor-specific functions, and when half the workstations wouldn't log on during the training day 4 days before school started. We realized then our dependence upon another community--the technical representative community. For six months
we used our year's warranty on our Novell software. I'll bet these people will be glad when this August rolls around and the warranty runs out. But we've recently acquired what we needed all along--a certified network engineer on the University's staff. This, I think, is the beginning of a significant change in the University community's acceptance of us, and other non-mainframe, dedicated pedagogical labs, as important communities in our own right. It's a realization that the computer community at the university has a responsibility for more than mainframes, more than its own open-use lab. As much as we would have earlier liked to resist anyone's intrusion into our domain, and as much as we would like to have been self-sufficient, we aren't, and likely won't be. As the administrator, I can do many things in and for the lab, but I can't fix Novell software problems, and I don't have time to replace disk drives and motherboards. We have to rely on others. And it's a darn lot nicer when those others are interested and enthusiastic about what you are doing and what you need.

8. It Works!

Student Reactions: Business as Usual

Perhaps the most pedagogically gratifying reaction is the least personally gratifying one. After the first week, students walk in the lab, log in and get to work. There's little gee whiz,
no wow, and no bells and whistles. I suppose I'd be untruthful if I said that's not a little disappointing. But on the other hand our students are writing all the time. The computers are transparent; they're expected; and they're easily the most popular computers on campus--only our login security, restricting the use to English classes, keeps us from being swamped. This, I think, is important. It's not a computer class, but a writing class, and we're thus conforming to the raison d'être of our community.

Faculty Reactions: The Roar of a Small Crowd

The reactions of the 9 faculty who have taught in the ECL are the most enthusiastic. My own reaction, and one that is shared by many other faculty, is that in this classroom the students are writing--not listening to someone talking about writing, not reading about writing. Certainly these things go on in non-computer classrooms, but I'd bid fair to guess that the slush time in many if not most other classrooms is gone. We like this--a lot. That much more writing equals that much more opportunity for us to help them write.

As Cindy Selfe mentions, one benefit of an ECL is increased collaboration (126). It's certainly a benefit at Creighton's lab, according to our faculty. We have a classroom E-mail system and realtime conferencing as part of the Daedalus system. As Mike
remarked earlier, communities talk with each other, help themselves, and generate shared memories and traditions. These tenets lie at the heart of collaborative, social/transactional rhetoric. The computer enables these collaborative practices, and it empowers students as a result. I can't think of a teacher in the ECL who doesn't realize the ability of the computer to make students responsible to themselves and their community.

9. Where Do We Go From Here?

Mundane Things:

A. Repair and Replacement. These needs must be funded. Presently there is no provision for either. However, while we found it impossible to acquire grant money for establishing the computer lab, we believe that it is easier to sell an ongoing success than a nice idea; therefore, we intend to seek a sponsor for the existing classroom, to which his/her/their/its name will be attached. Computers wear out; computers become obsolete perhaps more quickly than automobiles. We wrote our proposal knowing that our machines would be obsolete in 5 years. In fact, there are elements we'd like to upgrade or change already. This change will most likely have to come through grant money.

B. Administration

We've learned a lot about administering a computer.
facility, most obviously that one person cannot do everything alone. This year we’ve had a temporary assistant facility administrator to help us out; next year a tenure-track composition specialist with computer lab expertise will be in place to assist. We’ve discovered that one can easily spend 25% on average of each day on things associated with the lab--paper, toner cartridges, blown monitors, hardware or software problems, network issues, room temperature--things that will always happen when you have a facility that is used by 350 persons every 48 hours. To keep the computer community running smoothly, one ideally needs two persons in charge.

C. Expansion. The present computer lab only serves a fraction of our composition classes. We need at least one and possibly two more such classrooms. With the success of the first, we believe that sponsorship of one or two more will be much easier.

D. Extrapolation. The computer lab is working very well as a tool for the teaching of composition. How can computers better enable us to teach literature? This needs to be explored, and we have an idea in mind for a development grant proposal, but that’s a subject for another conference.

E. Evangelism. So far, we’re still the only department- specific lab on the University campus. So far,
everyone tells us how glad they are that we've got it. And so far, we're the keepers of the big secret--it's become, and will become, part of the integral workings of the educational enterprise, as natural as picking up a pencil or sitting in a chair. We need to spread the word to the rest of the university. We're being wired for a campus-wide WAN, but too many think that it's only for faculty access to mainframes and E-mail. Our most urgent mission, now that we've made contact with one Dean, ten writing faculty, one chairman, and some of the computer center staff, is to take this small but potent army to the street that runs through our campus. We're trying already through the University computing committee, through workshops on instructional computing and workshops for area teachers in our own lab. We need to break out of our own community; we need to bring all of the university community into the computerized community, too.
Work Cited