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Using Computer-Mediated Instruction in History Classes

With the application of computer and Internet technology to higher education over the past two decades, a new type of course has emerged among colleges and universities in the United States. Ranging from computer-assisted to computer-mediated courses, this new approach can infuse electronic and internet technology into the learning experience—thereby transforming the conventional lecture-style format—or they can replace the traditional format altogether with a distance-education design that does not require the student or faculty member to meet in real time. After a difficult start in the late 1990s, distance education—consisting mostly of for-profit enterprises—seems to be making a comeback. American institutions of higher education with a tradition of non-profit status together with faculty unions, chary of distance-education models that are perceived as weakening the professoriate, now find themselves as allies against the institutionalization and proliferation of for-profit distance-education programs.

The struggle over distance education and the perceived threat to “traditional” classroom style teaching has obfuscated an important transformation in the traditional classroom setting. More and more faculty are infusing electronic- and computer-mediated communication into their courses. As early as 1999, a survey by the American Association for History and Computing reported that already 80% of historians sampled used computers in their teaching, 93% in their research and almost all used email. Most US history departments now embrace the computer-assisted format, while the American Historical Association fosters the infusion of computer and Internet technology into the classroom through its website and panels dedicated to the topic at its annual meetings.

Since the 1990s, H-Net for the Humanities and Social Sciences Online has grown to sponsor over 100 electronic networks, offering more than 100,000 scholars from around the globe an electronic public forum for the free exchange of scholarly work. Each network has its own personality. H-Italy, the bilingual network for Italian studies, focuses primarily on problem solving for scholars engaged in teaching or research, book reviews, meeting and job announcements, but also mundane matters such as locating housing for scholars doing research abroad. These developments indicate how far the historical discipline in the US had become computer-assisted, even computer-dependent.

4 In the same report faculty reported that more than half of their students were ill-prepared to use computing technology in an academic setting. “Most History Professors Use Computers in Their Work, Survey Suggests,” The Chronicle of Higher Education Information. Technology Section (February 12, 1999): A21.
6 <http://www.h-net.org/>.
7 Work is performed on a volunteer basis by trained editors. Although H-Italy is a vibrant network, its web site is not exploited to the same extent as other networks because H-Italy has been unable to find a Web Editor to make and maintain the site. The public logs and an application to become a member of the network can be accessed at <http://www.h-net.org/~italy/>.
If the introduction of new technology and modes of communication into the academic setting raises new challenges and expectations, the traditional rhetorical triad of purpose, form and audience can still serve as a guide for developing effective computer-mediated instruction. In the United States, there is a growing divide between two basic forms of teaching: one sees the purpose of education primarily as a means of delivering content material to students; the other sees the purpose of education as a means of enabling students to become active participants in a guided journey of intellectual exploration.8

**Purpose**
If one adheres to the first definition of purpose, electronic communication is relegated to the task of delivering course content: syllabi, faculty contact information, lecture notes, readings, and the like. This method for using technology, though valid, is of less interest to me, since it simply relegates the Internet and the World Wide Web into the role of a surrogate for the traditional classroom. It does have the benefit of providing easy and free access to documents that students would otherwise have to purchase.9

If, in contrast, one sees the purpose of education as providing a context for student learning, I believe that this purpose is better served through electronic communication, since it allows students to interact and construct meaning by working more closely with their professors and peers. The role of the professor is transformed. Faculty use email, threaded discussions, listservs, and chat functions to focus as much on the process of learning as on the end result. They cultivate interaction among students during the learning process; provide formative feedback to students; and encourage students to become cognizant about how they are learning (or not) in formal and informal structures.10

**Form**
The form that electronic communication takes in the US is determined for the most part by the “e-learning systems” adopted by one’s college or university.11 The good news is that faculty do not have to earn their degree in computer science to develop a course website. E-learning systems, such as WebCT and Blackboard, the two most popular systems in the US, provide online modules that faculty can personalize to a greater or lesser extent with email, threaded discussions, groups, links, text, graphics, music and videos. The systems also provide help functions to supplement campus-based technological support. And, the use of a single e-learning system at a university makes for easier student acclimation to all computer-mediated courses.

E-learning systems do have their drawbacks. They can be limiting, and once a university decides on a particular system, all faculty are forced to use it and shape their online activities to match the system’s capabilities and strengths. Thus, faculty will find that they may not be able to have students engage in a particular activity or use a particular multimedia program because the system does not allow for it. So, faculty should check with their college’s technical staff before planning the online components for their courses.

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8 The two schools of thought are often cast as mutually exclusive, especially by the advocates of active learning, even though they do not have to be.
9 Of course, the publishing of primary and secondary sources on the web by libraries, archives and journals is a different matter and their use in a history course will be discussed below.
10 Many useful instructional models were developed in the writing-across-the-curriculum movement that began as a reaction to poor student writing that was attributed to the lack of student writing outside English classes. See, for example, Art Young and Toby Fulwiler, ed. *Writing Across the Disciplines: Research into Practice*. Upper Montclair, NJ: Boynton Cook Publishers, 1986; Toby Fulwiler, *Teaching with Writing*. Upper Montclair, NJ: Boynton Cook Publishers, 1987.
11 E-learning system is one of the new words (in American English) that are part of the burgeoning lingo of computer-mediated education. It simply means a program that delivers content and creates a forum for student and faculty interaction behind a firewall by integrating Internet and email technology.
The beguilingly limitlessness of cyberspace and the informal nature of electronic writing are two additional aspects of form that shape computer-mediated courses. Students can easily surf from the course website to anywhere on the World Wide Web. Faculty can use this capability to their advantage by pointing students to useful websites, but even so they should be aware that students can go anywhere on the Web. The informality of electronic writing makes it a new genre located somewhere between speaking and writing. Its form can range from high to low registers, and students are more likely to know better the lower registers. They rely on acronyms and Internet shorthand, as well as emoticons to convey tone of voice in emails, electronic chats and threaded discussions. If faculty require a certain linguistic register (i.e. in the US, Standard American English), they must teach students about the appropriate register one should take in communicating with different audiences. Faculty should also be aware that it will take time for students to unlearn writing habits that are not appropriate for an academic setting.

Audience
For those in the academic world, the third rhetorical coordinate, audience, may seem at first glance quite simple. The audience consists of students who, it is often assumed, should have few problems navigating an on-line course since they have vast computer and Internet experience. Perhaps no other expectation can lead more to faculty and student frustration than this one. Even if students have experience using the Internet, one cannot assume that they can navigate automatically the college’s e-learning system. Even when first-year students report on college surveys that they consider themselves well acquainted with the Internet and the World Wide Web, they are often only familiar with the format of their Internet Service Provider’s interface, or they only know how to use a particular instant messenger program. When it comes to navigating the college’s e-learning system for the first time or after a semester away, many students are at a loss. They may also have little familiarity with a plugin or how to download and install a required one not already on their computer. It is helpful to inform students up-front about required plugins, browsers and word processing programs. In the US, this information can conveniently be included in the syllabus. Faculty should be patient with students. The learning curve can be steep even when a college provides a thorough orientation to the college’s website and the e-learning system. It still takes students at least one week to become familiar with only the basics of using an e-learning system and academic electronic communication.

In computer-mediated courses, the students’ Internet and computer environment renders the concept of audience more complex. The technical specifications of the computer and Internet access, as well as the physical and social environment in which the computer and computer-user are located are all aspects of audience. RAM (random access memory), memory and connection speed, reliability of connectivity have an important bearing on what students can access electronically and how they can access it. American students often get frustrated when it takes longer than they expect to load a

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12 This observation came from a public discussion on email at the Second Annual Symposium on Communication and Communication-Intensive Communication at Baruch College, CUNY (October 11, 2002).
13 For faculty unaccustomed to the lower register, <http://www.aim.com/> and <http://www.netlingo.com/> have useful (and free for the moment) glossaries for English acronyms and Internet shorthand, as well as so-called smileys and emoticons.
14 Most browsers come equipped with what are considered standard plug-ins (i.e. Acrobat, Java, Shockwave Flash, Quicktime, RealPlayer, etc.), but students (and the faculty) will need to download and install others. Many students have trouble doing this and assume that the faculty can and should help them with problems of this sort. So, just telling a student to read the instructions or to go to the college’s internet support may not be enough. Patience is a virtue here. Netscape’s plugin sight can be found at <http://wp.netscape.com/plugins/>; Explorer’s at <http://www.microsoft.com/downloads/>.
15 Despite apparent efforts by the e-learning-system developers to create uniformity, from my own teaching and my experience working with faculty at the City University of New York, I can testify that faculty make use of the system idiosyncratically. No two courses are alike. It is thus important to understand to what extent the college’s student experience fits into one’s own use of the e-learning system. Moreover, at the three universities where I have taught, the general introduction was inadequate to familiarize students with the way I used the system. I have thus resorted to using one class each semester to give students an introduction to how I use the system and how I expect them to use it.
webpage or to download a file. I have seen no reliable data on how long is too long for the average student when loading a page or downloading a file—what I call the impatience factor. From my own experience and from unscientific polling of my students, I would conjecture that the impatience factor is culturally defined. It has a shorter limit in academic settings, and faculty can do little to lessen it when a student is not interested in a course or particular topic. A rule of thumb is that a faster more streamlined course site is better than a slower more elaborate one when trying to circumvent the impatience factor. It can be argued that less bells and whistles are better too, since what may seem fancy to faculty may come off like a lead balloon to students accustomed to the chic imagery of videogames.

Student access to a computer is another important aspect when considering audience. Knowing when students have access to the Internet, the dependability of the connection and the real environment in which they use the computer can have important bearing on the types of activities one incorporates into a computer-mediated course. One should be aware that some students may run into trouble if computer access is seen as threatening cultural codes of conduct. I found this to be the case more at the City University of New York, which has a large immigrant population from developing countries, than at Indiana University of Pennsylvania which has mostly a native-born population. However, even in the later case, some students who were the first in their family to attend college did come up against objections from family members about their computer and Internet use. Furthermore, a course that requires students to remain online or download large files may raise problems for students who share computer access with family members or who rely on the telephone for connectivity. Lengthy files can also become economically prohibitive. Although this issue may become less of a problem as DSL and cable connections make rapid downloads more affordable and as modem connections become less expensive, the challenge of streamlining the online components of a course still remains.

Electronic-communication further transforms the concept of audience in an academic setting. Tools such as threaded discussions, listservs, email and chat functions fracture the binomial of author/audience. Like Zeno’s second paradox, the limitless dimension of cyberspace is inserted into the finite setting of a course website. Faculty-directed or even spontaneous exchanges among students subdivide the two-way circuit for learning between a professor and student. When faculty and students participates in threaded discussions, one is no longer speaking to a single person, but to that person and everyone else who belongs to the discussion. Conversations are no longer two-way; they are multivariate. Moreover, even without faculty encouragement, students will often use threaded discussions, electronic chat rooms and listservs to exchange ideas and learn from each other. If structured properly, these tools can create a means by which students discuss issues and learn in ways that are impractical or impossible in a lecture setting. Informal electronic communication, such as email, electronic chat and instant messenger, additionally splinters discourse by allowing students to take the initiative to exchange and share ideas on their own beyond the (sometimes) intimidating eye of the professor. This exchange can be equally intimidating for the professor.

Of course, not all students will engage automatically in constructive uses for the Internet and the World Wide Web. But, faculty can model constructive online behavior, encourage students to explore ways to learn independently from each other, have students work through problems together and give each other constructive criticism. In this way, electronic communication transforms audience and offers an enormous potential for letting students share with the faculty their traditional role as arbiter of learning. Online learning thus has the potential for making learning a more democratic activity.
Minimum Prerequisites for Online Teaching

Clearly, there are advantages and disadvantages for using Internet technology in the history classroom. However, there are several prerequisites for colleges, departments and historians to engage in computer-assisted courses. Foremost, it is important that the time and effort faculty invest in developing and using a course website be recognized by the department and the university. Some US colleges and universities reward faculty for investing time in teaching, most prefer that faculty eschew this role and concentrate solely on publishing. It is thus vital for faculty to know their department and college’s policy regarding tenure and promotion. Time is a second prerequisite. Even if one is well acquainted with the e-learning system used on campus, one still requires time to develop a course website and to hone it as one teaches the course. In addition one needs time to improve the course website after each semester. Another important consideration is the easy availability of computers and the Internet to students. Ideally, students should have access on campus. It is helpful if the college surveys the students about computer and Internet usage so faculty can know what to expect in terms of connectivity and student familiarity with electronic communication and shape their course accordingly. A student-friendly and faculty-friendly technical department is also an important asset. It is always best if departments encourage faculty to share their experiences and learn from each other. Once faculty begin to engage in electronic communication, it raises the bar for other faculty so it is best for departments to foster cooperation.

Advantages of Using Online Teaching for History

Before examining how electronic can ameliorate the learning experience in the history classroom, I will address issues that are applicable to all disciplines. I would like to add that my discussion of electronic communication draws from my experience in American education. I do not mean to say that what works in the US or what works in my classroom can be transported to a particular course in Italy. Although my knowledge of Italian university education is limited to my experience at a perfezionando at the Scuola Normale Superiore di Pisa and the (limited) contact I had in the classroom environment at the University of Pisa, I know that courses in Italian universities are different. However, I would like to underscore that the strategies I will discuss are meant to serve as examples one can borrow wholesale, adapt to one’s liking or even discard—and for whatever reason. Pedagogical approaches are unique. It is my hope that the reader will see something he or she can take and adapt to their own teaching environment.

Asynchronous electronic communication allows faculty and students to interact with each other twenty-four hours a day, seven days a week and makes distance irrelevant as a limiting factor. It fosters closer instructor-student relationships that enable faculty to gauge if students have learned concepts and if students are having difficulties throughout the learning process. Because electronic communication speeds up the rate of communication, it allows faculty to let students get things wrong as they grope their way to a solution and still have the opportunity to get the answer right. Thus, instead of simply using a final exam as the basis for assessing learning, faculty can use electronic communication to evaluate students as they begin researching a topic, interpreting primary and secondary sources, formulating and reformulating hypotheses and constructing an argument—the type of work professional historians regularly engage in. Faculty can also create a learning environment that allows them to follow the students’ development as they work through increasingly more complex tasks.

16 This issue is too broad to discuss fully here. It is my personal experience that many colleges and universities in America pay lip service to the traditional teaching mission. All too often they shunt the heavy teaching workloads onto inexperienced graduate students or adjunct faculty (faculty who have semester-long contracts and who are hired and fired according to the laws of supply and demand). Even in American colleges that emphasize teaching, class sizes often become too large for truly effective teaching. The publish or perish paradigm and the desire by college administrations to use business models for academia are two of the principal causes for the decline in the quality of students graduating from American institutions of higher education.
This approach is particularly helpful when working with students who are writing theses or dissertations. If students record their reflections and thoughts on their work in weekly electronic journals, the faculty mentor can answer questions as they arise, provide guidance, or simply verify that students are making progress. Having students submit digitized drafts electronically in Microsoft Word allows faculty to use the comment function in the word processing program to provide more effective and timely critiques than by writing comments in the margins of a hard copy. Having students do multiple drafts of writing even in lower-level courses becomes practical in computer-mediated courses. The key here is to tailor what one does to the class size and to avoid feeling that one needs to see and comment on everything the students say or writes in order for learning to happen.

The potential for close contact between faculty and students does have its drawbacks. It requires more time from faculty, especially if one does not have a teaching or graduate assistant to help. Close contact may raise false expectations among students about faculty engagement. Students may balk at the length of time it takes for faculty to respond to email or to answer questions posted to threaded discussions. Faculty can also be viewed as the first line of defense on technical issues which faculty are unprepared or unwilling to answer. These problems can be overcome if faculty state clearly their policy on the length of time students can expect them to respond. In addition, some e-learning systems allow faculty to create automated responses to email that can remind students of the policy.

The issue of students asking faculty to problem-solve technical issues is a thorny one. Professors should be upfront with students that this task is beyond the competency of history faculty and falls under the purview of the technical staff. Nonetheless, faculty should be aware that an unwillingness to offer solutions or, at the very least, show sympathy can have a negative impact on student evaluations. In the US, where faculty are often dependent on good student evaluations for promotion and tenure, it is important to make an effort to appear helpful and be able to handle basic technical questions. One way to provide students with answers is to keep track of questions during a semester and to incorporate them into a FAQ (frequently asked questions) that can be incorporated into the course website.

Threaded discussions are particularly helpful in allowing students to pose questions to the instructor as they would in class. In all my classes I have a threaded discussion called “Ask Dr. Arpaia” in which I allow students to pose questions and make comments anonymously. I use the anonymous mode to offer students greater freedom and to avoid the embarrassment that comes when students think they have a stupid question. So far, no student has ever abused the privilege. The threaded discussion is extraordinary valuable since students often have similar questions. It allows me to avoid having to answer the same questions over and over again. Having tracked student usage for

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17 Since viruses are a concern, it is imperative for the university to have an updated virus scan. Requiring students to send documents in as Rich Text Format documents—which can be done in any word processing program—will eliminate the possibility of spreading macro viruses and Trojan horses. Alternately, faculty can opt to use a Macintosh computer which is much less prone to viruses—at least for the time being.

18 I have found that I can still manage requiring students to hand in weekly drafts in large World Civilization survey courses. I have students save their files as lastname_firstname-assignment#-draft#.doc (i.e. arpaia_paul-1-1.doc), so that when I open up the computer folder with the students’ files, the drafts are listed in alphabetical and numerical order. To speed up reading and commenting on student work, I create macro files that insert comments about form and content into the student’s text. This approach is possible because there are, after all, a finite number of useful comments one can make about any history assignment.

19 I have found that it takes me about three hours to read and make comments on electronic journals in an upper-level class of 25. It takes about ten hours to read and comment on carefully crafted short assignments in which I ask students to interpret historical texts in my first-year survey class of World Civilization for approximately 140 first-year students.

20 It is important to resist answering questions that are answered on the FAQ or are better answered by the technical staff. Students will pester faculty with these types of questions once they learn that faculty will answer them. Instead, refer students to the FAQ of the technical staff.
this type of threaded discussion (including how many times other students have read a question and my answer), I have found that students are more likely to raise a question online or read someone else's question than to ask one in class. The task of responding to online questions can also be given to a teaching or graduate assistant, thus lightening the workload for faculty.

If done properly, computer-mediated courses can become electronic learning communities in which students carry on the learning process inside and outside the classroom. And, these extramural activities can develop a life of their own or feed back into the classroom enriching a course whatever the approach a faculty member feels most comfortable with. However, if a professor uses a computer-mediated component but does not foster the creation of an electronic community, the course can be a disaster for both faculty and students. Fortunately, students quickly warm to using the Internet, email and the World Wide Web in an academic setting. There are also a few tricks one can use to get students going on creating an online learning community. From the first class, encourage students to get to know each other. If one does not feel comfortable using so-called ice-breaking techniques, one can adopt the practice of posing questions in class and calling on students to respond to each others questions. Once can also ask students to do a short in-class writing assignment and have a neighbor write a written critique and discuss the critique with the student.

To foster an electronic learning community and teach history, I require students to analyze primary sources and to respond to a series of questions in short paragraphs that students post to weekly threaded discussions. The prompt, as I call it, is structured to provoke a scholarly debate about a topic for groups of students that can range from 40 to 130. To get the conversation going, I also require students to respond to a colleague's response. If they agree with another student's interpretation they must tell why; if they do not, they must tell why not. The results can be quite rewarding. As students begin to engage each other in interpreting the documents, they become aware of the advantages and limits of the historical method and learn the discursive nature of the discipline. They also learn the concepts I am trying to teach, and a quick glance over the discussion can confirm that the students are able to talk informatively about the subject. Moreover, the asynchronous nature of the threaded discussion allows weaker students to follow the lead of and learn from stronger students. I only need to intervene from time to time, especially at the beginning of the semester. I may have to ask a student to redo a post that does not meet the threshold I set in my syllabus for a valid response. I will also chime in occasionally to congratulate a student on an excellent post and explain why it is commendable. I often bring to class printed copies of exemplary posts and incorporate them into my lectures. The point is that the work students do in the electronic setting can enrich the classroom and vice versa.

Computer-mediated courses also enable one to incorporate primary (and secondary) sources— including graphics, sound and film—into a course. American publishers have been quick to get on the bandwagon and now entice faculty with free online resources in return for choosing their textbooks. One does not have to follow this route. There are many free-use primary sources on the web. For the standard American survey courses, Prof. Paul Halsall's “Internet History Sourcebooks” is a well-indexed collection of public domain and copy-permitted historical texts and links for educational use.

21 The ice-breaking techniques are perhaps typically American. They are based on getting students to engage a neighbor or a group of students in some sort of interactive activity (such as an interview or a game). While many faculty find such techniques useful, I do not find them appropriate for a college-level history course. Instead I resort to the method of asking students to respond and comment on each others questions and answers in class.

22 For instance, when studying the Scientific Revolution in my first-year survey course, I ask students to read Galileo's letter to the Grand Duchess Christina and a selection from Francis Bacon's Novum Organum. I ask them to respond online to the following questions: 'in the light of class lectures, your reading of the textbook and your own ideas, what do the excerpts from Galileo and Francis Bacon reveal about their conceptions of epistemology? Are they similar or different? Can they be reconciled? Are they different from epistemologies we find today in the USA or elsewhere? If so, how?'

23 Website: <http://www.fordham.edu/halsall/>. 
(SISSCO) provides an excellent gateway to online resources whose links or texts can be incorporated into a course website. Motion pictures in the archives of the Istituto Luce and the Library of Congress are also available. And, there are many others.

Care should be taken when incorporating material from another site to avoid copyright violations. Fortunately, faculty can usually rely on expert advice from the librarians on campus. Some faculty prefer inserting material from other websites into their own to keep students from wandering off and surfing the web. When this is not feasible, it is quite easy to have an external link open within a frame in the course website, thus keeping the student within the boundaries of the course website. One important rule of thumb when linking material on other sites is to make sure that the linked URLs remain active from semester to semester and that they take the student directly to the primary or secondary sources. Once primary and secondary sources are inserted directly or indirectly into the course website, faculty can devise a myriad of class activities that incorporate them.

There are two caveats one should heed when integrating digitized texts into a course. First, there is a tendency in some computer-mediated courses to stop at knowledge (the possession of information) and fail to continue through to understanding (the ability to perceive and explain the meaning of things). In some courses, students are simply asked to become consumers of information and fail to hone their skills in discerning between what is important, relevant and verifiable and what is not. As in traditional classroom setting, historians should devise assignments that ask students to analyze online documents, challenge their validity and use them to construct and challenge their own and others’ historical interpretations. Second, the amount of information ‘out there’ on the World Wide Web is truly staggering, so students must learn that they cannot take information found on the Web prima facie. With the exponential growth in the amount of information online and the effort of groups that intentionally put out misinformation, discernment may become the most valuable skill for students. One valuable lesson for students is to have them analyze the website. The website purports to tell the truth about the American Civil Rights movement and Martin Luther King Jr. If students investigate the website thoroughly, they will discover that the site belongs to a Neo-Nazi White supremacist organization. An assignment of this type creates the opportunity for students to think about why people create website. It could also be used as a prelude to students creating their own website or an annotated webliography—that is an annotated list of websites for people interested in a particular historical topic.

The Internet and the World Wide Web constitute a challenge and a resource for teaching history. Not all faculty will embrace online media, which is to be expected and is a good thing. Students need to encounter different teaching and learning styles in college and computer-mediated instruction is only one of many valid forms of teaching. Clearly, computer-mediated courses offer new opportunities for faculty to teach and for students to learn. The most important challenge historians face in infusing electronic communication into the classroom is to do it right. But doing it right is something that should be defined by individual faculty with the recognition that it comes only after much trial and error.

24 Website: <http://www.sisisco.it/index.htm>.
26 Most US colleges and universities provide free on-campus access to many digitized academic journals and databases. Some of the more important ones are the American Humanities Index (bibliographic references to over 1,000 US and Canadian journals published from 1975 to the present); The Anthropological Index of the Royal Anthropological Institute (an index of journals at the British Museum); Digital dissertations (a searchable database of US dissertations from 1861 to the present and dissertation abstracts published since 1980); JSTOR (online texts of over 500 journals in many disciplines including history); PAIS International (a database of references to more than 400,000 articles, books, government documents, statistical directories, research and conference reports, publications of international agencies and microfiche from over 120 countries published from 1972- to the present.)