Computers are not “just tools” for writing. Networked computers create a new kind of writing space that changes the writing process and the basic rhetorical dynamic between writers and readers. Computer technologies have changed the processes, products, and contexts for writing in dramatic ways—and writing instruction needs to change to suit how writing is produced in digital spaces.

How technology changes writing practices
When we say “digital writing,” we are referring to a changed writing environment—that is, to writing produced on the computer and distributed via the Internet and World Wide Web. We are not talking about the computer as a stand-alone machine for writing. While that technology development has indeed changed the writing process, the computer itself as a stand-alone machine is not revolutionary in the sense we mean. Rather, the dramatic change is the networked computer connected to the Internet and the World Wide Web. Connectivity allows writers to access and participate more another. It is the networked computer, the spaces to which networked computers provide access, and the public ways in which individuals are writing that are together changing the cultural landscape. These elements, taken together, are truly revolutionary.

The changed context for writing
Writing with networked computers changes the contexts for writing in a number of ways. Writers create documents, presentations, movies, and interactive environments for audiences who will read and work with that writing at the computer interface. Most readers understand that reading computer screens is different than reading the pages of a book, and most web writers know they must design their writing for how readers interact with the computer screen. However, there are deeper issues at stake than simply interface design. We need to think about context at a deeper level, in terms of production and distribution.

* The WIDE Center Collective refers to the following Michigan State University faculty members who collaborated on this statement: Ellen Cushman, Dannielle DeVoss, Jeff Grabill, Bill Hart-Davidson, and Jim Porter.
seamlessly and instantaneously within web spaces and to distribute writing to large and widely dispersed audiences.

The revolution of connectivity is not just a network or machine revolution; it is primarily a social and cultural revolution. The way that people are using the Internet and the sheer numbers of people writing on and with the web is having significant social and cultural impact. A February 2004 Pew Internet & American Life study reported that “44% of U.S. Internet users have contributed their thoughts and files to the online world” through posting written and visual material on web sites, contributing to newsgroups, writing in blogs, conversing in chat spaces (such as instant messaging), and via other digital means. Wireless, broadband, and satellite technologies are further expanding and accelerating the means of communicating. (For example, using your cell phone you can post a picture and a text message to the web in just a few minutes.) Writing instruction must equip students with the tools, skills, and strategies not just to produce traditional texts using computer technology, but also to produce documents appropriate to the global and dispersed reach of the web.

Many writing technologies have streamlined the writing process (the typewriter is one example), but only a few writing technologies have had truly dramatic social impact. The printing press is one; the networked computer is manipulate and embed visual information in documents. At the most basic level, even word-processing applications come with fairly large clip art collections and offer the means for writers to create data displays like charts, graphs, and diagrams. Most web search engines allow writers to search for photographs, animations, and video clips to download and use in documents, web pages, and digital movies. These options require writers to think carefully about production choices. These tools shift the ways in which composing takes place: they change the way we do research, the way we produce “texts,” the way we deliver our writing.

When we put it all together, the ability to compose documents with multiple media, to publish this writing quickly, to distribute it to mass audiences, and to allow audiences to interact with this writing (and with writers) challenges many of the traditional principles and practices of composition, which are based (implicitly) on a print view of writing.

A rhetorical view of writing
To most the word “writing” means words on paper, prose in sentences and paragraphs. From the formalist (or textual) perspective, computers (or any technology) are incidental to writing, simply a means of producing it but not actually part of the art of writing. The formalist perspective emphasizes style, syntax, coherence, and organization—meaning at the level of the sentence and computer technologies allow writers with access to a computer network to become publishers and distributors of their writing. And chances are they will get feedback, sometimes immediately. Therefore, audiences and writers are related to each other more interactively in time and space. Writers can easily integrate the work of others into new meanings—text, image, sound, and video—with a power and speed impossible before computer technologies. The depth and breadth of this type of collaboration—both implicit (“borrowing” from others) and complicit (communities of writers)—may be one of the most significant impacts of computer technologies on the contexts and practices of writing. This context presses up against larger issues of intellectual property, plagiarism, access, credibility of sources, and dissemination of information.

Computers are not “just tools” for writing. Networked computers create a new kind of writing space that changes the writing process and the basic rhetorical dynamic between writers and readers.

Writing isn’t just scripting text anymore. Writing requires carefully and critically analyzing and selecting among multiple media elements. Digital writers rely on words, motion, interactivity, and visuals to make meaning. Computer software applications allow writers to easily generation), argument, and delivery, as well as matters of grammar, syntax, style, and organization.

How we should teach digital writing
Most university-level writing instruction has yet to catch up with the dramatic changes we are talking about here. Most college composition courses are still taught exclusively from a print perspective. While we think the print perspective should continue to be taught, it is not sufficient by itself.

Whether or not we should teach writing with computers may have been an appropriate question to ask 10 years ago—or 20 years ago—but it is no longer the correct or timely question. The issue now is teaching writing in places that afford students the technological choices that they need, and those choices certainly entail computers.

Student writing processes are highly variable. When we ask students to write in a classroom with computers, markers, crayons, and the paper and pens that they bring to class, they choose different technologies for different purposes. Some students like to scribble, some to draw, some to jot notes on paper, and others turn immediately to the computer. Those who turn to the computer sometimes write with an e-mail application, sometimes with a word processor, sometimes with a graphics program that allows them to make images.
the paragraph. And writing in this sense is the same, whether it is produced with a pencil, a typewriter, or a networked computer. Additionally, the formalist perspective views writing not as a process of discovering meaning or knowledge (“content”), but as simply a way to present it. This view sees writing for its conveyance properties, not for its communicative properties: writing is container, not the message and certainly not the “content.” This view of writing is a common one. However, it is not the view of writing shared by those who study writing, communication, and technology; writing in organizations (i.e., professional writing); and writing and/as media. It is not the view of writing in the field of Computers & Composition—a field that has researched and published on computer-based writing for 20+ years.

We hold to a broader view of writing—a view in which the technological changes in production and distribution matter a great deal. From a rhetorical viewpoint, writing concerns not only the words on the page (the product), but also concerns the means and mechanisms for production (that is, process, understood cognitively, socially, and technologically); mechanisms for distribution or delivery (for example, media); invention, exploration, research, methodology, and inquiry procedures; as well as questions of audience, persuasiveness, and impact. From this perspective, writing technologies play a significant role in meaning making—especially in terms of production (process) and distribution (delivery). This view of writing is not particularly new. It recalls the classical Aristotelian and Ciceronian views of the art of rhetoric, a view that sees rhetoric as including questions of context, invention (idea with purpose for audiences frames our instruction, along with the myriad components that require attention to do this writing well (e.g., attending to audiences, purposes, and contexts; selecting among genres; identifying appropriate tone; selecting among and integrating source material).

- Framed by learning to learn. Teaching mere technical skills, or teaching particular software applications, is not what we do. Teaching software is technical training that may meet immediate needs, but it does not expand students’ intellectual capacity. (It can also be a frustrating exercise in that the tools constantly change—i.e., new versions of software emerge and interfaces are updated and altered.) Teaching students to master a technical tool in itself and divorced from rhetorical purpose and audience is an activity

The question is not “why teach writing with computers” but why teach writing in spaces that allow students to write with computers. The answer is fundamentally pedagogical in nature: (1) Because students need a full set of technology choices—including computers and networks—to support how they write now, and how they will continue to write as professionals. (2) Because if teachers of writing expect to intervene usefully to help students with their writing processes, they have to engage in students’ production, which are now mostly computer mediated.

We believe that all writing courses should be taught with computer technology—to prepare students for their future professional lives and for their civic lives as participants in an increasingly digital and global world. We believe that most first-year writing teachers do emphasize writing for purposes and audiences, writing as a content area itself. Their efforts will be facilitated by the addition of computer technologies to enhance students’ technical, rhetorical, and critical abilities as meaning makers. Writing with digital technologies is not about learning software for the sake of the software.

Technical production, in our writing courses, is important, clearly so. However, it is defined in a critical way. It is:

- Linked to the thoughtful, critical application of technology. Thoughtfully, critically selecting among tools for performing writing tasks and preparing compositions means recognizing and selecting among many options. Technologies do not frame our instruction—rather, writing that fails to engage students as learners. Thus our instruction teaches composing with technologies as an integrated process and as a liberal art—that is, we see our task as helping students acquire the intellectual and critical capacities they need to critique and choose among available options and to acquire new knowledge for themselves as tools develop and evolve.

- Anchored by multimodal approaches to writing. Writing no longer means merely words on the printed page. Today, writing means selecting among and scripting multiple media, including photographs, charts, video, images, audio, diagrams, hyperlinks, and more. Students need to understand how these media signify and how to layer and juxtapose media to create sophisticated messages.

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