1

Media Literacy

Broadening the Definition of Computer Literacy

What exactly does it mean to be literate in this world? Well before the 1988 Right to Literacy Conference, which hoped to "address an audience far beyond the bounds of Modern Language Association membership" (Lunsford, Moglen, & Slevin, 1990, p. 1), educators paid a great deal of attention to the empowerment of students through literacy. More than a decade later, however, literacy remains a vexing issue, as illustrated by the keynote address at the 1998 Conference on College Composition and Communication. Cynthia Selfe's (1998) speech was a clarion call for humanists to bring previously neglected matters to the foreground because

we have a much larger and more complicated obligation to fulfill—that of trying to understand and make sense of, to pay attention to, how technology is now inextricably linked to literacy and literacy education in this country.

When extended, this argument suggests that computer technology's effect on literacy also carries profound implications for the moral education of students, for when it comes to computer literacy, both the rights and responsibilities of those who acquire it must be considered, and teachers must pay attention to far more than the technical skills that would satisfy advocates of an impoverished definition. Just as words enlighten or deceive, serving moral or immoral purposes, so, too, does computer literacy carry potential for good or evil. What is necessary is a more robust definition of this term, one that embraces rhetorical traditions as well as the exploration of human expression through emerging media.

Unfortunately, the repetition of terms such as *computer literacy* in the absence of thoughtful definitions and substantial concern encourages educational institutions to neglect the effect of terminology on students, teachers, and curricula. Contemporary rhetoric reveals an unhealthy preoccupation with a school's published curriculum and neglect of what Elliot Eisner (1985) describes as the *implicit* and *null curricula*. The implicit curriculum consists of everything a school's personnel teaches through the indirect media of assemblies, dress codes, detentions, and more; the null curriculum refers to neglected subjects, such as auto mechanics, woodworking, and home economics. Often, what educators omit from the school's curriculum or fail to consider as a contributor to the school's ethos is just as important as what they self-consciously include (Eisner, 1985).

It is worth thinking in such terms while examining the effect of the Internet gold rush on schools. To accommodate computer literacy in their K–12 curricula, many schools push to the periphery electives such as music, art, and physical education. This raises two significant questions: As schools introduce computer technology to their classrooms and endorse new expressions of the explicit and implicit curricula, how cognizant are they of their null curriculum's effect on students? While rushing to keep up with technology and placating vocal watchdogs of the explicit curricula, are school officials aware of the effect this may have on the implicit curricula?

A fundamental anxiety, which shapes educational curricula more than it should, lurks behind the rhetoric of many computer literacy advocates: "If we don't do something to address this particular ignorance," they argue, "U.S. children will fall behind foreign children and the United States will lose its supremacy." No politician wants to be remembered for allowing the sun to set on the U.S. empire. Nonetheless, myopic definitions of terms such as *computer literacy*, and the failure of schools and universities "to make a focused curriculum out of [their] contentiousness," impoverishes educational institutions in ways that few politicians understand (Graff, 1990, p. 825). The end of the 20th Century may well be remembered for the triumph of rhetoric that prompted enormous investments in technology as the panacea for all of public education's malaise. What is most remarkable, however, is how little clarity and substance has accompanied this experiment, which lacks basic definition and philosophical purpose:

It is often asserted that one of the problems with computers is that too few people know how to use them. The population is accused of being computer illiterate. When calls are made for schools to provide better education in computers, it is not clear what is in mind. (Landauer, 1996, p. 121)

What's more, preoccupation with what a new form of literacy enables may distract one from what it disables. It is naive to think computer literacy invites only positive change; implicit in the idea of integration, after all, is a quiet annihilation of that which preceded it. Yet computer literacy advocates seldom acknowledge that one consequence of integrating technology into the classroom is that students will spend more time interacting with machines and less time interacting with "unmediated" human

beings. Meanwhile, media critics point out that "technologies create the ways in which people perceive reality, and that such ways are the key to understanding diverse forms of social and mental life" (Postman, 1993, p. 21). Thus, introducing the "boxes and wires" of telecomputing into schools is not merely a political or educational issue. It is a moral, philosophical, and cultural issue as well. To proceed with this experiment as if it merely alters a school's explicit curriculum without affecting the implicit and null curricula suggests either a cavalier attitude or epistemological ignorance.

It would be unrealistic to expect classroom teachers to devote equal time and attention to all forms of literacy, so it is wise to ask at this point, as computer literacy gains momentum, what forms of literacy might be marginalized. Seymour Papert (1993), emeritus member of the Epistemology and Learning Group at the Massachusetts Institute of Technology's Media Lab, is representative of those who have little trouble "demoting reading from its privileged position in the school curriculum" because it would liberate children from the "early and massive imposition" of what he calls "letteracy." As Papert (1993) sees it:

Literacy should not mean the ability to decode strings of alphabetic letters. Consider a child who uses a Knowledge Machine to acquire a broad understanding of poetry (spoken), history (perhaps relived in simulations), and art and science (through computer-based labs), and thus draws on this knowledge to conduct a well-informed, highly persuasive campaign to preserve the environment. All this could happen without being letterate. If it does, should we say the child is illiterate?

Papert (1993) clearly favors a "translation/critical literacy" rather than the traditional "decoding/analytic literacy" taught in public schools (Myers, 1996). Unfortunately, his immersion in computer culture often blinds him to its flaws. Similarly, computer science instructors, preoccupied with the syntax of programming language, seldom pause to consider the "rhetoric of the desktop," or to alert students to the ways in which a computer culture influences their language and perceptions. Nonetheless, students who create "documents" to be saved in "folders" and placed on a "desktop" are learning how to speak a corporate language. How many of them, while acquiring the skills that define computer literacy in myopic technical terms, will have the strength of character to resist the seductions of this metaphor or its effect on their perceptions of the world?

What is particularly disturbing about Papert's (1993) definition of literacy is its indifference toward human relationships with physical environments and peers. In *The Future Does Not Compute*, Stephen Talbott (1995) takes exception with Papert's vision of computer technology as the "primary instrument for overcoming abstraction, reintegrating education with life, and embedding the student in concrete learning situations" (pp. 151–152). Talbott fears a distortion of reality and detachment from humanist concerns, claiming that

it is a strange definition of "concrete" that places all its stress upon the student's active involvement, and none at all upon whatever it is he is involved with. The only fully concrete thing a computer offers the student is its own, perhaps enchanting, presence. Beyond that it hosts a mediate and abstract world.... This makes it easier for the child to remain caught up in the computer's presentation of reality—and therefore inserts a more distracting, more comprehensive veil between him and the world into which he was born. (p. 152)

■ THE CURRICULAR CONUNDRUM

Given such pernicious possibilities, one may ask why educators should introduce computer-mediated activities to their classrooms. Why should humanities teachers, in particular, take part in shaping computer literacy if it poses a threat to the traditions they value? Such questions were largely absent from the Modern Language Association's Right to Literacy Conference in 1988, where "much of the debate focused on distinctions between functional literacy, cultural literacy, and public literacy" (Costanzo, 1994, p. 11). Yet a decade later, we stretch this attenuated term further by asking it to accommodate emerging technology and electronic texts. Whether the humanities teacher approves or not, "computers are altering the way many of us read, write, and even think. It is not simply that the tools of literacy have changed; the nature of texts, of language, of literacy itself is undergoing crucial transformations" (Costanzo, 1994, p. 11).

Changes in literacy inevitably alter school curricula. Thus, humanists who retreat from the debate over computer literacy in schools may unwittingly invite the end of what they had hoped to preserve: a liberal arts curriculum. What is required, then, is the marriage of emerging technologies with the traditions of rhetorical education, a synthesis that would stimulate school curricula. However, this is not without risks, for the rhetoric and gadgetry of technology have the potential to overwhelm the subtler concerns of a humanities curriculum. One of the most eloquent advocates of such a synthesis is Richard Lanham (1994), who notes that although computer literacy has encouraged an "extraordinary convergence" in university curricula, it also has the potential to displace a central fixture of the humanities curriculum. If allowed, the consequences will extend well beyond schools.

Once you abolish rhetorical education, then you must ask:

How, then, do I teach decorum? What else do I use for my behavioral allegory? Property? Stuff? And what about the teaching of language? Once it has become simply instrumental, the clear, brief, and sincere transmission of neutral fact from one neutral entity to another, it loses . . . its power, as our present literacy crisis attests. If you pursue only clarity, you guarantee obscurity. And people lose their vital interest in language, as any composition teacher can attest. The "literacy crisis" is not only a social crisis, a crisis of instructional leverage, of educational policy, although it is all of those. It comes from the repudiation of the rhetorical heart of Western education, and its linguistic and behavioral education in decorum. (Lanham, 1994, p. 83)

THE RHETORICAL TRIANGLE: ETHOS, LOGOS, AND PATHOS

If the abolition of rhetorical education invites such crises, what exactly can be done to revive "the rhetorical heart of Western education" (Lanham, 1994) while helping students acquire a more satisfying computer literacy? Clearly, this requires a delicate balancing act, merging rhetorical traditions with emerging technologies to arrive at a new synthesis called media literacy (see Figure 1.1).

Figure 1.1

Media Literacy

Media literacy is the ability to read and understand a communications medium by looking *through* the processes it enables, interpreting its signs and symbols, while also looking *at* the medium's effect on an author, audience, and message.

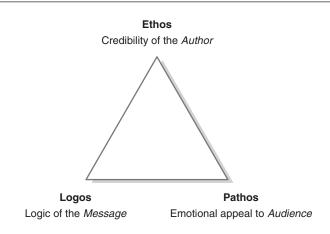
To succeed, we must adopt a holistic approach, establishing a literacy-across-the-curriculum program similar to writing-across-the-curriculum initiatives. Can we ask this of teachers who have not been formally trained in rhetoric? Are teachers of mathematics and science, let alone of the humanities, equipped to pose as rhetoricians? Yes, indeed, for all are engaged in rhetorical activities each day, whether seeking truth or trying to persuade someone to believe a story, cast a vote, buy a product, or take some other action. All of these activities require participation in the ancient art of persuasion that scholars of ancient Greece called rhetoric.

What this shift requires, more than formal training, is a reorientation in the way computers and computer technology are viewed. Until now, we have approved computer literacy as if it were just another form of basic literacy or a functional literacy necessary to succeed in the workplace. These forms of computer literacy required one to "look through" the technology and to learn how to manipulate hardware and software to accomplish certain tasks. However, it is now time to step back from the machinery and look at computers, networks, and the interactions they enable in order to learn how to "read" and interpret their impact. By looking at the machinery instead of constantly looking through it, one returns to the "rhetorical heart" of education while broadening the definition of computer literacy (Haas, 1996; Lanham, 1994).

How to begin? Like this: Return to the foundations of rhetorical analysis, which hold that every message has an author, an argument, and an audience. Rhetoricians speak of these three elements in terms of a "rhetorical triangle" (see Figure 1.2), employing the Greek terms *ethos*, *logos*, and *pathos*, which provide clues to the etymology of modern terms. Ethos speaks to the "ethics" or credibility of the author, logos addresses the "logic" of the message, and pathos relates to the emotional appeal (think of sympathy, empathy, apathy) and how it affects an audience. Whether

one speaks of this as ethos, logos, and pathos or author, message, and audience is a matter of personal preference. What is significant, however, is the way this rhetorical approach provides students—and teachers—with a vocabulary and tools for reading and discussing the signs and symbols they encounter both online and off.

Figure 1.2 The Rhetorical Triangle



Consider, for instance, television advertising. When a company hires a famous athlete such as Michael Jordan for endorsements, they do so with the knowledge that Jordan's ethos will reflect favorably on their product. Furthermore, by using Jordan's athleticism to create a stunning visual image, accompanied by instrumental music and special effects, the advertisers find their way to the emotional heartbeat of their audience, drawing them in through an effective use of pathos. What is missing? What point on the rhetorical triangle may actually be blunt, compared to the sharp points of ethos and pathos used by this particular medium? In a word: logos. Just because Michael Jordan, a tremendously gifted athlete, looks good in a particular pair of athletic shoes, drinks a particular soft drink, or endorses a fast food restaurant does not necessarily mean the product is right for everyone. Indeed, by scratching beneath the surface of these glittering advertisements, teachers can help students see that ethos and pathos are often used to distract the audience from a weak message, one whose logos does not hold up under close examination.

■ MEDIA LITERACY CHALLENGE 1

The Rhetoric of Computer Advertising

One way to help students develop media literacy skills is by asking them to apply rhetorical analysis to another kind of advertising.

What to Do

- 1. To initiate this challenge, ask students to find an advertisement for computer hardware, software, or accessories in a popular magazine. Have them examine the ethos, logos, and pathos used to sell the product to that magazine's intended audience.
- 2. Ask students to bring the advertisement and analysis to class. Have them form small groups, share the advertisements, and see if they can guess what type of magazine published them. Each group should list common images, themes, and methods used to express logos, establish ethos, and appeal through pathos.
- 3. In a subsequent discussion with the full group, create a list of rhetorical strategies that computer manufacturers use to persuade people that their product is truly the best and that a customer should act immediately by purchasing that product.

IS EVERYTHING AN ARGUMENT?

Placing rhetoric at the heart of computer literacy not only broadens the definition of the latter term but also helps students cultivate critical literacy while engaged in recreational computer use. Consider, for example, the habit of browsing, or "surfing," the Internet, which has quickly become a diversion comparable to channel surfing television programs. What is often missing from these activities is the kind of critical thinking teachers would like to instill in their students. Unless they are encouraged to think critically, students may simply acquire meaningless information that they fail to scrutinize or document in research papers.

This leads to an ethos problem. The student who borrows intellectual property without proper citations or uses inaccurate information gathered from a dubious source inevitably loses credibility. In such instances, the rhetorical triangle reminds students to consider all three fundamental concerns—ethos, logos, and pathos—before rushing to judgment. As a result, the rhetorical triangle furnishes a powerful means for analysis and articulation, serving as both an instrument of inquiry and a vocabulary for expression. Students who randomly pluck information from the Internet may not realize they have fallen prey to the salesmanship of pathos, which disarms their critical judgment by appealing to their emotions, distracts them with faulty logos, and leads them into the temptations that damage their ethos.

One may teach this lesson through the rhetorical strategies of daily life, since their prevalence alone helps students realize the importance of interpreting signs and symbols to develop media literacy skills. To emphasize a point, as well as start an argument, some rhetoricians claim "everything's an argument" (Lunsford & Ruszkiewicz, 1999). Although an overstatement, this is certainly a good starting point for discussion. While there is evidence of ethos, logos, and pathos in every statement read, seen, or heard, not all statements make the same kind of argument. Granted, this is not the kind of argument that adolescents have with their siblings, nor is it necessarily one in which the participants attempt to win a debate.

Rather, it is the kind of argument that comes from either (a) attempting to discover truth or (b) after having discovered that truth, attempting to persuade others to take an action (Lunsford & Ruszkiewicz, 1999, p. 5).

When seen through this filter, a surprising number of statements written, visual, musical, and virtual—acquire an argumentative quality. In other words, they can be viewed as rhetorical devices that attempt to persuade a particular audience. They may wish to share a truth, telling the audience that "Not marble, nor the gilded monuments/Of Princes, shall outlive this pow'rful rhyme" (Shakespeare, 1964, p. 95); then again, they may wish to stir the audience to take action, submitting to the power of the statements' persuasion.

MEDIA LITERACY CHALLENGE 2

Arguments"R"Us

This challenge helps sensitize students to a wide range of arguments they encounter on a daily basis.

What to Do

- 1. Divide the class into small groups and ask each group to consider one of the following questions:
- (1) Is a love letter an argument? Teacher's Tip

Although all of the items could

be seen as arguments, students

understanding this concept

initially. Nonetheless, when they have begun to see their

world through rhetorical

filters, they should be ready to look at computer paraphernalia

in new ways, subjecting it to

may have difficulty

similar critiques.

- (2) Is a grocery list an argument?
- (3) Is a restaurant's menu an argument?
- (4) Is a vacation itinerary an argument?
- (5) Is a birthday party invitation an argument?
- (6) Is a course syllabus an argument?
- (7) Is a standardized examination an argument?
- (8) Is a report card an argument?
- (9) Is a computer program an argument?
- (10) Is a Web site an argument?
- 2. Ask students how each item might present an argument and what media are used to express it. How do those media use ethos, logos, and pathos to convince an audience that their message is true or persuade them to take action?

Expanding the Challenge

To further develop students' understanding of rhetorical filters, ask them to write a brief rhetorical analysis of the promotional copy used in the packaging of computer merchandise. What evidence is there that the manufacturers have employed ethos, logos, and pathos to persuade the user that this is a quality product?

Suggested topics: The cover, table of contents, and blurb of a CD-ROM, computer manual, or software application. Help students discover distinctions between advertisements for computer merchandise in various media and the promotional material found on the merchandise itself.

Questions for discussion: How are the imagery and text on the merchandise different from the imagery seen in the magazine ads? Is there a difference, or do they "echo" the persuasive tactics used in advertising campaigns?

THE TECHNOLOGY OF WRITING

Ultimately, computer literacy needs to be considered as part of a larger discussion and placed in the context of significant cultural, historical, and technological developments. Just as typewriting classes gave way to keyboarding classes, computer application courses that isolate various software applications and treat the computer primarily in technical terms may also disappear. Until that happens, however, educators need to make a concentrated effort to situate computer literacy in the larger context of media literacy. This serves a number of purposes while calling attention to frequently neglected concerns. For instance, despite the attention that the Internet and computer technology have attracted, how often do people actually think about the impact of writing technology on their writing and thinking?

In his book, Writing Space: The Computer, Hypertext, and the History of Writing, Jay David Bolter (1991) describes writing as "a state of mind" while arguing for broader definitions of fundamental terms. In fact, Bolter not only argues that pencils, pens, paper, and computers are writing technology, but also that the skills themselves are technological inventions:

There is good etymological reason to broaden our definition of technology to include skills as well as machines. The Greek root of "technology" is techne, and for the Greeks a techne could be an art or a craft, "a set of rules, system or method of making or doing, whether of the useful arts, or of the fine arts" (Liddell & Scott, 1973, p. 1785). . . . In the ancient world, physical technology was simpler, and the ancients put a correspondingly greater emphasis on the skill of the craftsman—the potter, the stone-mason, or the carpenter. In his dialogue the Phaedrus, Plato calls the alphabet itself a techne. He would also have called the ancient book composed of ink on papyrus a techne; Homeric epic poetry was also a techne, as was Greek tragedy. All the ancient arts and crafts have this in common: that the craftsman must develop a skill, a technical state of mind in using tools and materials. Ancient and modern writing is a technology in just this sense. It is a method for arranging verbal thoughts in a visual space. The writer always needs a surface upon which to make his or her marks and a tool with which to make them, and these materials help to define the nature of the writing. Writing with quill and parchment is a different skill from writing with a printing press, which in turn differs from writing with a computer. (p. 35)

MEDIA LITERACY CHALLENGE 3

Musical Chairs and Writing Technology

This challenge will transform writing technology by turning what is usually invisible and common into something visible and extraordinary. In doing so, it raises questions to inspire further exploration of writing technology as well as classroom discussions about media literacy. As a result, this literacy challenge illustrates the need for broader definitions and a deeper understanding of the technology and media that students employ while developing literacy skills.

What to Do

- 1. Divide the class into groups of three or four students.
- 2. Ask each group to spend 5 minutes brainstorming a story idea about "a person in a place with a problem."
- 3. After they have established their outline, each group begins at one of seven workstations, each of which presents a different writing technology. By way of illustration, the workstations for this exercise could provide:
 - Station 1: Chalk and chalkboard.
 - Station 2: Crayon or charcoal and large, unlined poster paper.
 - Station 3: Pencil and unlined paper.
 - Station 4: Pen and lined paper.
 - Station 5: Markers and a whiteboard.
 - Station 6: Manual typewriter and typing paper with correction fluid.
 - Station 7: Laptop or desktop computer and diskette.

If any of these materials are unavailable, use comparable substitutes to approximate the evolution of writing technology from its simplest to most complex forms. Groups have 5 minutes to work on their story's narrative, using the writing technology at the station. Instrumental music provides a soothing background as well as practical purpose: When the music stops, so must the composition. Each group member must contribute at least one sentence to the narrative using the designated writing technology to write the sentence.

- 4. As soon as the music stops, each group steps back from its workstation and leaves its final sentence in a state of arrested development.
- 5. The groups rotate, moving to the next station in the sequence, where they read and continue their predecessors' narrative—beginning with that incomplete sentence—while using the new writing technology before them.
- 6. After the groups have completed a full rotation of the stations, so that everyone has had an opportunity to use each of the writing technologies, ask students to complete the survey form in Figure 1.3.

Media Literacy: Informal Study of Writing Technology For each of the following, please use the space provided or write a brief commentary on the back of this sheet. 1. Which writing technology felt most comfortable? Briefly explain why you liked the "feel" of this combination most. Put another way, which combination allowed you to concentrate most on the narrative you were writing? _ Chalk and chalkboard Crayon on large, unlined poster paper Pencil and unlined paper Pen and lined paper Markers on a whiteboard Manual typewriter and typing paper Laptop or desktop computer 2. Which combination called the most attention to itself, distracting you from the narrative, and how did it do this? 3. How did the respective writing spaces affect your sentence length or style? (In other words, how concerned were you with trying to fit your words and sentences into that writing space?) 4. If you had a choice of writing implement and writing space—that is, the tool and the surface on which it is used-which would you choose for the following activities, and why? Grocery list: Love letter: Diagram/map: Academic essay: A reminder (to yourself or family member):

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5. Of these technologies, which do you think would be most useful to the writer

who wished to emphasize the following, and why?

-Pathos (emotional appeal to the audience)

-Ethos (the author's credibility)

—Logos (the message)

■ CIVIL LITERACY

Teacher's Tip

When students have completed this survey, consider having them discuss it in their original small groups or in new groupings. Alternatively, it might be worthwhile to facilitate a full-class discussion on "Writing Technology: Evolution or Revolution?" If addressed as an open-ended question, this question helps students think about computers and computer literacy as both an evolutionary and revolutionary process. As a result, they should begin to see computer literacy in a new light, discussing it as part of a historical movement situated in the larger context of media literacy.

Once teachers have widened the parameters of computer literacy, enabling students to think of it in terms of media literacy, it is time to examine less technical matters. As already shown, there is far more to online learning environments than the "boxes and wires" that enable telecomputing. In many ways, the assembly of hardware and software presents fewer challenges than the creation of an online community of learners, particularly if the participants fail to behave in a manner conducive to educational endeavors. Having considered ways to restore the rhetorical heart of education to computer literacy, however, teachers are better prepared to cultivate civil literacy in cyberspace.