By Elizabeth Daley

Expanding the Concept of Literacy

When I ask people to define, in one or two sentences, the word *literacy*—what literacy is and what it enables people to do—the answers I receive are quite similar. To most people, literacy means the ability to read and write, to understand information, and to express ideas both concretely and abstractly. The unstated assumption is that "to read and write" means to read and write *text.* Although media and computer literacy are occasionally mentioned in these definitions, media literacy is most often defined as the ability to understand how television and film manipulate viewers, and computer literacy is generally defined as the skills to use a computer to perform various tasks, such as accessing the Web. If I also ask people about the nature of language, I usually receive the response that language enables us to conceptualize ideas, to abstract information, and to receive and share knowledge. The underlying assumption, so accepted that it is never stated, is that language means *words.*

Twenty-five years ago, a rather popular book was entitled *Four Arguments for the Elimination of Television.*[1] Clearly, that vision of the world was not realized: television has not been eliminated, and screens—from television screens to computer screens—now dominate our lives. This reality needs to be acknowledged. So, in the spirit of the title of the earlier book, I'd like to suggest four arguments for an expanded definition of *literacy:*

1. The multimedia language of the screen has become the current vernacular.
2. The multimedia language of the screen is capable of constructing complex meanings independent of text.
3. The multimedia language of the screen enables modes of thought, ways of communicating

Elizabeth Daley is Executive Director of the Annenberg Center for Communication and Dean of the School of Cinema-Television at the University of Southern California. She holds a Ph.D. in communication arts from the University of Wisconsin. This article is drawn from a paper delivered at the 2002 Aspen Symposium of the Forum for the Future of Higher Education.

Illustration by Derek Lea, © 2003

and conducting research, and methods of publication and teaching that are essentially different from those of text.

4. Lastly, following from the previous three arguments, those who are truly literate in the twenty-first century will be those who learn to both read and write the multimedia language of the screen.

These four statements are the foundational principles for the work being done at the Institute for Multimedia Literacy (IML) at the Annenberg Center at the University of Southern California (USC).

1. The multimedia language of the screen has become the current vernacular.

I often ask colleagues to imagine that they are living and teaching in Padua around the year 1300. Inside the stone walls of that great university they lecture in Latin, but the people walking on the streets beneath their windows, including their own students, speak Italian. Eventually that vernacular has to be embraced (and, indeed, it was embraced) within the Italian academy. The corresponding argument today, simply put, is that for most people—including students—film, television, computer and online games, and music constitute the current vernacular.

Print first allowed for mass literacy, and it has been very effective, but to privilege a print language often means to ignore the success of the technologies—audio recording, radio, cinema, and television—that have come into existence since the primary modes of print were developed. These technologies have become, for average citizens, the most common methods of receiving information, communicating with one another, and entertaining themselves. It is not hard to see how the grammar of these technologies has long since invaded our collective thinking. Metaphors from the screen have become common in every aspect of daily conversations. *Close-up* is synonymous for "in-depth" and "penetrating." We speak of *flashing back* to our earlier lives. We *frame* events to put them in context. We *cut to the chase* when we are in a hurry. We *dissolve* or *fade out* or *segue* from one topic to another, and we have *background sound*. We spend many hours at our computers looking at and sharing *screens*. Students are accustomed to the direct emotional experience of music as one of the primary factors in creating their identities, and they spend hours playing computer games in online communities. In short, our shared experiences as human beings are more often than not derived from the images and sounds that exist on screens.

2. The multimedia language of the screen is capable of constructing complex meanings independent of text.

At USC, the highly ranked School of Cinema-Television is praised, envied, and admired but still held suspect. In the world of a research university, it remains an anomaly. No university is ranked nationally on the basis of such a school, nor is such a school considered to be critical, as are the Departments of Physics and English.

I believe the reason for this lack of status is not only because media creators and scholars deal with that "disreputable" world of entertainment but also, and even more important, because in their work in this discipline, they do not give primacy to print. They believe that images and sounds, integrated in a time-based medium, can be as important in creating knowledge and communicating ideas and information as text. At the most fundamental level, their work does not endorse the premise, widely held for the past two millennia, that comprehension of and expression through the printed medium defines what it means to be literate and, by extension, educated.

A few years ago, a colleague sent me an article that had appeared in the *Chronicle of Higher Education*. The author, a respected art historian, asserted that it was time for the academy to give up a deeply ingrained suspicion of images and realize that the visual could indeed contain intellectual content, that it might in some cases be equal to text. I assumed that the article was a reprint, written in the 1930s perhaps, but it was current. At that moment, I realized that we at the IML would need to defend not only the idea of a vernacular that was a cinematic/multimedia-based language but also, more important, the value of that idea. We had a very long way to go to establish that such a language might have clear differences from, and even advantages over, print in some instances.

By arguing for the importance of the language of the screen, I do not intend to attack words or print. But print carries its own technological bias. Print supports linear argument, but it does not value aspects of experience that cannot be contained in books. Print deals inadequately with nonverbal modes of thought and nonlinear construction.

Like text, multimedia can enable us to develop concepts and abstractions, comparisons and metaphors, while at the same time engaging our emotional and aesthetics sensibilities. Rich media, with its multiple simultaneous layers, does much more than provide enhancements, illustrations, and tools for enriching, accessing, and transmitting the established literacy. Think for a moment of the still images that have defined many important moments in U.S. history: the photo essays of the Great Depression; a sailor kissing a girl in Times Square at the end of World War II; a young Vietnamese girl fleeing napalm; a college student at Kent State kneeling over a body. As icons, they no longer require any explanation for

most contemporary Americans, although a printed text or oral explanation might well complement and extend their meanings. However, even if we did not know the context of their creation, they would each carry strong meanings and convey powerful emotions. Multimedia and cinema, though sometimes enriched by language, embrace many other elements as co-equal—not only image but also sound, duration, color, and design. Think also for a moment of historic cinematic moments: the first moon landing; the planes slamming into the World Trade Center. What would it be like to try to fully share these and other momentous events without access to the language and power of the screen?

Print supports linear argument, but it does not value aspects of experience that cannot be contained in books.

3. The multimedia language of the screen enables modes of thought, ways of communicating and conducting research, and methods of publication and teaching that are essentially different from those of text.

Since the Enlightenment, the intellectual community has valued the rational over the affective, the abstract over the concrete, the decontextualized over the contextualized. These values, combined with a deeply ingrained suspicion of practice and of the creation of product, make it difficult to bring the vernacular of contemporary media into the academy.

Accepting the language of multimedia as co-equal with text will require a major paradigm shift that challenges the domination of science and rationality, abstraction and theory. I am certainly not alone in thinking that this shift is long overdue. For example Stephen Toulmin, in his highly regarded 1990 book *Cosmopolis*, eloquently argued for the academy to move beyond the dominance of the Cartesian model.[2] But just how difficult this transition will be was made clear to me a few years ago when a senior academic figure explained why she found it difficult to judge the worthiness of artists for promotion and tenure. She said that she found their work too specific and lacking an abstract, theoretical base. It seemed that a professor was more valued if he or she wrote about art rather than made art.

The language of multimedia is, no doubt, more closely related to the affective and subjective language of art than to the rational and linear language of science. Sergei Eisenstein, the great Russian filmmaker, once described the language of art, as opposed to the language of science, as a language of conflict, a dialectical language as opposed to a linear one. When the language of science is applied to art, he argued, it ossifies art; for example, a landscape becomes a topographical map, and a painted Saint Sebastian becomes an anatomical study.[3]

The grammar of multimedia and the ways in which it creates meaning are only beginning to be systematically articulated. By contrast, the language of the cinema offers us an extensive body of theory, providing a starting point from which to think about multimedia. In 1923 Dziga Vertov, a Soviet documentary filmmaker and one of the Russian pioneers of cinematic language, wrote for the motion-picture camera a fanciful monologue that might well be applied to multimedia today: "I am a mechanical eye, I a machine, show you a world the way only I can see it. Now and forever, I free myself from human immobility. I am in constant motion. I draw near and then away from objects . . . recording movement . . . of the most complex combinations. Freed from the limits of time and space, I put together any given points in the universe no matter where I've recorded them. . . . My path leads to the creation of a fresh perception of the world. I decipher in a new way a world unknown to you."[4]

One of the fundamental cinematic building blocks, which also applies to much of multimedia, is *montage*, or the juxtaposition of elements, both within and between shots. For the filmmaker, this is the art of editing, and it is core to the creation of cinema. Montage offers a clear and important example of how differently text and multimedia construct meaning. Through montage, one is able to manipulate time and space and create sequences that could never exist in the physical world but that are thematically and conceptually related. Montage permits an interaction between the creator and the receiver, as well as among the elements of the creation. It not only allows but encourages the recombination of elements to create new meanings.

The famous demonstration of montage by Lev V. Kuleshov, another of the Russian pioneers, elucidates the concept. Kuleshov made a short film sequence that juxtaposed a well-known Russian actor's face against three different shots: a bowl of soup, a dead woman in a coffin, and a girl playing with a toy bear. When asked to describe what they had seen, viewers—according to V. I. Pudovkin, who was then a student in Kuleshov's workshop—insisted that the man was hungry when looking at the soup, joyous when watching the girl, and sad when viewing the

Multimedia, so ubiquitous to young people's experience, often seems to be particularly hard for them to analyze or deconstruct.

dead woman. They described his various emotions with great detail, as proof of his outstanding talent as an actor. All versions were, however, the same shot of the man. Nothing in his image had changed. The meaning attributed to each sequence came only from the collision of the shots.

With the computer, we can now electronically construct images and sounds and manipulate space and time to create meaning in ways about which our Russian progenitors could only dream. The tools of keying, compositing, and morphing are more than ways of misrepresenting truth. They enable the construction of higher orders of meaning, nuance, and inference. Synthesizing and sampling, as well as simultaneity, are natural to multimedia, permitting a form of *bricolage*, a process through which, in the words of John Seely Brown, one is able to "find something (perhaps a tool, some open source code, images, music, text) that can be used or transformed to build something new."[5]

Interactivity as a core factor in multimedia is in some ways closely related to performance and can enable the viewer/reader/user to participate directly in the construction of meaning. It is perhaps worth digressing for a moment to note that whereas performance has long been devalued as "entertainment," the art of storytelling, always performative, has been a major way of transmitting culture and values throughout human history.

The very vocabulary of multimedia encourages approaches different from those used to write text. One "creates" and "constructs" media rather than writing it, and one "navigates" and "explores" media rather than reading it. The process is active, interactive, and often social, allowing for many angles of view.

The physical production techniques used to make multimedia and the practices of distributing it also differ from the models used to produce and publish text. First, and perhaps foremost, the production of multimedia is most often an act of collaboration. A film, large or small, is rarely made by one person. The "film by" credit is most often the manifestation of a particular business practice and does not reflect the true nature of authorship or the process of creation. This collaborative process may be reduced in scale in multimedia projects, but it is still typical. It lies in the very nature of the creative process and does not fundamentally change because of the difficulty or simplicity of the tools that are required.

Second, the final product—be it a film, a television program, or some other form of multimedia—is most successful when it emerges in large part during the process of creation. A script or scenario or storyboard provides a guide, but if one wants to go beyond the predictable and formulaic, there needs to be room for discovery and even serendipity during the production or creation of a film or multimedia document. One of the great U.S. filmmakers, Walter Murch, who edited *The English Patient,* among other well-known films, refers to this process as the "collision of intelligences" that produces something unforeseen by the creative team, a process that allows for and respects intuition. In some ways, this process constitutes a type of active research in which one studies what one is doing while doing it. Such work demands a climate open to experimentation and a willingness to explore and fail—an "ecology of experimentation," to borrow a term from a University of Michigan document.[6] It allows for rapid iteration and quick changes of direction.

Third, media forms are usually meant for public distribution and presentation. They are intended to be seen in environments beyond that of their creation. In the beginning at IML, both students and faculty felt that student projects were private and meant for viewing only by the student and the professor. Over the past semesters, however, we have seen the

nature of authorship change. Students no longer write to please only the professor. They want to be understood by their peers and by others who will see and experience their projects. They consider themselves to be authors who possess expertise in a certain research area. Likewise, faculty in IML workshops are intent on making their own research projects accessible to those not in their discipline. Faculty in the humanities and in arts and sciences—from disciplines as diverse as quantum physics, art history, and philosophy—have found common ground, insights, and points of access into the pedagogical and research issues in one another's disciplines. Certainly not all work in a discipline will be understandable to those without training, but for interdisciplinary work, faculty must find a language to speak across the boundaries. Multimedia may well have the potential to provide a much-needed new space in which cross-disciplinary conversation can occur between the humanities and the sciences.

4. Lastly, following from the previous three arguments, those who are truly literate in the twenty-first century will be those who learn to both read and write the multimedia language of the screen.

After a hundred years, the language of cinema has been rather well defined, and a large body of critical literature exists. The production methodologies are also quite well understood and articulated, although that knowledge often seems to rest primarily within the oral culture of the filmmaking community. Even with this history and ample evidence of the skill required to construct media, the attitude widely held by both faculty and administration is that complex media texts do not deserve classroom or research time, especially if such study might take emphasis away from traditional activities such as essays and research papers.

Since the 1960s, universities and colleges and even high schools have taught so-called media or visual literacy courses. These courses, however, have had two limitations. First, they often seem to have an underlying assumption that television, cinema, and related media are inferior communication forms that may misrepresent reality, since media at its worst manipulates us and lies to us and at its best is superficial. These courses, so far as I can see, enforce the belief that real education remains in books and that real knowledge is rational and linear. Students are taught to read visual texts in order to defend themselves against the onslaught of visual culture. Second, these courses have been extremely one-sided in the definition of literacy, focusing on a "read only" approach. Full literacy demands the ability to write, as well as to read. I was recently told by a very well-known scholar that images are less useful than text because one can interpret images many ways but words are far more precise. I wondered if he had never had the experience that most us have on a daily basis—that of saying, "No, what I really meant to say was . . ."

The current situation is further complicated by the widespread assumption that students already have an adequate knowledge of screen language and multimedia. No doubt, young people today have less fear of the computer and more technical ability with software for rich media; multimedia is indeed their everyday language. However, they have no more critical ability with this language than do their elders—perhaps less. They need to be taught to write for the screen and analyze multimedia just as much as, if not more than, they need to be taught to write and analyze any specific genre in text. Generally, they have had instruction in text at the secondary level, but rarely have they received similar instruction for multimedia. Multimedia, so ubiquitous to their experience, often seems to be particularly hard for them to analyze or deconstruct.

Another consideration is that although the academic study of film, media, and audiovisual culture has established pedagogical precedents that provide theoretical building blocks for the critical application of film, television, and multimedia into higher education, it is

common to see media integrated into disciplines across the curriculum without these important critical tools in place. Films or segments of films are screened in various classes "to engage students" in the subject matter. Often this usage appears to have occurred without appropriate regard for the nature of audiovisual media, its inherent meaning and structure, the cultural context of its creation, or the consequences of dissecting it.

The most glaring examples of this practice have occurred during the past two decades in history departments, where film has become an integral part of the curricula. Despite initial resistance, dramatic narrative films are now recognized for their ability to bring the past "to life," creating an emotional impact that is thought to exceed that of written texts. However, most history and humanities faculty are not trained to address the rhetorical codes and narrative strategies of cinema. Thus, historical films are frequently analyzed empirically and are evaluated according to the same criteria as are conventional historical documents. Without a background in film theory and screen language, students and faculty do not read a film as the product of highly developed systems of signification embedded in a cultural context. By contrast, they have been taught these skills for textual narratives since their early stages of reading education.

Even the most cursory knowledge of media is not included in the general education curricula of most colleges or universities.

To read or write the language of media and understand how it creates meaning within particular contexts, one needs some understanding of frame composition, color palette, editing techniques, and sound-image relations, as well as of the mobilization of generic and narrative conventions, the context of signs and images, sound as a conveyor of meaning, and the effects of typography. Such principles as screen direction, the placement of objects in the frame, color choices, morphing, cuts, and dissolves all do much more than make a screen communication aesthetically pleasing. They are as critical to the creation of meaning as adverbs, adjectives, paragraphs, periods, analogies, and metaphors are to text. Multimedia also requires that attention be paid to design, navigation, and interface construction. The mouse, the click, the link, and the database have already taken their place alongside more traditional screen descriptors.

Outside of schools of film, instruction in these formal elements of multimedia and cinematic construction is not provided in the same way that it is in English or foreign languages. In fact, even the most cursory knowledge of media is not included in the general education curricula of most colleges or universities. Higher education institutions require that students learn not only the content but also the formal techniques of such authors as Steinbeck, Hemingway, and Frost well enough to discuss both the content of their work and their creative style in light of an established body of literary theory. Such work is highly unlikely to be required in media of any kind. At best, one course in "the arts" may be required, but it is unlikely to be a course that requires the equivalent of a language lab.

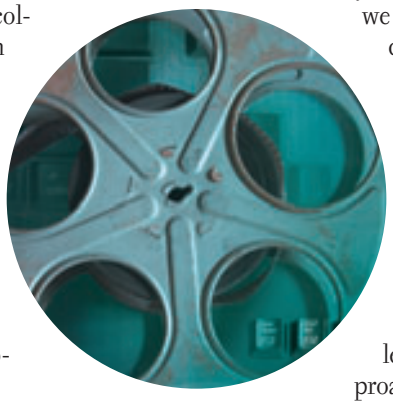
At the IML, we are committed to empowering faculty and students to choose the best language for the task at hand. In some cases, this language may well be linear text, and in some cases, it may be one or more kinds of multimedia. To make that choice, a faculty member or student must have a command of the elements of multimedia and screen language and must understand how to use that command to create and disseminate knowledge.

The Institute for Multimedia Literacy

My work with multimedia literacy began a few years ago when one of the most famous alumni of the School of Cinema-Television, George Lucas, asked me a very provocative question. "Don't you think," he said, "that in the coming decade, students need to be taught to read and write cinematic language, the language of the

screen, the language of sound and image, just as they are now taught to read and write text? Otherwise, won't they be as illiterate as you or I would have been if, on leaving college, we were unable to read and write an essay?"

As I flew back to Los Angeles that day, I knew that he was correct. What I did not fully realize, at 25,000 feet over the Pacific, was that what he had so casually suggested was likely to be highly disruptive within the academy. I was rather new to the university at the time and assumed that the proposal would be of considerable interest to colleagues. However, when I called a leading faculty member in the Department of English to suggest that we explore ways of incorporating teaching some basic multimedia writing in freshman composition, I was greeted with profound silence.



My colleagues in the School of Cinema, however, strongly endorsed the idea, and in the fall of 1998, we began what would become the USC Annenberg Center's Institute for Multimedia Literacy. We started with one course in which students who were not cinema majors were required to create a multimedia project, in their own discipline, that would have the intellectual rigor expected in a five-to-seven-page term paper but that could be "explored" (i.e., read) only on the computer screen. This multimedia project could not be printed out as hard copy. It had to employ sound and image; it had to be time-based; and it had to be interactive. Needless to say, we all found this assignment challenging. These first students came from anthropology, history, sociology, and English literature.

Today, we oversee classes that incorporate work in the extended literacy of multimedia throughout the undergraduate curriculum at USC, as well as in satellite classes at Berkeley, at Cal Tech, and in two Los Angeles–area high schools. Each semester, we offer a group of faculty the opportunity to participate in our program for the first time, while faculty from previous semesters continue to work with us. So far, more than two thousand students and forty faculty have been included. The faculty are assisted by teaching assistants and post-docs from the Division of Critical Studies in the School of Cinema. All are required to attend a summer workshop conducted by continuing post-docs but also, and most important, by faculty who have taught in the program previously. Peer mentoring operates at all levels. The goal is to help the incoming faculty members rethink the content of their courses. We ask them to clearly tell us what it is that they want to teach, and then we try to help them discover how the language of multimedia might further that goal. We also ask them to assess their current research to see how the language of multimedia might offer fresh perspectives or at least suggest a new approach to their current efforts. We hope that in doing so, they will connect their teaching to their research in more direct ways. In the workshop, they must author their own project, which must be specific to their discipline. At the same time, they are engaged in redesigning their syllabi to include multimedia projects.

Courses drawn into the program have ranged from gender studies to quantum physics, from Slavic studies to philosophy. The projects vary just as greatly in approach. Some are structured around Web sites, as in the case of the Slavic course in which the students developed a site enabling visitors to navigate the text of *Crime and Punishment* through maps of St. Petersburg. Another student site, created in an Asian American literature class, explicated the novel *Woman Warrior* by examining the abuse of women, from foot binding to corseting, using popular culture images that inculcated these practices into belief systems. Other classes have worked with databases, as in the "Culture of the 1960s" course in which the students collected oral histories. The faculty member will use this material both in his own research and in future classes. Most recently, we are seeing the creation of elaborate interactive games.

Over the past few years I have become more convinced than ever that the rapidly developing language of multimedia—the language of the screen—can bring important new approaches to research, publication, and teaching. Now we simply have to accept the challenge to embrace the paradigm shift that is required to bring this vernacular into the academy. Fortunately, I have colleagues who agree. For example Dr. Mark Kann, chair of the USC Political Science Department, recently stated: "It seems to me that at some point, multimedia expression is going to be like writing: it's something you don't leave college without. Kids are very sophisticated in navigating on computers and surfing the Internet. I think pretty soon they're going to have to be as sophisticated in expressing themselves using the media. And I wouldn't be too surprised if at some point a multimedia program that is the equivalent of freshman writing will start appearing at universities. It will become a requirement for graduation."

The concept of a language composed of elements other than word and text is neither fundamentally new nor particularly revolutionary. Rather, this concept is an evolutionary development of the ideas and practices that have been with us since people first struggled to leave records and tell stories. Technology is simply enabling these alternative ways of communicating to penetrate our lives more directly and in more powerful ways.

Notes

1. Jerry Mander, *Four Arguments for the Elimination of Television* (New York: Morrow, 1978).
2. Stephen Toulmin, *Cosmopolis: The Hidden Agenda of Modernity* (New York: Free Press, 1990).
3. Sergei Eisenstein, *Film Form*, trans. and ed. Jay Leyda (New York: Meridian Books, 1957), 46.
4. *Kino-eye: The Writings of Dziga Vertov,* ed. Annette Michelson, trans. Kevin O'Brien (Berkeley: University of California Press, 1984), 17–18.
5. John Seeley Brown, "Learning in the Digital Age," in Maureen Devlin, Richard Larson, and Joel Meyerson, eds., *The Internet and the University: Forum 2001* (Boulder, Colo.: EDUCAUSE and The Forum for the Future of Higher Education, 2002), 71–72, <http://www.educause.edu/forum/ffpiu01w.asp> (accessed January 21, 2003).
6. University of Michigan, *President's Information Revolution Commission Report,* April 2001, <http://www.umich.edu/pres/inforev2/> (accessed January 21, 2003).