

Visual Literacy: An Institutional Imperative

Academics have a long history of claiming and defending the superiority of verbal over visual for representing knowledge. By dismissing imagery as mere decoration, they have upheld the sanctity of print for academic discourse. However, in the last decade, digital technologies have broken down the barriers between words and pictures, and many of these same academics are now willing to acknowledge that melding text with image constructs new meaning, and some may even go so far as to admit that images, as communication devices, can stand on their own.

Walk down the corridors of a classroom building at the local community college or down the “hallowed” halls of an Ivy League university: the lecture rooms, once the domain of the dusty lectern and chalkboard, are now filled with the hum and glow of computers and projectors. Screens flash with graphics and multimedia content. Students work alone and in teams searching the Web for resources, conducting virtual experiments, charting and mapping data, and assembling multimedia solutions to assignments.

Step back and look at the broader academic landscape. Scientific visualization, an anomaly only twenty years ago, has jumped from mainframe to mainstream. Image archives, rare and crudely catalogued ten years ago, are emerging as searchable collections providing rare access and insight into art and culture. New, visually rich journalistic forms such as digital photography, audio and video podcasts, and e-documentaries allow novices along with professionals to be content creators without the overhead

of major and costly production infrastructure. Satellite imagery and real-time webcams provide casual browsers and researchers alike with observational data that they had little systematic access to a few decades ago. “Screen time”—with its nonlinear “clickability” and elements of image, color, sequence, and motion—has been added to the once privileged “paper space” as a primary organizing format for expressing and exchanging knowledge.

Haphazard Adoption

In 1984, Apple Computer announced the Macintosh, and overnight, everyone was an “expert” desktop publisher. Similarly, the visual revolution today has produced its share of novice design and overestimated competencies. Students, both immersed in and enthused about visual imagery, often lack the skills, precision, and depth, as well as the education, that allow them to be masters of the medium. For example, Susan Metros recently taught a freshman seminar on visual literacy. As the class progressed, it became obvious that although these students were indeed visual learners and traveled seamlessly in a world rich with sight (and sound), they lacked the ability to express themselves visually. They could view images but could not make images. They could read a map but could not map data. They could input numbers to build a chart but could not understand why one chart would be better than another. They could copy images from the Web but could not create an original composition. They could string together video clips to make a movie but could not script a story.

Faculty who bravely choose to use visuals in teaching or research face another

set of daunting challenges. They have difficulty locating the professional resources and the support services required to produce high-quality visuals. And they have even more difficulty finding the time to learn, and the consultants to teach them, how to create their own solutions. Furthermore, when students request to fulfill an assignment graphically, and many do, faculty often lack the experience and confidence to critically evaluate work that wanders outside the print norm. If faculty members’ interest is piqued and they succeed in developing and honing their visual skills, they run the risk of being ostracized by their colleagues, professional societies, and promotion and tenure committees and having their work discounted as frivolous.

A Systematic Institutional Approach

If not confronted, the evolution of visual literacy will continue to bang along haphazardly as students carry literacies gleaned in their K–12 education and pop-culture lifestyles into their tertiary learning experiences. Higher education has the opportunity to take a systematic institutional approach to defining core values that include visual acuity alongside the ability to read and write, formalizing curricula that teach skills and engage students, and initiating debate on issues related to how visual literacy benefits society. Institutions can take three steps to accelerate the adoption of new visual literacies consistent with their goals.

1. *Multimodal fluency: Teach a basic visual design vocabulary.* George Lucas has argued: “If students aren’t taught the language of sound and images, shouldn’t they be considered as illiterate as if they left

college without being able to read or write?"¹ Much like written language, visual literacy has its own grammatical syntax and vocabulary. Visually literate individuals must be able to decode imagery—look at it, perceive meaning, and make decisions based on what they see. They must also be able to *encode* visual imagery—that is, make simple images and visualize basic data.

As college and university committees and senates rethink what it means to be a literate person in the twenty-first century, they have an opportunity to include this new language and skill set in their curricula. As an example, the Ohio State University just released a major rewrite of its 1987 undergraduate general education curriculum. This draft document includes a graduation requirement that students be able to demonstrate skills in written, oral, and *visual* expression.

Rewriting general education curriculum is a long and arduous process. For those faculty, staff, and students who want to begin building their visual skills at their own pace and in their own space, there are excellent products available. One example is *VizAbility*, a CD-ROM/book combination codesigned by Kristina Woolsey. *VizAbility* explores concepts and skills related to seeing, drawing, diagramming, and imagining.²

2. *Design context: Provide the places, people, and resources needed for those in the academic community to become visual producers.* Many college and university information technology units provide learning commons and labs (with a few even colocated in libraries), where students can go to produce media digital solutions to assignments and where faculty can learn how to use new media. Institutions also support instructional technology units, many with staff visual designers who can assist faculty in creating graphics and visuals for use in teaching and research.

An overlooked resource for faculty support is students. Research on Research: Student-Faculty ePartnerships, an ongoing project at Ohio State, pairs a digitally facile student with a faculty member to create a publicly accessible,

multimedia-rich, digital portfolio chronicling the faculty member's research.³ Undergraduate students gain firsthand knowledge of the research process specific to their major. In addition to the professional portfolios, faculty gain insight into the visual design process.

Institutions can join professional organizations like the New Media Consortium (NMC) (<http://www.nmc.org>) and the EDUCAUSE Learning Initiative (ELI) (<http://www.educause.edu/eli>). These organizations provide their members with a plethora of professional-development opportunities, entrée into active communities of practice, and easy access to cutting-edge resources on topical subjects and new, emerging, and future technologies. For example, the NMC recently released *Pachyderm 2.0* (<http://www.pachyderm.org>), a simple-to-use, open-source authoring environment for creators of Web-based and multimedia learning experiences.

3. *Visual judgment: Develop constructive critics of visual information.* Seeing is no longer believing. A consumer of images must be able to judge accuracy, validity, and worth.

This holds particularly true in today's digital age, when images can be effortlessly manipulated, cropped, and disseminated by anyone with a basic drawing package and an Internet connection.

Institutions must provide a stage, real and virtual, where the academic community, in tandem with the global community, can freely debate the ethical issues inherent in a visually dominated world. Higher education must prepare visually literate students to look critically at images and graphic representations and ask the following questions: "Does this image tell the truth?" "How representative is this image?" "What is the source of this image?" "Are we responding to emotional issues or content?"

Call to Action

The challenge of transforming print-centric colleges and universities into a visually rich and dynamic community of creators and scholars is daunting.

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Although the information technologists have laid the infrastructure and although commerce and entertainment have provided examples, higher education remains bogged down in its traditions—traditions that were highly effective in a *past* era.

This transformation to a visually literate and vibrant academic community requires the commitment of the college or university's top leadership. The key is to move beyond training a few visually adroit instructors and students and to instead establish strategic and overarching institutional goals. There is no easy, natural enculturation process. The individuals and organizations with expertise in visual forms are not typically the most revered in the institution. Furthermore, the requisite changes go well beyond cosmetic fixes, since becoming visually literate alters the way that communities are prepared to perceive the world, solve problems, collaborate, and communicate. Finally, visual literacy is dynamic: technologies and genres change rapidly. If this shift is to be an institutional strategic imperative, leaders—along with the academic community—must reexamine academic mission, rethink core values, rewrite general education requirements, and broaden the definition of what it means to be a *literate* person in the twenty-first century.

Notes

1. George Lucas, quoted in James Daly, "Life on the Screen," *Edutopia*, September 2004, <http://www.edutopia.org/magazine/ed1article.php?id=art_1160&issue=sept_04>.
2. Kristina Woolsey, Scott Kim, and Gayle Curtis, *VizAbility* (Boston: Thomson Course Technology, 2004).
3. Victoria Getis, Catherine Gynn, and Susan E. Metros, "New Partnerships: Engaging Undergraduates in Research through Technology," *EDUCAUSE Center for Applied Research (ECAR) Research Bulletin*, vol. 2006, issue 1 (January 3, 2006).

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