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ABSTRACT

The development of a visual literacy facility, the Creative Visual Lab, at the S. I. Newhouse School of Public Communications at Syracuse University (New York) is described. The facility was designed to provide students with the instruction that would develop their computer proficiency and visual sensitivity without being, in itself, completely computer-driven. Paradoxically, the computer, a tool that has become a practical necessity in industry, can be an impediment to educating students in its own use. The laboratory was designed to put more gratification into analysis and critical thinking. A conference table, a studio area, and a computer cluster were established as learning areas and are complemented by an audio-visual booth. The Creative Visual Lab has been shown to help build visual literacy through (1) process, (2) research, (3) creativity, (4) drafting practice, (5) critique, (6) execution, and (7) teamwork. The laboratory provides the benefits of having computers without the administrative burdens. One figure illustrates the laboratory floor plan. (Contains 9 references.) (SLD)

Accommodating Technology in the Visual Literacy Classroom

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In the last seven years, so-called "desktop publishing," has had the greatest impact on print design and pre-print production. According to a recent government occupational report, electronic publishing "is one of the fastest growing categories in the computer field" (Stanton, 1991). "Desktop" or electronic publishing means using "a personal computer, in combination with text, graphics and page layout programs, to produce publication-quality documents" (Stanton, 1991). These systems produce reader-ready or camera-ready documents that can by printed or reproduced by traditional methods.

Companies that spend billions of dollars annually on printing and publishing have embraced computer publishing (Stanton, 1991). They have seen how this technology saves them plenty of money and at the same time gives them greater control of their publications or documents. It has become a workable, low-cost solution for most business publishing needs.

While computer publishing software has ushered in many advantages, professionals acknowledge that this technology presents some fundamental problems. Most notably, it takes what used to be specialized design tasks and packages them. The programs are relatively easy to use. Yet experience with the technology is showing that many users don't have the design sense or skills to put the software packages to effective use. Bruce Robey, a former typesetting shop supervisor details the problem,

> "In the old system, the author dealt with content, the typesetter with form. Frequently, the results (under the new system) are an offense against typographical good taste" (quoted in Stanton, 1991).

Thus, computer published results can be disappointing for people without design experience. Jon Tarter writes in *Softletter*, a computer software newsletter, that "while mastering the software is easy, producing an attractive page demands a certain amount of visual literacy — design training and layout skills" (1986).

And according to some experts, the expectations for visual literacy has never been higher. Some proponents of visual literacy contend that we've moved from a text-driven society to a visual one. In the U.S., the television set is on for an average of 50.2 hours a week in white households and 73.6 hours in a week in black households, according to a 1992 study conducted by Bozell advertising agency (Sternberg, 1992), and all family members tune in. In 1993, A.C. Nielsen reported that among adults 18 and older, women watch television 4

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hours, 51 minutes a day; and men, 4 hours, 16 minutes. Teens tune in 3 hours, and children, 3 hours, 7 minutes per day (1993, Nov.). Nielsen also found that 75 percent of all U.S. households own at least one VCR. All of this TV exposure has some experts calling for visual literacy. Rutherford, a Canadian scholar, contends that visual literacy should become rudimentary training for all viewers. He proclaims:

> "Worshipping at the altar of false images in a world of rapid fire TV imagery, 'visual literacy' is at least as important as learning how to read" (1992).

Young people, namely the students we teach, particularly need visual literacy instruction. Messages aimed at teens are, as Foulsham describes in the article, "The Youth Cult of Zap, Crackle & Pop," filled with "kaleidoscopic editing, and often a presenter-free collision of sound, image and symbol" (1993). Foulsham suggests that teens are much more visually adept and that they can comprehend and absorb many different messages simultaneously. They become more "impatient with traditional images and narratives" (1993).

Visual Literacy and *Computer Literacy*

The rise of desktop publishing and the evolution to a visually-charged environment has professionals demanding more from college graduates. Today's job market requires computer literacy, computer publishing literacy, and visual literacy, to land entry-level positions in the following media: advertising; newspaper, magazine and book publishing; public relations; and graphic arts.

The S.I. Newhouse School of Public Communications at Syracuse University recently underwent a three-year review and re-design of the undergraduate curriculum. Multiple focus groups and in-depth interviews with marketing communications specialists, advertising practitioners and public relations professionals found that computer skills and visual literacy are important to students hoping to work in some aspect of marketing communications. These professionals endorsed the school's current visual literacy course requirement and identified three major skills which should be covered in the course. They include: an understanding of design, typography, layout, and semiotics; ability to produce documents on computer software; and an understanding of publishing processes.

The Computerized Solution

To provide students with the type of instruction that would develop their computer proficiency and visual sensitivity, one instructional solution assumes that all design work will take place on a computer. This standard solution is computer driven (Barnhurst, 1991). To build skills and visual literacy, computers must become pervasive in the classroom, dorm room, and all-night lab. The students then live with the technology. Following this approach, we first proposed that the school equip a lab specifically designated for creative and visual instruction. Among other items, the proposal included computers at each student desk, which accounted for more than half the total projected cost. The more we explored the computer-based solution, the more problems we found, some more obvious than others. Here are the two most important problems with using computers as the primary venue for visual literacy and creative publishing training:

Budget. First, it's expensive. After the initial expense for remodeling, hardware purchases, software purchases, and allocating of space, we would still have to come up with funding for the ongoing expenses: staffing, maintenance, security and routine upgrading of equipment and software.

Content. Second, the computer technology can dominate visual learning. Promotional materials for "desktop" publishing tend to stress the software's simplicity and ease of use (Thompson and Craig, 1991). What tends to be downplayed in the promotional literature is the need for visual skills and design knowledge required to present clear ideas (Stanton, 1991). Computers can compete for attention in the classroom, especially when time in-class must be allocated to several different software packages, file integration, computer networking, and printer and scanner operation. The learning curve on software has grown "longer and steeper" as more complicated versions routinely arrive in the marketplace (Stanton, 1991).

Besides the limitations of cost and time, computers can present other structural barriers to learning visual literacy. Four types of problems arise when the computer drives the process of learning and working visually.

Hardware. Except in the most advanced multi-media settings, computers tend to isolate individuals in front of a screen. This configuration is antithetical to creative fields such as advertising, where teamwork has been essential to problem-solving.

Interface. Most computer software, by its interface design, puts the tools of *production* into the hands of students first. However, in media industries, conceptualization comes first. Seasoned practitioners will toy with design as they brainstorm, but production does not come before the Big Idea. The appearance of most layout packages on the screen invites the user to enter some words, choose type, and begin a layout, even before an idea has fully formed.

Software. Computers and their accompanying software offer students pre-packaged solutions (algorithms) to communications problems. And students can become tempted to use them. All the whistles and bells that a computer has to offer can take over the visual design, whether these algorithms are appropriate or not. Even word processing software comes with so many font styles, sizes, borders, and other visual manipulations that students want to use them all. The design takes form simply because the pre-set algorithms are available on the computer.

Output. The computer and other hardware, such as laser printers and scanners, create a polished output almost at once. This superficial precision can lull students into a false sense of skill or accomplishment. Those who say they can't draw a straight line with a pencil, suddenly produce precise lines and more.

All of these problems may in fact be considered advantages in a professional setting but students need to learn to manage all the freedom and power that computers put in their hands. Paradoxically, a tool that is a practical necessity in industry can prove an impediment in educating students to use that very tool.

A Visual Literacy Solution

To avoid these problems in the classroom, we searched for an alternative. The solution needed to rely less on computers. We had to find a way to achieve visual literacy from a pedagogical perspective. Rather than putting computers first, we wanted to put more gratification into analysis and critical thinking, the hallmark of true education. The facility itself, by its layout, equipment, arrangement and location, needed to serve these ends. How could we build an environment that was more conceptual, where analytical and creative problem-solving ability would get reinforced?

We began by breaking the tasks and activities of the classroom down into steps from the visual and creative learning processes. We identified several phases or cycles: research and ideation, rough drafting and critiquing, computer production, critiquing, and revising. Professionals cycle through these phases, moving smoothly back as well as forward as they produce their work. To train the neophyte to understand and begin the process, we decided to explore the idea of examining the phases from the perspective of different teaching spaces. First, computers, of course, would be a central component, but, second, we also considered how we introduce visual ideas, with room to talk around the table and the ability to show images from many sources. Third, students need space to work independently and in small groups, coming up with and sharing ideas. Fourth, students needed work spaces to assemble and mount their computer output. Finally, we needed a space where the students could show their work and have it critiqued.

Although this list identifies five places, on closer examination we found that some of the learning activities were similar and could be accomplished in fewer than five physical areas. In the end we settled on three learning spaces: A conference table, to give initial instructions and show examples, could also be used to critique and discuss students' work. A studio area, with design tables grouped in small clusters that put students together as they came up with ideas, could also be used to assemble and revise their work. And of course, a computer cluster, in this case shared with many departments, needed to be close enough so that stu-

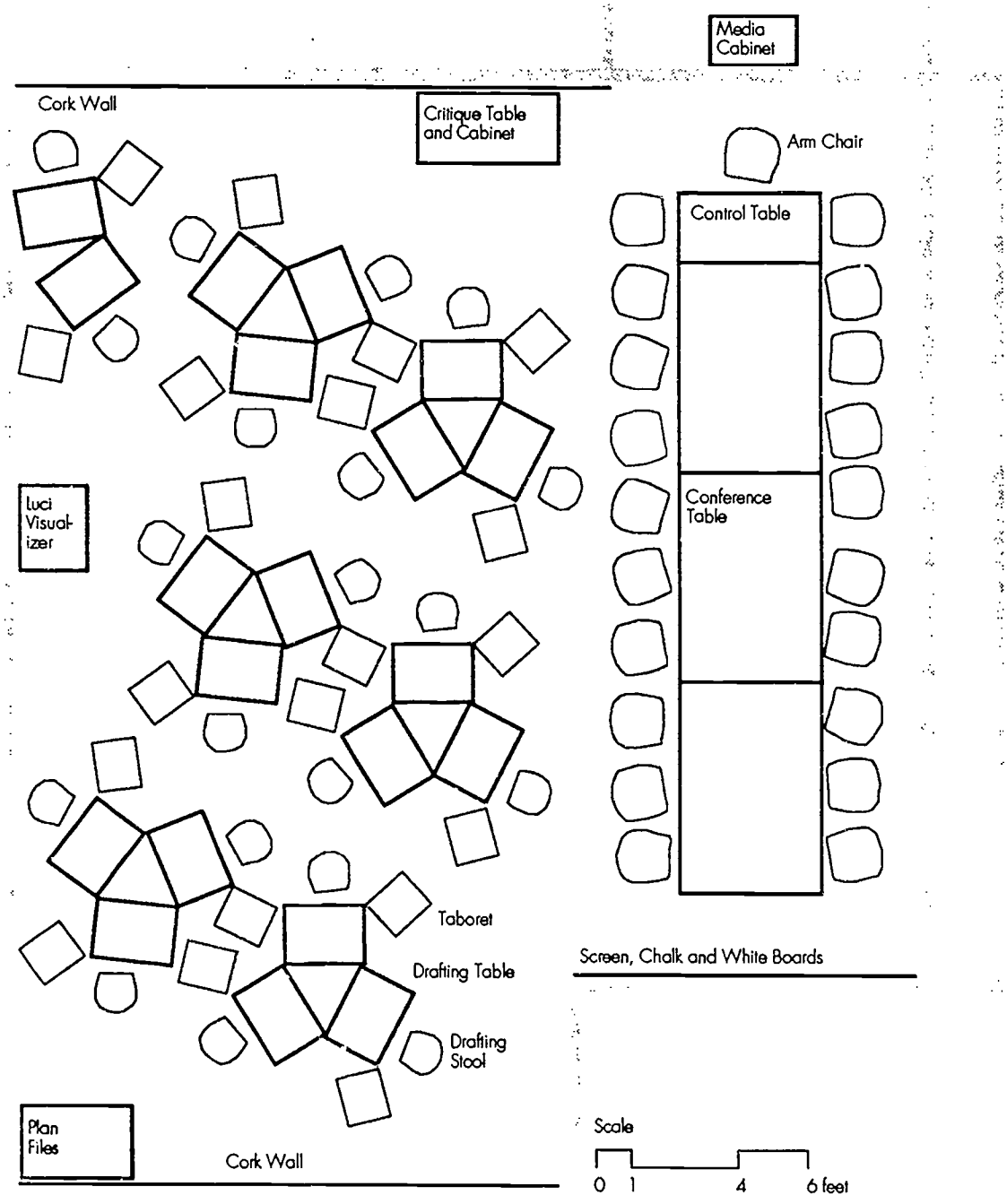

DIAGRAM. CREATIVE VISUAL LAB. Floor plan with conference and worktable seating for twenty students, display facilities, and a separate control booth for a full range of audio-visual and interactive computer equipment. The computer clusters are located two floors below the classroom.

dents could move back and forth in a few minutes from one phase (and place) to another.

The diagram shows the Creative Visual Lab. The room is divided into two areas. A large conference table with 20 chairs fills the right-hand side, and a work area has seven clusters of design tables.

At the head of the table in the conference area, an audio-visual booth contains the equipment rack, dubbed the Tower of Power. This equipment helps instructors incorporate visual examples into lectures and also allows them to critique students' work. The audio-visual rack houses a 1/2-inch video cassette recorder and 3/4-inch video playback unit, both attached to a projector that casts the image onto a large screen located at the end of the conference table. Also included in the rack is a slide projector, CD player, cassette recorder/player, and computer. The computer also can be viewed through the projector and is networked to the central computer clusters. This arrangement allows students and instructors to open all software applications and student work available on the network directly in the Creative Visual Lab. The computer keyboard sits on a small pull-out shelf at the instructor's seat of the conference table, which can be locked when not in use. The computer has a built-in portable hard drive slot for large student projects (and for visiting professionals who want to bring large computer files to show), and a compact disk player, for demonstrating audio tracks used in copywriting. Sound from all the audio-visual equipment is supported by a subwoofer speaker system.

The projection booth also contains a portable document camera. This state-of-the-art device replaces both an opaque projector and an overhead transparency projector. A small video camera is suspended on an arm above the bed of the projector. Students and instructors can place ads and designs on the copy board and broadcast the image onto the screen. When the professor points out specific design elements or copy ideas, the pointing hand also projects onto the screen, as will any three dimensional example of advertising or publicity.

Advantages to a Visual Literacy Approach

As plans for this facility developed, other advantages emerged, besides the obviously lower cost to implement, equip, and maintain the room. We have identified seven specific ways in which the Creative Visual Lab helps build visual literacy.

Process. Educators have learned quickly that one real advantage of the educational setting is the ability to write course outlines that take a complex task and break it into a series of steps manageable for the beginner. By breaking up the creative process into separate spaces, the classroom actually helps students move conceptually through the design and advertising experience. Although they may not need the physical separation when they work as professionals, we believe it helps them understand and master work that may later become holistic.

Research. The new classroom places the computer at a physical distance, making it just as accessible as the tools used in research, such as the library and access to the client. The work space immerses the students in the problem but also encourages them to venture away from it to do primary research. Meeting with a client is as attractive and available as searching a data base supplied by computer network. As a result, students learn important research skills and habits of mind, and they're less likely to try to solve communications problems before doing adequate research. The computer is still a resource, but meeting clients is, too.

Creativity. Students begin with the instructor in the classroom, where they spend time thinking about the communications problem they've been assigned. Instead of rushing to execution, they spend the necessary time brainstorming, generating ideas, and "concepting." Some solutions in design, advertising, publicity, and research need to come from the human hand in action. A homemade or vernacular look can be found in experimental typography and layout and in post-modern advertising. The new work setting encourages students to seek inventive alternatives, rather than relying too heavily on the methods readily available on the computer.

Drafting. Producing sketches and rough ideas with pencil and paper leaves early tries in a draft stage. This incomplete, unpolished form pushes students to search for ideas and solutions to a communications problem, instead of coming up with a slick version of their first idea. The output by hand is never so dazzling as to lull students into thinking prematurely that the problem is solved. Thus they keep looking for other options. Students see rough drafts as ***drafts*** because they quite simply are ***rough.*** They are encouraged to try more ideas and do more revisions before going to the computers.

Critique. Critiquing student work in the facility becomes easier for the instructor and for prospective employers. Once they've devoted inordinate amounts of time toiling on the computer designing elaborate ads that lack a hint of a Big Idea, students can resist feedback. Prospective employers are much less hesitant to criticize rough, early work, than to tackle a highly polished but misguided execution.

Execution. Executing — producing final work — is what computers do best. This is one of the primary reasons professionals appreciate and rely on them. Execution is a problem only if begun too early in the communications problem-solving process. The facility, by its physical arrangement and location, makes execution a much later step for inexperienced students.

Teamwork. The cluster arrangement of the design tables pushes students to work as teams during conceptualization and after critiquing. They also can't help seeing — and learning from — each other's work. Students discovered that they really like working in the room outside of class time. Because it is not under constant guard (the audio-visual booth locks separately) as computer facilities often are, the space is friendly. Students can go in at all hours, work on their projects, get away from the unblinking video monitor, and interact with other students from other fields of study.

The Creative Visual Lab has the benefits of having computers without the administrative burdens. As we planned to use the facility, the typical class would begin at the conference table, where the day's task gets introduced. Students then move to the work area, where they can come up with ideas individually and in teams. As they propose ideas, the instructor circulates and suggests revisions. Once they have a good idea, they can move into large-group critiques or into production, as the task demands. Because the classroom is near the computer labs, students can run down to the computers during class. Then they return to the conference table for a general critique. While reviewing students' ad or publicity campaigns or designs, called up from the network, an instructor can send those who need additional revisions of a similar nature to one of the work clusters to further evolve their concepts and thinking. They can return to the conference table after revisions are made. In other words, students don't have to wait until the next class session to receive instructor and peer feedback. The room also has large proof files where students can store their work.

Addressing the issue of computers and visual literacy is challenging. How can instructors do justice to both? The pedagogical problems we wrestled with, the issues we had to resolve, and the facility we created indicate one way the two can come together to provide students with the skills and knowledge demanded by today's communications professionals.

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