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*In the Media Laboratory, a total environment can be created that employs all five senses in a manner that is familiar and meaningful to the students of the seventies.*

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# Technology—A Creative Use

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**T**HE image created in the minds of many when technology is mentioned is that of machines replacing teachers and further dehumanizing the educational process. An alternative image is presented in this article in which technology is used to further humanize the educational process by promoting human qualities and processes.

The technology is located in a room at St. Louis University called the Media Laboratory, created mostly by and for students. The overall atmosphere of the lab is one of relaxation and informality. Included in the room are many electronic devices, but no desks, chairs, or blackboards. The educational value of these electronic devices will be dealt with further. Briefly, though, a child comes from an electronic environment outside school to a non-electronic classroom. He is bombarded by television, radio, movies, music, advertising, signs, etc., which are all part of his electronic world. By contrast, the classroom seems to be a very dull and uninviting place to many children who are continually, to use an electronic phrase, "turned off." Consequently, an electronic classroom was created at St. Louis University to use with elementary and high school students as well as university students in an attempt to "turn on" students.

The room allows for the creation of vari-

ous electronic environments and provides electronic stimuli to "mix the molecules" of students. It can also provide a showcase for electronic entertainment. The following is a brief description of the technology utilized in the room and the environments and effects that can be created.

The room is entirely carpeted, with no chairs or desks. Seating is on the floor. The front wall is a false wall on which the rear projection screen is installed. Behind this wall, projectors and the control center are located. The control center consists of a quadraphonic tape recorder, turntable, and receivers which provide the quadraphonic sound. Also, an Arion Dijitel programmer, the nerve center, is used to program and automatically control up to nine different projectors or effects for multimedia presentations. The controls for three, three-channel color organs, which cover the two side walls, are also in the control room. The fourth wall is a mirrored wall that enhances many of the effects. Within the lab itself are a strobe light and a mirror ball. The latter refracts spotlights into small pieces of light and spins

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them around the room. Photo cells, activated with flashlights by students, are used to change the slides of a show. The latest addition is a "pulsar" that turns the frequency of a person's heartbeat into light patterns. These are some of the electronic effects used to produce multimedia shows, environments, and informal atmospheres for discussion groups and film viewing.

### Sense of Awareness

As stated earlier, the student of today lives in an electronic world. When he leaves home to enter school it is estimated he has viewed some 4,000 to 6,000 hours of television and has become accustomed to the highly electronic environment of radio, films, and music. The electronics are not limited to the home as portable radios are common and portable televisions and record players are becoming common. A student walking down a hallway with a transistor radio to his ear is a frequent sight in many schools. The turn of a knob instantly changes the program or raises the volume level to the point of eliminating all other sounds. The child comes to school with high informational input from the electronic media and a sense of awareness and immediacy not known before. He is ready to use this new awareness in school. Instead, the student confronts a school that is generally still geared toward lectures, blackboards, and ditto sheets, and he uses his volume control to "turn off" the teacher.

To change this incongruous situation does not mean replacing the teacher with a television receiver or a film projector, but does mean recognizing the electronic world of the student. Technology, as described earlier, can be used in creating familiar electronic learning environments which the teacher facilitates and with which the student interacts. Marshall McLuhan has expressed his concern with the possible effects of the printed page on our world view. Printed words must follow sequentially and ideas become fragmented, in a linear, one thing at a time way. However, for the student in the electronic era, it is an all at once experience with a simultaneous bombardment of



Students in the Media Lab watch a production on the rear projection screen.



A configuration of slide projectors and special effects generators are used to produce multimedia shows.



Three color organ translators produce lighting effects which create a setting for learning.

the senses. Videotape becomes a more meaningful mode of expression than composition. Creating a slide-tape show presents a creative process. Organizing a storyboard for a film motivates the student but writing an outline for an essay bores him. Producing an environment through sound and lights that portrays the War of 1812 excites him.

Creating a multimedia show that sparks emotions of fear, anxiety, hatred, or love proffers the affective domain. Creating a situation in which students "battle" with visuals introduces visual literacy. Moreover, the student who creates the total environment employing all five senses of his classmates bombards them with technology that is familiar and meaningful to the student of the seventies. These examples are some of the ways the media lab is used. Other examples could be cited and countless more will be created by students as they are released in the "electronic classroom" to interact with an environment that is familiar and comfortable to them.

Every classroom does not need to be an elaborate media lab nor should a student's

time be spent exclusively in an electronic classroom. The lab itself becomes a curriculum, but it is also used to stimulate students to continue their learning with other tools than media. One electronic classroom per building or district is sufficient. Though a lab is somewhat expensive to build, modest but efficient ones can be readily constructed with equipment already present in the school by bringing the equipment to a central location and using it in a lab type atmosphere.

If one considers the electronic orientation of today's students, teachers will need to use technology more effectively and totally in order to "turn on" students confronted by a non-electronic classroom. The day of "turning on" students by showing them a poorly produced black and white movie is gone. Total mediated classroom environments need to be created to keep pace with the world's environment and that of the school's corridor. As one educational poster states, teachers do not teach, they create environments for learning. Brainstorm an environment with the students and see what happens. □



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