Alan J. Pierce

Re-Engineering Schooling

As the guest speaker at events organized by business, education, government, and civic leaders, my theme often revolves around the changing nature of work and the need for systemic change in education. In these presentations, I often use the imagery of a time machine to show how much our world has changed in the last 100 years.

If we could bring forward a teacher from 100 years ago, her (most public school teachers were women) teaching style wouldn't raise a ripple of discontent from students, parents, or administrators. She, however, might question the green chalk board, the lack of strict discipline, the familiarity between students and teachers, and ask, "What's a mall?"

Technology influences the weave in the very fabric of our educational institutions. Student-centered learning has become the bridge between the technology of our society and the learning approaches and instructional technologies used in our schools. The Internet, computers, and new computer-based learning systems have expanded teaching beyond the single classroom, single building, or even common learning time.

In this month's column, we will look at Sony's LLC-9000, now being introduced in our public schools, and distance learning, a teaching strategy that combines the power of the Internet to expand college offerings to nontraditional students.

In September 1997, the Lancaster Public Schools initiated a strategic plan that emphasizes a performance-based curriculum that is career-path and technology-driven at all grade levels. To accomplish their strategic plan, the Lancaster School System has integrated Sony's LLC-9000 Learning Systems with all other available instructional technologies to re-write the learning process,

In communication technology rooms, students use these integrated systems to learn desktop publishing, computer literacy, language instruction, and integrate all of their curricula studies with available technology resources. The teacher uses a touch screen and console switches on the LLC-9000 to create and control instructional patterns. Students may organize into groups while they work at their individual workstations. From their LLC-9000 consoles, teachers can monitor what each group or individual student is doing. Teachers can control four video units simultaneously to send, edit, and provide multimedia instruction. The system's Response Analyzer can perform question analysis to determine a student's learning needs. More information on this system is available at http://www.sony.com/news.

An old learning strategy called home study has gone through a technological metamorphosis into a cybercast format known as distance learning. Most universities, including your most prestigious private institutions, are now developing distance learning programs for nontraditional students. Distance learning is a mass communication, message-delivery system capable of delivering almost instantaneous two-way communication that contains text, graphics, video, and audio to a properly equipped computer.

The distance learning broadcast may be viewed in real-time or at a participant's convenience. Use of this archived presentation is similar to watching a VCR tape. In both cases, participants may be as close as the same building or as far away as another continent, In some systems, all participants are virtual members of the class and therefore can submit questions to the presenter during the live broadcast. Some universities are developing their own transmission systems. Johns Hopkins University is collaborating with Sylvan Learning Systems and sending their distance learning students to satellite learning centers.

The effect of cybercasting on brick-and-mortar schools is becoming as significant as the effect of the Internet on research and general communication. The June 16, 1997, issue of Forbes reported that over one million students are currently enrolled in college cyberschool courses.

To prepare a cybercast broadcast, presenters may transfer their presentation to the cybercast provider in many different ways. In the Cheetah Broadcasting classroom, the presenter uses a telephone hookup during a live lecture. Since speech recognition systems are still considered unreliable, Cheetah converts this voice transmission to a closed-caption text format by trained court reporters. The graphics for this classroom presentation would be sent to Cheetah for separate on-time delivery. At the other end of the continuum, the entire presentation may be packaged and sent to the cybercast provider in advance of the broadcast or entirely created and transmitted from the university's own media laboratory.

During a live presentation in the Cheetah system, instructors see the names and locations of their cyber students as each logs on (electronically comes to class). The questions students ask during a live broadcast scroll on the instructor's computer screen, in real time, allowing for student/teacher interaction through cyberspace.

You may observe the development of Elizabeth City State University's Distance Learning Project at http://198.85.48.246/dised. Our technology department is just a few hyperlinks away. If you are presently thinking about a future career, there is a major shortage of technology teachers. You may also explore this career option through the home page of TSA (www.tsawww.org), which contains hyperlinks to ECSU and all other universities that have a Bachelor of Science degree in Technology Education.

Recalling the Facts

1. What is the main difference between your average classroom and the ones described in this article?

2. Name four tasks that a teacher can perform using the Sony LLC-9000 system.

3. Describe the role of the cybercast provider.

4. How does the Cheetah Broadcasting provider convert voice communication to cybercast text? **TD**

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