

## Beyond e-learning

By Jerry Cammarata  
Area 13 Director

It's hard to pick up the newspaper, turn on the television, listen to the radio, or talk to a friend these days without encountering some discussion about two important issues — technology and education. While these topics have received tremendous attention, the debates and conversations usually are about one or the other, not the effect of one on the other. Yes, there have been articles written about e-learning, the connection of schools to the Internet, and the impact of "computers as teachers." But what has not received the attention it deserves is how technology is affecting education and the teaching and learning experience.

Educational/instructional technology is the new term given to the integration of technology into the teaching and learning experience. Like the book, the pencil, and the blackboard, the new technologies are the tools that students now need to be prepared to participate in the new information age economy.

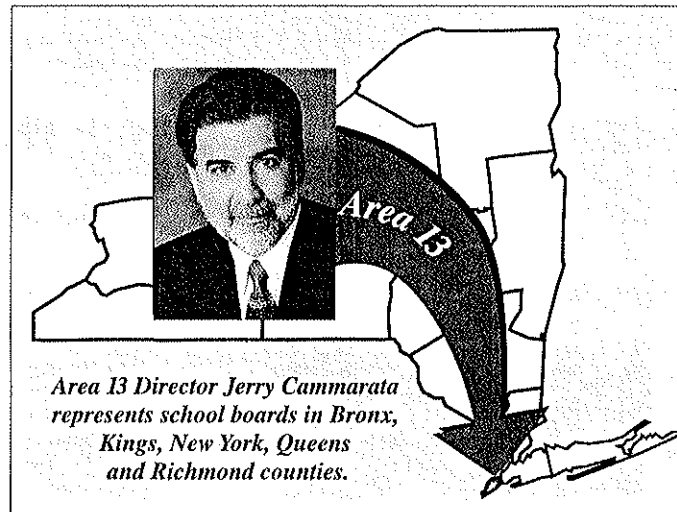
These new tools — the ability to use computer networks, multimedia devices, search engines, electronic libraries, distance learning, Web-based applications, and Internet portals — are creating a new definition of what it means to be literate in today's society. Technology literacy will transform the classroom and produce a new dynamic. Walls will disappear, individual research will increase and become interactive, there will be instant access to information, families will become more involved in learning, students will spend more time on tasks, and there will be a more effective tool for students to communicate with teachers for assistance and guidance.

Most importantly, according to the U.S. Department of Education, educational technology has already affected student achievement. On average, students who use computer-based instruction scored at the 64th percentile on achievement tests, while a control group of students without computers scored at the 50th percentile.

In New York City, schools have had varying degrees of success with the integration of technology into instruction. While New York City ranks low on the computer to student ratio (8.8:1), the technology in place is relatively current and nearly all schools have Internet access. Some districts and schools have been very entrepreneurial, bringing creative programs into their classrooms.

Corporations have been key participants in these computer programs in numerous ways.

In my borough of Staten Island, Apple Computer has worked with the Michael J. Petrides K-12 school to create a school-wide wireless network. This year, 800 laptops (called iBooks) that



were built for schools using wireless technology will be available to lend to students for use in school or at home. Every classroom at Petrides can now function as a computer lab where students have direct access to the Internet.

In 1997, Cisco Systems Inc. began one of the most significant programs to date. In a joint effort with the New York City Board of Education, Cisco developed the city's first Cisco Academy Program. Students matriculated in the Cisco Academy program receive the latest network technology training available on state-of-the-art computer labs and equipment. The course is four semesters in length and covers the world of network engineering in profound detail. After completion of the program, students qualify for the certification exam.

The Cisco exam is an industry standard certification and is recognized worldwide. Graduates who have received the certification can conceivably earn starting salaries of \$30,000 to \$40,000.

Time Warner Inc. has joined hands with Cisco and the city board of education to assist in providing teacher training. And just recently, Chase Manhattan Bank and the Chase Manhattan Foundation announced a program to donate Gateway computers as part of a \$2 million effort to distribute desktop computers to public schools students. The new computers will be distributed to incoming sixth graders. Chase employees will volunteer their time to install the computers and provide technical support.

In addition to Apple, Cisco, Time Warner and Chase Manhattan, companies such as Microsoft, Oracle, CompTIA, IBM and Toshiba have contributed to the board of education's technology initiatives.

While these programs have been quite successful, what is evident is that a piecemeal approach has had the effect of affording some students in the system a distinct advantage over students not similarly educated.

And, to date, there is not one single

school or district where state-of-the-art instructional technology has been universally integrated. The reasons for this are numerous — competing priorities, lack of funding, inconclusive experience with computer labs, lack of long-term planning.

Acknowledging the importance of instructional technology and its spotty record of integrating technology into its school system, the city's board of education established a Teaching and Learning in Cyberspace Task Force in July 1999. The objective of the task force was to create an instructional technology program that would be self-funded. The task force recommended in April of this year that the board create a revenue-generating portal with Internet service provider (ISP) capabilities that would finance a program to provide every member of the board of education community an e-mail address and Internet access and every student and teacher with a fully-networked portable computing device beginning with the fourth grade class of 2001.

Portals are gateways to a community of users, rich in content with e-commerce opportunities. An educational portal would combine a portfolio of pedagogical content, communication and commerce services. A portal would serve as the impetus for organizing and building a network through the Web that would allow for the discussion of issues and concerns 24 hours a day, seven days a week. It is the board's belief that this new vehicle of communication would create a ubiquitous, online sophisticated learning community for the entire public school community.

At present, students, parents, teachers and administrators are navigating through the Internet using various ISPs as they conduct research, engage in activities and participate in e-commerce transactions, such as buying airline tickets. The task force recommended that the board leverage all of this Internet activity through its own free ISP/portal that

would allow the board, rather than the ISPs being used, to capture revenue from transactions, sponsorships, site licensing and e-commerce opportunities.

The portal envisioned for the board would have two dimensions: one would be instructional/educational and the other would be commercial. The instructional/educational zone would focus on content and applications that facilitate learning. It would be a parent-controlled, commercial-free area for students and members of the educational community. The partner portal zone would allow access to the Internet targeted to the needs of the adults and family of the community.

A feasibility study of these recommendations was completed last month. The study found that the creation of the portal is doable and would generate revenue. The study was referred to the board's new Committee on Technology and to the chancellor. The chancellor was directed to develop an implementation plan with timelines.

Of utmost importance to the success of this program is the training of our teachers. Teachers in New York have not been fully trained to integrate technology into instruction, and in many cases, are behind the students in learning technology basics. Forty-two percent of our teachers have basic computer training and 29 percent have been trained to integrate technology into instruction. While the feasibility study was being completed, the chancellor issued a Request for Proposal for online teacher professional development using simulation environments.

Meanwhile, the system is providing technical support for its teachers. It recently held an event for educators who were interested in "jump-starting" their school's use of instructional technology. One representative from every elementary, middle and high school in New York City was invited to attend the event, which provided a unique opportunity for all schools to focus on the current state of instructional technology use. Participants were given materials to engage students in instructionally sound, technology-based projects the day after the conference. Instructionally appropriate, technology-supported projects were made available and a massive online community of educators was established at the event.

Educational institutions are facing a world that is changing so quickly it is almost impossible to keep pace. The new technologies, however, provide a roadmap that will enable us to reform our teaching and learning experience and produce technology savvy students who will become successful workers in the 21st century.

*The views expressed in the Director's Dialogue column are those of the author and do not necessarily represent NYSSBA policies or procedures.*