



TECHNOLOGY EDUCATION: AN EMERGING PRIORITY FOR THE NEW CENTURY

by Cathy Eslinger

The 21st century brings new challenges in education, for both students and schools. Traditional education priorities such as literacy, math, and science must be approached with a cognizance of our high technology economy and with a recognition of how changing technology may be used to enhance educational opportunities for students.

The Colorado General Assembly is currently considering two measures, House Bills 01-1163 and 01-1365, intended to promote the role of technology in K-12 education. House Bill 01-1163 would establish an information technology grant program under the Colorado Department of Education and State Board of Education. Beginning in 2002, selected grant recipients would receive funds to integrate information technology education into their ninth through twelfth grade curriculum. House Bill 01-1365 would allow nonprofit science and technology education centers to apply for state matching funds. In light of the consideration of technology education by the General Assembly, this issue brief reviews the context of current federal technology education initiatives.

Technology Education Promoted on the Federal Level

At the federal level, technology-centered instruction and programs have gained attention as an education priority for the past several years. In 1996, the executive branch set forth four goals for educational technology:

- T support for teachers in instructing students in computer and Internet use;
- T access to modern computers for all teachers and students;

- T Internet access in every classroom; and
- T effective software and on-line resources within every school's curriculum.

Colorado's Progress Toward Educational Technology Goals

The U.S. Department of Education's Office of Educational Technology profiles how each state is progressing toward educational technology goals set forth five years ago by the Clinton administration. As of December 2000, Colorado had made the following progress toward these goals:

- T Colorado provides a computer for every 5.3 students;
- T Seventy-five percent of Colorado schools have Internet access from one or more classrooms; and
- T Seventy-four percent of Colorado schools have provided at least half of their teachers with school-based e-mail addresses.

A New Administration Sets Priorities

In the early days of his administration, President Bush has promoted enhancing education through technology. Within his broad education initiative, "No Child Left Behind," President Bush is supporting consolidating federal programs into a single performance-based technology grant program. Five specific proposals underpin the Bush administration plan:

- T increasing funds for bringing technology into the nation's classrooms, particularly in schools serving rural or low-income areas;
- T reducing paperwork requirements by using formula-based funding rather than an application process;

T allowing funds to be used for Internet filters, in support of the "Children's Internet Protection Act of 2000";

T encouraging state performance goals for measuring how technology funds are used to advance student achievement; and

T supporting Community Technology Centers in high-poverty areas through grants administered by the Department of Housing and Urban Development.

Current Federal Initiatives

Descriptions of five of the major components of federal educational technology funding are followed by Table 1, indicating the Colorado and federal appropriations for Fiscal Year 2001.

Technology Literacy Challenge Fund. The Technology Literacy Challenge Fund (TLCF) supports state and local efforts to provide computers, software, and trained teachers to schools seeking to integrate technology into their curriculum. The Colorado Department of Education receives the grant applications and is responsible for selecting recipients and distributing funding according to federal guidelines. Thirty-five Colorado school districts received some level of TLCF funding last year, with final awards for 2001 programs still being completed.

Technology Innovation Challenge Grants. This program provides competitive grants to partnerships of schools, businesses, libraries, and others for innovative uses of educational technology. This program will become the Next Generation Technology Innovation program in FY 2001 to encompass a broader scope of programs.

Preparing Tomorrow's Teachers to Use Technology. This three-year grant program helps partnerships of universities, high-tech companies, school districts, and nonprofit organizations to provide teacher training in the area of technology. The effort supports the integration of technology into teacher preparation programs across the country, including seven programs in Colorado.

Community Technology Centers. This program funds technology learning centers in low-income communities. The centers, based in public housing facilities, community centers, libraries, or educational facilities, allow members of the community who do not have computers at home to access technology-based resources.

E-Rate. A provision within a 1996 federal telecommunications bill allows schools and libraries a discounted rate on telecommunications services such as phone service, internal connections, and Internet access. The discounts are allotted on a scale determined by the poverty level and geographic location of the applicant school or library. The average discount to a school or library is 60 percent.

Table 1: Funding of Federal Educational Technology Programs

Program	Colorado Appropriation: FY 2001	Federal Appropriation: FY 2001
Technology Literacy Challenge Fund	\$3,540,698	\$450,000,000
Technology Innovation Challenge Grants	\$644,247	\$136,328,000
Preparing Tomorrow's Teachers	\$2,247,898*	\$125,000,000
Community Technology Centers	\$137,275*	\$64,950,000
E-Rate	\$14,151,611**	\$4,720,000,000***

* approximate figure due to multi-year funding

** FY 2000 figure

***Total funding requested by applicant schools and libraries

Source: U.S. Department of Education Office of Educational Technology