ERIC DIGEST

JANUARY 2000 NUMBER 135 EDO-EA-00-1

Becoming a Technologically Savvy Administrator

By Joseph Slowinski

At the turn of the century, technology has permeated public schools as it has the rest of society. Over 90 percent of schools have access to the Internet (Market Data Retrieval 1999), and more than half of U.S. schools provide at least 90 percent of their teachers with an email account.

Yet, as the critical issue of school computer utilization shifts from mere access to the more fundamental issue of how to effectively integrate technology into the curriculum, there has been little discussion of what role administrators should play. This Digest provides an overview of some issues associated with effective integration of technology in schools that are relevant to school leaders.

Why and How Should Administrators Promote Technology?

As the world becomes more dependent on technology, students and their parents will continue to expect a public education to include the integration of computers and the Internet. Businesses are already demanding graduates who are technologically literate. Communities throughout the country will increasingly require effective leadership in the area of technology from insightful and forward-thinking school leaders. Given these expectations and demands, administrators who implement technology effectively in their schools and communities will contribute greatly to both education and the economy in the twenty-first century.

The author is an educational policy analyst as well as an associate instructor in the Indiana University system. He also serves as an editorial review member of the international journal *Information Technology, Education, and Society.*

Forty-five states have in place or are creating state standards in the area of technology. Nine of these states require a technology-related exit exam for graduation (Milken Exchange on Education and Technology 1999). In conjunction with these initiatives, several states have passed mandates on teachers' competency; for example, by 2001, North Carolina and Idaho will require teachers to demonstrate technology competence for certification and licensure.

In light of the current movement toward standards and accountability, it is likely that other states will soon create similar mandates. Such legislation or state-level policy will force school leaders to reflect on how best to promote the integration of information technology in their districts.

Technology is not an end in itself. The appropriate use of technology, Donovan (1999) reminds us, is to promote innovation toward school improvement. To reinforce this purpose in their schools, administrators should discuss with staff how technology can best be used to enhance teaching and learning. Throughout this process, school leaders should assure teachers that the goal of technology is to improve teaching and learning, not to replace teachers.

Administrators must be prepared for a significant investment of time to move technology from a part-time tool to an active tool fully integrated into the curriculum. As Donovan (1999) suggests, to move an innovation to full integration, a reform must have many of the following characteristics: (1) be advantageous to current methods, (2) be compatible with needs and expectations, (3) be simple to use, (4) be easily tried without a huge commitment to change, and (5) be observable and modeled by staff who embrace technology. School leaders should concentrate on building a school context replete with as many of these characteristics as possible. When most of these factors are present, teachers will be more likely to embrace technology and begin to integrate it into teaching and learning.

What Do Administrators Need to Know about Technology Planning?

As administrators have witnessed the introduction and implementation of information technology in their buildings, they have become acutely aware of the burgeoning expense associated with providing access to computers and the Internet. Between 1991 and 1997, $19.6 billion was spent on instructional technology in United States public schools (EDvancenet 1998). A recent survey of 400 school officials suggests that the total cost of ownership for a building with 75 computers was more than $2,200 per machine (Consortium for School Networking 1999).

As school leaders move beyond the issue of merely ensuring access, they must develop strategies to sustain technology in their schools while taking into account the total cost of ownership. This clearly requires thoughtful planning based on how technology can be used effectively as part of a long-term school-improvement plan directed at improving learning and achievement goals (EDvancenet). One strategy is to develop a school vision statement of how technology can be utilized to achieve a school's objectives (see National Center for Technology Planning's website).

School vision statements are most effective with a minimum of five sections:

1. Vision and objectives to achieve the vision: Engage school board members, faculty and staff members, students, and community members in the process of reflecting on, discussing, and articulating a shared vision of the future of the school or district.

2. Assessment of current school environment: Analyze the existing conditions of your school to more accurately comprehend the terrain that must be navigated to achieve the articulated vision.

3. Gap analysis: Recognize the gaps between the current environment of learning and where the school wants to be in the future as the basis for an action plan to guide the school toward the vision through the utilization of technology as a tool.

4. Evaluation: Set in place appropriate methods for continually evaluating progress toward the vision and, based on this ongoing feedback, for reformulating the action plan.

5. Strategy for altering objectives in accordance with formative evaluation data: Articulate a change strategy that includes a plan for altering the objectives.

As a result of this articulated vision, a longitudinal technology plan is driven by the school vision rather than by the technology itself.

What Legal Issues Should Concern Administrators?

Technology raises many challenging issues for school leaders (for example, copyright and what constitutes appropriate use of Internet materials). To avoid litigation, administrators must become knowledgeable about at least the fundamentals of technology-related school law.

The Council of School Attorneys and Technology Leadership Network (CSATLN), a subgroup of the National School Boards Association that includes 3,000 education-focused attorneys, states that "rapid development of new technologies has outpaced the development of related law, leaving educators in doubt as to how to manage issues of copyright, privacy, liability and security" (1999). CSATLN published *Legal Issues & Education Technology: A School Leader's Guide* to prepare administrators for the plethora of emerging legal issues associated with instructional technology.

School leaders also can visit cyberlaw websites to remain abreast of developments in technology law that could influence school practice and policy. Administrators can use several sites listed at the end of this Digest to find updates on copyright, acceptable use, filtering, and so forth.

How Can Schools Obtain Additional Funding for Technology?

More school leaders are becoming aware of corporate philanthropy as a supplement to district, state, and federal revenues. In 1997, corporations and other philanthropic organizations donated approximately $16 billion to individuals and groups in the United States (The Foundation Center 1999). Of this total, nearly one quarter, or $3.84 billion, went to educational institutions. In 1998, total grant awards increased by 22 percent to $19.46 billion. By aggressively seeking out philanthropic gifts and grants for their schools, administrators can offset to some extent the high cost associated with introducing and sustaining technology in public schools.

The philanthropic process presents a dilemma for school leaders. The culture of schooling affords little time for such endeavors as grant writing. In addition, few school-level staff members possess the necessary experience, skills, and knowledge to engage in the formal and professional preparation of a grant. Although districts may have difficulty justifying a salary for a grant writer, can they afford *not* to hire one? The decision to allocate funds for a grant writer can pay off handsomely. Those contemplating this step may want to review *e*School's (1999) *School Technology Funding Directory* and the Foundation Center's *User-Friendly Guide to Funding Research and Resources.*

How Can School Leaders Better Support Professional and Curriculum Development?

The integration of technology in classrooms has been demonstrated to have a positive impact on student achievement (Valdez and others 1999). To gain this benefit, districts must couple technology with ongoing staff training. Once all teachers have access to the Internet and know the fundamentals of using computers, the Web itself can be a valuable source of professional development and curriculum materials. Administrators should actively promote the use of the Web to obtain curricular ideas, as well as to find methods of more effectively integrating technology into classrooms to promote learning.

One obvious step is to encourage teachers to take advantage of online professional-development networks, which can be a valuable component of their personal professional-development plan approved by the district or school. Teachers can use these networks to advance their professional growth without leaving the comfort and privacy of their classroom or home. One such community of K-12 teachers is the 21st Century Teachers Network. The online network is organized by state as well as by content areas, allowing for both virtual interactions on a national level and actual collegial opportunities on a local level.

On a more technical side, Tech Corps is a group of volunteers in each state whose goal is "to recruit, place, and support volunteers from the technology community who advise and assist schools in the introduction and integration of new technologies." Tech Corps can offer schools technical advice as well as provide recommendations regarding how to effectively integrate technology at the school level.

RESOURCES

Consortium for School Networking. "Taking TCO to the Classroom: A School Administrator's Guide to Planning for the Total Cost of New Technology." Consortium for School Networking, 1999.

Council of School Attorneys and Technology Leadership Network. *Legal Issues and Education Technology: A School Leader's Guide.* Alexandria, Virginia: National School Boards Association, 1999.

Donovan, M. "Rethinking Faculty Support." *Technology Source* (November/December 1999). http://horizon.unc.edu/TS/development/1999-09.asp

EDvancenet. "Leader's Guide to Education Technology." Alexandria, Virginia: Author, 1998.

Flowers, R. (Ed.). *1999 - 2000 School Technology Funding Directory.* Bethesda, Maryland: *e*School News Communications Group, 1999.

The Foundation Center. *User-Friendly Guide to Funding Research and Resources.* New York: Author, 1999. http://fdncenter.org/onlib/ufg/index.html

Hallinger, P.; J. Slowinski; and B. Rodriguez. "Managing Technological Change for Schools of the New Millennium." Eugene, Oregon: ERIC Clearinghouse on Educational Management, 1999.

Market Data Retrieval. *Technology in Education.* Shelton, Connecticut: Author, 1999.

Milken Exchange on *Educational Technology. Educational Technology Policies of the 50 States: Facts & Figures.* Santa Monica, California: Milken Family Foundation, 1999.

National School Boards Association. *Education Leadership Tool Kit.* Alexandria, Virginia: Author, 1999. http://www.nsba.org/sbot/toolkit/

Valdez, G.; M. McNabb; M. Foertsch; M. Anderson; M. Hawkes; and L. Rassck. "Computer-Based Technology and Learning: Evolving Uses and Expectations." Oak Brook, Illinois: North Central Regional Educational Laboratory, 1999.

Websites

Cyberspace Law Center (http://cyber.findlaw.com/)

Digital Future Coalition (http://www.dfc.org/)

Electronic Frontier Foundation (http://www.eff.org/)

*e*School News Communications Group (http://www.eschoolnews.org)

National Center for Technology Planning (http://www.nctp.com)

Stanford University's Copyright & Fair Use (http://fairuse.stanford.edu:80/)

Tech Corps (http://www.techcorps.org)

West's Lawoffice.com (http://www.lawoffice.com/tools/lawtools.htm)

A Product of the ERIC Clearinghouse on Educational Management • College of Education, University of Oregon • Eugene, Oregon 97403-5207

This publication was prepared with funding from the Office of Educational Research and Improvement, U.S. Department of Education, under contract No. ED-99-C0-0011. The ideas and opinions expressed in this Digest do not necessarily reflect the positions or policies of OERI, ED, or the Clearinghouse. This Digest is in the public domain and may be freely reproduced. The text of this Digest may be viewed electronically at **http://eric.uoregon.edu** EA 030 161.