State Officials Report Their Intention To Expand Role in Computer Policy

By Linda Chion-Kenney

Pressured by the grass-roots movement that brought computers into schools, state officials now believe they must play a pivotal role in coordinating the use of educational technology if its benefits are to be realized, according to a report prepared for the U.S. Education Department.

The result, "state-level policies formulated by state education officials, governors, and legislators will have a significant impact upon the use of microcomputers and telecommunication systems at the local level over the next decade," according to Charles L. Blaschke, president of Education TURNKEY Systems Inc., which prepared the report.

TURNKEY is a Falls Church, Va., firm that conducts market research, develops software, and consults school officials in planning, developing, or evaluating programs related to the use of technology in education.

The TURNKEY report was prepared as part of a $500,000 two-year contract with the Education Department for a "State Leadership Assistance for Technology Program."

Project SLATE, as the program was called, provided workshops and technical assistance to some 600 policymakers in 20 states, who identified several policy issues raised by educational technology. They included computer literacy, software evaluation, exchange and distribution, staff training, and equitable access to computers.

According to the SLATE report, only seven states had formal policies on the use of electronic technology in education prior to 1980. Today, 47 states have formal policies incorporated in legislation, state-board policies, or education-department mandates or regulations.

Reason For Swift Change

One reason for the swift change, the report says, was the unwillingness of state officials to be left out of the popular local movement for technology in education.

The report notes that in 1981, Quality Education Data Inc., a Denver-based market-research firm, found that more than 60 percent of the microcomputers in schools were bought by teachers or "computer buffs" who relied heavily on funds from their own pockets, from local school-building budgets, or from Parent-Teacher Associations.

Now, Mr. Blaschke said, "most states realize the need for a coordinated and systematic approach to the use of technology if its potential benefits are to be realized and costly duplicative efforts are to be minimized."

Federal Role Needed

The TURNKEY report recommends that the federal government play a stronger role in assisting state officials who are involved with technology planning. It suggests that federal officials:

- Gather and disseminate information on telecommunication networks, new technological advances in videodiscs, research on computer-assisted instruction, and trends and projections for the use of expert systems in computer-managed instruction.
- Support state consortia for the development of high-quality software in "thin markets" such as bilingual, vocational, and special education.
- To avoid "adverse political reactions to the creation of a national curriculum," TURNKEY recommends that federal funds be used for administrative costs and state funds be used for software development.
- Develop a program to provide technical assistance to state legislatures, where "expertise on education technology . . . is limited."
- Maintain a database on current and projected uses of educational technology in schools, priority software needs, and other related information.

"Throughout the state it became increasingly clear that the hardware and software products available for use in schools are driven by technology produced for the business and home-education markets," the report notes.

"While there exist a number of reasons for this phenomenon, including alleged illegal copying by schools and costly marketing and distribution for the school market, a major contributing factor has been the lack of in-depth, market-related information and effective communication of this information to private sector developers, distributors, and marketing groups."

Jean Narayanan, chief of the educational-technology branch of the Education Department said copies of the TURNKEY report have been distributed to "key people in the department, and we are waiting their response."

Computer Literacy Revised

The report also highlights what the TURNKEY researchers view as the emerging issues and trends in the education-technology movement.

One of the strongest trends, Mr. Blaschke said, is the changing definition of computer literacy.

"When we got started two years ago, states were trying to define computer literacy in a structured way that included an orientation to computers and the history of computers as well as programming languages."

"Toward the end of the project," he said, "the states we had been dealing with were questioning the need for such requirements because there was such a large number of school districts integrating computers as a tool into existing courses, such as math, science, and social science."

As a result, he said, the prevailing definition of "computer education" in schools is shifting away from programming and toward applications, such as word processing, spreadsheets, and database management.

"What they're realizing," Mr. Blaschke added, "is that this is an information age kids are growing up in, not necessarily a computer age, and the computer is just one tool in the whole process."

Other Important Tools

Mr. Blaschke further noted that state officials now view videodiscs and telecommunications as other important tools in the developing information age.

Videodiscs, which are about the same size as phonograph records, are capable of storing vast amounts of digital information. An encyclopedia, for example, can be stored on a single disk.

Telecommunications systems provide the capacity to transmit messages electronically from one computer to another. This can be done through existing telephone lines—which is costly—or through other existing telecommunication systems, such as public radio and television, cable, satellite, and microwave frequencies.

Electronic Mail

TURNKEY reports that in 1983, "approximately half of the states had implemented or were planning a combination of statewide reporting and telecommunications systems via electronic mail."

"There is considerable debate, however, over system selection," the report adds. "Some states favor relying upon existing infrastructures, which depend mostly on telephone lines; others lean toward emerging technologies, such as satellite-based telecommunication systems."

In addition, the report notes, advances in telecommunications technology "offer cost-effective alternatives to traditional distribution patterns."

"Developers and state-level officials recognize," the report states, "that 60 to 70 percent of the unit price of courseware can be attributed to marketing and distribution costs and are attempting to work out arrangements which will reduce this cost."

Some states, for example, are attempting to use public-television or recently deregulated FM subcarrier radio channels to transmit educational-software programs, according to the TURNKEY report.