Strategic Planning and Staff Development in Computer Applications

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Strategic Planning and Staff Development in Computer Applications

by Christine M. Black and Dr. Larry E. Decker

The introduction of inexpensive microcomputers and the concerns expressed in the national report, A Nation At Risk, place pressure on educational institutions to be responsive to innovation and futuristic direction in planning and implementing the use of technological equipment. Larry Blash, educational consultant for IBM, points out the fact that "many school districts are being forced into buying computers by a society that says, "Thou shalt have."" (AS&U Roundtable 1985) Twenty states already have legislative mandates which add "computer literacy," a phrase which has no clear content or universal meaning, to high school graduation requirements. (Crawford 1984) These and other indications suggest that computers will be included in many future school budgets.

Although the American public reinforces the Macintosh Avenue sales pitch that personal computers can do anything, the importance of development and training of personnel using the computers, especially teachers, is given little attention and is often understated. (Hal-Sheehy '85) Scanland and Slatery (1983) suggest that teachers must understand the necessity for instructional improvement and its relationship to "personal philosophy of the teaching/learning experience, the nature of the teaching role, national and educational long-range goals, and present perceived roles within the educational process." (McMeen '86)

There is a sense of ambiguity and uncertainty about equipment and its relation to the necessity of microcomputer installation within the school program. Conflicts of professional opinion and public sentiment center on the polarization of instructional programs rather than technological homogenization of instructional applications of computer use for improved educational and curricular function.

Dr. Edward E. Brickell, Virginia Beach City Superintendent, recently cancelled the purchase of $350,000 worth of computers and software designated for kindergarten through second grade with the query, "Are they enhancing the instructional process the way we think?" (Boyer '86) Thomas Mulqueen and Toby Tentenbaum at Fordham University doubt "the benefits of learning to program" and suggest a moratorium on computer instruction. (Pflaum 1985) Parker (1984) cites a September 21, 1983 Washington Post editorial addressing this computer concern with the statement:

Without thoughtfully designed instructional programs that are thoroughly understood by teachers and made a part of their routine curricula, computers will be of no more enduring interest or value to students than the latest arcade game. (Parker 1984)

These questions and opinions are indications of an emerging concern which focuses on the importance of effective utilization of human and economic resources and the importance of developing a strategy to prevent the purchase of inappropriate or obsolete hardware. Microcomputer technology may be the tip of the iceberg. The next dimension of technological wizardry, such as robotics, slow-scan television, and advanced satellite networks, is looming on the instructional horizon. (Decker and Krajewski 1986)

Training and Staff Development

Lack of computer use by well-intended staff, lack of administrative knowledge of computer hardware, and computers placed in closets focus on the question of educational accountability and credibility to responsive planning. The cost of initial computer placement with no program standardization in the industry, shakeouts of manufacturers and some product lines, and a lack of interface between the home and school place additional emphasis upon the priority of properly trained personnel. (Neight and Jobe '85)

Training and staff development is generally recognized as a need, but uncertainty exists concerning the dimensions and design of the programs. A 1984 report by the Office of Technology Assessment, Computerized Manufacturing Automation, is cited by Schuck to make the point that:

Individuals and employers are demanding education, training, and retraining programs (however). There is a basic uncertainty about how current instructional programs should be revised or expanded to reflect the increased use of advanced technologies and changing skill requirements, given the ongoing nature of technological change.

Training plans must consider more than the development of skills. The first step in strategic planning related to the use of computers is to develop a philosophical statement for the division. The statement should delineate the beliefs and values the division places upon the affective worth of the individual student to society as a result of educational participation. The philosophical statement should be an integral part of the divisions mission and the long-range goals. (Parker '84)

In designing a staff development program, the ratio-

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Proper planning and execution are essential for effective computer use in education. The development of a strategic plan is critical because the design of the program will depend on the anticipated areas of computer application. A comprehensive plan should consider the following areas:

1. **Lack of acceptance of the need for strategic and contingency planning.**
2. **Continual changes in technology.**
3. **Financial limitations.**
4. **Lack of knowledge of existing resources.**
5. **Unfamiliar jargon.**
6. **Resistance to newness and change.**
7. **Lack of strong and continual administrative support.**
8. **Staff roles not clearly defined.**
9. **Unclear performance standards.**
10. **Lack of acceptance of the need for reward and motivation procedures.**
11. **Lack of recognition of the need for feedback and follow-up training.**
12. **Ineffective time management.**

**Areas of Computer Application**

Strategic plans must consider the potential areas of application, including:

- **Computer-assisted instruction**
- **Computer-managed instruction**
- **Administrative applications**
- **Communication applications**

These areas require careful consideration to ensure effective implementation.

**Personnel Training**

The participation of educational administrators and instructors in the development of a strategic plan is critical because the design of the program will depend on the anticipated areas of computer application. A pilot study can be developed and conducted which incorporates the computer strategic plan in relation to instructional development into a research-based educational site prior to total district involvement and commitment.

The initiation of a strategic plan responsive to continual changes in technology permits flexibility. By logically disseminating information among personnel, long-range objectives are generally defined and understood by all staff members. Through the enactment of a plan which outlines the immediate objectives in relation to the long-range educational perspective, “key actors” acquire a sense of mission and purpose in the development and nurturing of individual school needs.

The key to successful implementation of technology into the instructional domain is the involvement and preparation of staff personnel as catalytic agents. The role of the principal as instructional leader and liaison agent of the community and division policy is critical. Through active participation with staff, parents, and students, the principal can be an active role model for computer applications. As a principal becomes more confident and proficient, instructors and support staff are more likely to accept the computer as an extension of instruction.

Every subject teacher and administrator should have direct input and should participate actively in the computer curriculum development process. The perpetuation of the myth that computers are the property of mathematics or science departments is self-defeating to the total instructional component.

Training plans must consider the needs and wants of instructors and the importance of the focus of leadership on the total process to combat “computer phobia.” Personnel must be aware of computer jargon and the strengths and weaknesses of educational technology and understand the role of each individual within the total educational program. In-service training should utilize community corporations, college classrooms, and computer advisors as extensions of the schoolhouse environment.

**Summary**

Winston Churchill once stated that “first we shape our

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structures than afterwards they shape us." Educational administrators and instructors are the technological architects of the electronic schoolhouse. Decisions concerning school programs will affect generations across the myriad of society. Educators cannot afford to lose sight of the purpose of education.

Technology is not the solution to all instructional situations or the answer to all instructional problems. As architects of technological applications in education, instructional professionals need to comprehend and use the potentials and recognize the limitations of computer hardware and software in the school setting. Training and staff development programs must focus on enhancing administrators' and instructors' ability to integrate computer capabilities in the school setting within the educational plan.

As architects of technological applications in education, administrators and instructional personnel in a school division must develop a strategic plan which incorporates multiple options for the new, intermediate, and experienced computer user. They cannot afford to adopt a "wait and see" attitude in relation to the division's involvement in the use of computers. This attitude will place the division in jeopardy of retardation and stagnation—conditions which students, staff, and the general public will become increasingly aware of as inexpensive technological apparatus continues to be introduced for home use.

Bibliography

Decker, Robert, and Robert J. Krajewski. "For robotics, slow-scan video, satellite beams, and more—the future is now." The American School Board Journal 173 (March 1986), 32.
Keen, Peter G. W. "Computers and Managerial Choice," Organizational Dynamics 14 (Autumn 1985), 44.
McMeen, George R. "The Impact of Technological Change on Education," Educational Technology XXVI (February 1986), 44.

Bibliography

Parker, Walter C. "Computer—Master or Tool?" Principal 63 (January 1984), 49.