The Use of Policy Analysis in Setting District Policy on Microcomputers

By carefully considering problems, issues, and needs identified through a systematic process, administrators can set sound policies and plan for their implementation.

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The use of microcomputers in schools is a striking example of an educational change that has both widespread and deeply felt importance. To date it has been a grassroots movement with individual teachers, principals, and parents acting as the driving force behind it. Recently, however, it has been elevated to state and national importance. For example, it is a common thread running through recent national critiques of education, such as *A Nation at Risk*. Furthermore, computer technology, along with science and mathematics, is part of curriculum mandates in virtually every state (Education Commission of the States, 1983).

To manage the tremendous resources involved in districtwide microcomputer use—while not stifling the initiative of those who have brought the computer revolution to its present point—school district administrators need guidance for future decision making. The techniques of policy analysis can provide such guidance.

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classic

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ASCD Issues Policy Statement on Equal Access to Computers

"An evolving information society that hopes to remain democratic," asserts a recent ASCD committee report, must ensure "equal access to educational benefits of computers and related technology."

The report continues that since "information is power," and "the computer has emerged as a major instrument for creating, gathering, treating, and using that information . . . all learners should have comparable opportunities to master the effectiveness of computers."

The report speaks to the necessity of providing a *variety* of instructional experiences with the computer to *all* students (and not, for example, limiting slower students to solitary remediation drills, bypassing cooperative work with other students using the computer to solve problems).

A second concern of the committee is the tendency to assume that female students would be less interested in computers than would males. "The best means to ensure sexual equity," the statement says, "is to introduce boys and girls to computers at the earliest possible age. By the secondary level, inequity may be irreversible."

The report recommends that policymakers ensure equity of access to computers "without respect to race, color, religion, sex, age, handicap, national origin, or social class."

ASCD's Executive Council appointed the committee's members, who were: (Chair) Gwyn Brownlee, Director of the Region 10 Education Service Center's Instructional Service Department, Richardson, Tex.; Cecil Good, Director of the Department of Instructional Technology, Detroit, Mich.; M. Tim Grady, an education consultant in Clarksville, Tenn.; James T. Guines, Associate Superintendent in the D.C. Office of Instruction, Washington, D.C.; Kenneth Komoski, Executive Director of the Educational Products Information Exchange, Stony Brook, N.Y.; and Geri Strader, Associate Superintendent, Area L, Houston, Tex.

A copy of the committee's statement may be obtained by sending a stamped, self-addressed envelope to Equity Statement, ASCD, 225 N. Washington St., Alexandria, VA 22314.

Figure 1. Steps in the Policy-Making Process.

1. A PIN (problem-issue-need) emerges.
2. A policy analysis is conducted.
3. The board discusses the elements of each option.
4. A draft policy covering the option(s) chosen is presented to the board for approval or revision.
5. Public review of the policy is scheduled.
6. A decision is made to adopt or revise the draft policy.
7. The administration is charged with (1) policy implementation and (2) the evaluation of policy impact.

Figure 2. Policy Analysis Steps.

1. PIN clarification
2. Question development
3. Data collection, analysis, and synthesis
4. Identification of alternative policy options and their implications

What Is Policy?

Districts typically have policies on many topics, such as energy conservation, student discipline, and field trips, but none on microcomputer use. Because of pressure for computer use and its potential widespread impact on a district, clearly it should be considered in the context of policy setting.

Policy has been defined as "a rule or guideline that reflects or directs the procedures, decisions, and actions of an organization and the individuals within it" (Hall and Hord, undated). An outline of steps in policy making can be helpful in managing the process (Figure 1). "Just as *policy making* is a social process" (Wolfe, 1982), so is policy analysis, the process by which systematically collected information is provided to decision makers. Policy analysis is intended to facilitate "the choice of the best policy among a set of alternatives with the aid of reason and evidence" (McRae, 1979). It combines "practical experience and common sense" with "formal, analytical techniques" (House, 1982).

The steps of policy analysis are similar to those of any research project (Figure 2). What makes them special is that they focus on problems, issues, and needs (PINs) for the purpose of formulating policy options. As Quade (1977) notes, "Policy analysis seeks to improve decision making in a particular situation" (p. 22).

One way to gain information about potential PINs is to have knowledgeable people report on conditions in the district regarding each cell in the computer use/PIN cluster matrix in

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Figure 3 and on the topics in Figures 4 and 5. Of course, there will be many cases where a PIN in one cell will be connected to PINs in other cells. Individual and overlapping PINs can become part of a three-point summary focusing on (1) things that *are not now* PINs, (2) those things that *are* PINs, and (3) those things that are *unknown*.

Question Development

By closely examining those items that are PINs, or that are unknown, a set of questions can be formulated to focus the policy analysis. For example, typical concerns of many districts are curriculum impact, courseware development and evaluation, teacher training, and equity (Rockman, White, and Rampy, 1983).

Figure 3. Computer Use/PIN Cluster Matrix.

Pin Clusters / Computer Uses	People	Organizational	Technological
Instructional			
CAI			
Problem solving			
Computer literacy/ Computer science			
Personal, professional, administrative, and support services			
Local			
District-wide management information			

Figure 4. PIN Cluster Topics.

People (individual and informal group PINs)
- Affective, personal feelings of adequacy/inadequacy
- Knowledge and skills regarding the operation of computers
- Social, interpersonal relationships related to computer use

Organizational (management and coordination PINs)
- Centralization vs. decentralization of control
- Equity in access, use, and outcomes regarding computer use
- Planning/timeliness
- Funding and resource allocation

Technological (computer use specific PINs)
- Selection, maintenance, service, support
- Equipment: central processing units, peripherals
- Software: locally programmed, generic, task specific
- Facilities: space, furniture, lighting, power, security

Figure 5. Computer Use Areas and Topics.

Instructional Use

- Computer-assisted instruction using software for drill and practice, tutorial, and simulation
- Problem solving in content areas using software for word processing, data base management, spreadsheet applications, graphics, and programming
- Computer literacy/computer science

Administrative and Support Service Use

- Local use (confined to individual buildings or departments) and
- District-wide use (assumes the sharing of data across site and potentially with external agencies);
  - Office applications: report writing and other word processing, scheduling, filing and record keeping, daily/period attendance, grades and process reporting.
  - Special support uses: print shop ordering, curriculum materials center booking, personnel grievance data, teacher/substitute information, financial forecasting, maintenance scheduling, transportation routing, on-line cash registers, enrollment projections.

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Data Collection, Analysis, and Synthesis

The actual task of designing and implementing data collection, analysis, and synthesis procedures will most likely be delegated to school district personnel (for example, a district evaluation unit) or to an outside consultant. The specific procedures used will depend on the nature of the question(s) addressed and the resources available.

Identification of Alternative Policy Options

Because policy setting is a social process, it is important to maintain open communication throughout the policy analysis process, so that people know what is happening and why. This communication will assure all concerned that their points of view are being considered.

In discussing the essential characteristics of the adoption phase of planned change, Fullan (1982) states:

> It is the *quality* of the planning process which is essential: the degree to which a problem-solving approach at the adoption stage is combined with planning ahead for implementation (Miles, 1980). The quality of the adoption process ... sets the stage for subsequent success or failure (p. 64).

Detailed implementation planning is not part of policy analysis. However, each adoption alternative should relate to a set of administrative rules and procedures of sufficient detail to guide subsequent implementation. These rules and procedures should include general information on logistical and scheduling activities, staffing, funding level, roles and relationships, facilities, materials, and other requirements.

While the formation of policy options and their implications should fall to the district superintendent and key staff, the details of implementation should be left to those who will be most directly involved. For as Fullan (1982) notes, "More important for change in practice, however, is *implementation-level participation* in which decisions are made about what does work and what does not" (p. 65).

Knowledge for Decision Making

In summary, policy analysis is a vehicle by which district administrators can gain knowledge for decision making relative to an innovation like computer use. Through policy analysis they can come to understand the problems-issues-needs surrounding computer use in their own districts. As a result, they can be in a position to actively set the direction and content of such a change.□

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