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.

Peter J. Gray

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.

*Peter J. Gray is Research Associate, Research on Evaluation Program, Northwest Regional Educational Laboratory, Portland, Oregon.*
“Typical concerns for many districts are curriculum impact, teacher training, and equity.”
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 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.

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**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
"It is important to maintain open communication throughout the policy analysis process, so that people know what is happening and why."

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).

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**Figure 3. Computer Use/PIN Cluster Matrix.**

<table>
<thead>
<tr>
<th>Computer Uses</th>
<th>People</th>
<th>Organizational</th>
<th>Technological</th>
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</thead>
<tbody>
<tr>
<td><strong>Instructional</strong></td>
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<tr>
<td>CAI</td>
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<tr>
<td>Problem solving</td>
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<tr>
<td>Computer literacy/Computer science</td>
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<tr>
<td><strong>Personal, professional, administrative, and support services</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Local</td>
<td></td>
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<tr>
<td>District-wide management information</td>
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**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
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.

References