DOCUMENT RESUME

ED 105 636 95 EA 007 076

AUTHOR Deal, Terrence E.

TITLE Survey Feedback: A Tool for Developing New Organizational Responses to Complex Educational Environments. Research and Development Memorandum No. 135.

INSTITUTION Stanford Univ., Calif. Stanford Center for Research and Development in Teaching.

SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.

REPORT NO RD-Memo-135

PUB DATE Apr 75

CONTRACT NE-C-00-3-0062

NOTE 33p.

EDRS PRICE MF-$0.76 HC-$1.95 PLUS POSTAGE

DESCRIPTORS Change Agents; Change Strategies; *Complexity Level; Educational Change; Educational Environment; Educational Research; Elementary Secondary Education; Institutional Environment; *Organizational Change; *Organizational Development; Organizational Theories; Planning; Policy; Policy Formation; *Problem Solving; *School Organization; Skill Development; Training

ABSTRACT

This report builds a case for survey feedback as a useful method of assisting schools to respond actively, rather than passively, to uncertainty and complexity in the school environment. The main argument is that passive responses, such as defensiveness and buffering, reduce educational effectiveness. Planning, an active response, creates conflicts and places demands on time, money, and other school resources. But, in the long run, planning may be a more permanent and effective strategy. The assumption is that educational problems and their solutions are largely organizational. To develop an active response, schools need a systematic information-gathering process, problem-solving capabilities, implementation plans, new organizational designs, and training activities to help people assume new roles. The field of organizational development has been a source of assistance in training. Survey feedback, an organizational development technique, can provide assistance in the other areas, particularly the diagnostic part of problem-solving. This report describes a survey-feedback approach that combines survey instrument with organization theory and involves school people in defining problems, proposing solutions, and evaluating the impact of the change strategies. (Author)

STANFORD CENTER
FOR RESEARCH AND DEVELOPMENT
IN TEACHING

Research and Development Memorandum No. 135

SURVEY FEEDBACK: A TOOL FOR DEVELOPING NEW ORGANIZATIONAL RESPONSES TO COMPLEX EDUCATIONAL ENVIRONMENTS

Terrence E. Deal

School of Education
Stanford University
Stanford, California

April 1975

Published by the Stanford Center for Research and Development in Teaching, supported in part as a research and development center by funds from the National Institute of Education, U. S. Department of Health, Education, and Welfare (Contract No. NE-C-00-3-0062). The opinions expressed in this publication do not necessarily reflect the position, policy, or endorsement of the National Institute of Education.

Introductory Statement

The Center's mission is to improve teaching in American schools. Its work is carried out through five programs:

- Teaching Effectiveness
- The Environment for Teaching
- Teaching Students from Low-Income Areas
- Teaching and Linguistic Pluralism
- Exploratory and Related Studies

This report, from the Environment for Teaching Program, discusses how survey feedback can be used to assist schools in responding actively to complex educational environments.

Abstract

This report builds a case for survey feedback as a useful method of assisting schools to respond actively, rather than passively, to uncertainty and complexity in the school environment. The main argument is that passive responses, such as defensiveness (e.g., delaying) and buffering (e.g., simply adding a new program or new staff without coordination with existing resources), reduce educational effectiveness. Planning, a more active response, creates conflicts and places demands on time, money, and other school resources. But, in the long run, planning may be a more permanent and effective strategy. The assumption is that educational problems and their solutions are largely organizational. Thus planned change and development requires schools to develop new capabilities--especially new forms of organization. Increasing role differentiation and coordination, for example, is a basic structural change.

The costs of defensiveness, buffering, and planning are discussed and it is suggested that, for several reasons, the costs of planned change and development are becoming more competitive with buffering, which has been the predominant approach. To develop an active response, schools need a systematic information-gathering process, problem-solving capabilities, implementation plans, new organizational designs, and training activities to help people assume new roles. The field of organizational development has been a source of assistance in training. Survey feedback, an organizational development technique, can provide assistance in the other areas, particularly the diagnostic part of problem solving. This report describes a survey-feedback approach that combines survey instruments with organization theory and involves school people in defining problems, proposing solutions, and evaluating the impact of the change strategies.

Contents

SURVEY FEEDBACK: A TOOL FOR DEVELOPING NEW ORGANIZATIONAL RESPONSES TO COMPLEX EDUCATIONAL ENVIRONMENTS

Terrence E. Deal

The problems of schools are dissected and discussed at great length by members of the educational research community. But the researcher's role in relation to these problems does not necessarily stop with description and analysis. Knowledge is sometimes used as a rationale for change; it is sometimes actively applied to help solve important educational problems. In the past, a number of research-based reforms have been tried in education. But, for various reasons, few have worked successfully. Partially because of this, while the research community continues to focus on educational problems, description overshadows intervention. The extension of the research-report cycle into the development, implementation, and evaluation of possible reforms has not been notably vigorous or productive.

This paper analyzes the relations between schools and complex educational environments. Its emphasis is distinctive for two reasons. First, it suggests that educational problems and their potential solutions are largely organizational in nature. Second, given this organizational perspective, its main purpose is to suggest how one technique in the organizational development (OD) field--survey feedback--may be an important tool for building school organizations that are able to cope successfully with complex educational environments. Rather than simply describing an educational problem, this paper will suggest some ways in which educational research can provide a basis for a solution.

To accomplish this, the paper discusses several issues: (1) the environmental complexity that schools presently face, (2) how schools generally have responded to environmental complexity and what this response

---

Terrence E. Deal is a Research and Development Associate at the Stanford Center for Research and Development in Teaching and Lecturer in the School of Education.

This paper was presented at the Annual Meeting of the American Educational Research Association, Washington, D. C., March 30 - April 3, 1975.

has cost, (3) the organizational capabilities needed for a more active response to environmental complexity, (4) the limited assistance conventional organizational development has provided schools in building these capabilities, (5) the potential of survey feedback to provide additional assistance, and (6) the description of a version of survey feedback that is being developed by SCRDT's Environment for Teaching Program.

The Complexity of Educational Environments

A central contention of this paper is that educational environments have become complex. From a school administrator's point of view this complexity is observable in many ways. Parents are more concerned than ever about the quality of their children's education. Taxpayers are worried about the price tag that high quality education carries. High quality education bears definitions ranging from "open education," where students have unlimited autonomy to explore a vast array of experiences, to the "three-R's," where the reading, 'riting, and 'rithmetic emphasis of past eras holds sway. Agreement on the goals and methods of instruction is often non-existent--even at the local school level.

The world of the educational administrator is buffeted by these issues. Around the issues coalitions form; negotiations are conducted among administrators, teachers, and community representatives; board members are recalled; superintendents are fired; and a continual series of small skirmishes and large scale conflicts is waged. In short, education is a primary concern of most communities, and because the formal control of American schools lies with the public, the structure and process of education are influenced heavily by community groups, organizations, politics, and other forces outside the school or classroom.

Throughout this paper the term complexity will be used to characterize educational environments. Administrators facing the issues above would certainly describe educational environments as complex. But, what does complexity actually mean? In a more abstract sense, complexity can be conceptualized as having three dimensions:

1. Diversity. Complex environments are characterized by a wide range of clients, goals, subgroups, resources, materials, and

expectations which the organization must take into account in accomplishing its central mission.

2. Change. Complex environments change at a rapid rate, making it necessary for an organization to scan the environment constantly.

3. Uncertainty. In complex environments the timing and direction of change is impossible to predict. Consequently the ability of the organization to develop clear connections between technical processes (technologies) and organizational outcomes and therefore to standardize programs is reduced.

In sum, complex environments are diverse, unstable, and uncertain. Educational environments often meet these criteria. First, clients, goals, subgroups, and expectations are extremely diverse. Often within the same school community expectations range from extremely liberal to extremely conservative and each group wants schools to reflect one emphasis or the other. Second, educational environments are highly unstable. In the late 1960's alternative education was the rage, only to be quickly replaced in the early 1970's by a concern for accountability and career education. Third, educational environments are highly uncertain. This uncertainty greatly influences the technical system (or instructional program) making it difficult to develop any method of teaching that will produce desired outcomes.

Responses to Environmental Complexity

Organization theory provides a way to describe educational environments abstractly. It tells us also that organizations facing dynamic, complex environments can take at least three stances: defensiveness, buffering, or planning.

Defensiveness

Organizations can develop ways to protect or isolate themselves from environmental complexity. The use of red tape, stalling tactics, and playing one subgroup against the other are examples of a defensive posture. For example, parents demanding a structured, phonics-based reading program may be told that the suggestion must be "studied," or that the addition of new programs requires the action of a series of committees, specialists,

and administrators before the proposal can be submitted to the board of education for approval; or parents desiring a "looser" reading program may be stirred into action with the result that their opposition cancels the request of the first group.

Buffering

Organizations can remain passive and deal with environmental complexity through internal adjustments. They can respond to environmental diversity and change by adding new progra or personnel and by minimizing the interdependence and coordination of these with existing programs. When faced with a request for greater emphasis on screening children for subtle learning problems, a school can add a specialist in learning disabilities. But the work of this specialist may be isolated from that of regular classroom teachers. The environmental demand is met by adding a program without coordinating these diagnostic efforts with classroom activities (Meyer, 1975).

Planned Change and Development

Organizations can adapt actively to environmental complexity by creating organizational designs with the internal differentiation and coordination necessary either to deal internally with diverse environmental demands or to influence the environment or both. Matrix structures, decentralized management models, environmental scanning units, or project teams are examples of active adaptation (Kingdon, 1973; Emery, 1967; Lawrence and Lorsch, 1969). One California school district, for example, has given individual schools the authority to develop educational programs to fit community needs. At the same time, the district reviews these programs, coordinates resources to avoid duplication, and holds the schools accountable for meeting the objectives set by their respective communities.

As a qualifier, defensiveness and buffering can resemble planning. For example, schools can establish parent advisory groups but use them to cancel out diverse factions or to delay changing the educational program. Or, as another example, teaching teams may be created but in such a way that teachers do not become interdependent or coordinate their individual efforts. In neither case is there any genuine planning or development.

Comparative Consequences of Defensiveness, Buffering, and Planned Change

Each mode of organizational adaptation to environmental complexity has certain consequences. Organizations that close off the environment may find a reciprocal withdrawing of needed support. School districts that refuse to respond to community demands, for example, may not be able to get needed tax-override legislation. Defensiveness may, in the short-run, permit the organization to adapt, but with severe long-range consequences.

Organizations that adapt to a complex environment by buffering may successfully reduce coordination costs but reduce the ability of the organization to function effectively. Buffering can be done in three ways: (1) by vertical segmentation--separate organizational levels respond independently; (2) by lateral dissociation--divisions or units within a level act independently, without communication or coordination; and (3) by technical fragmentation--participants in the organization emphasize means, operations, and procedures without assessing their link with desired outcomes. It is easy to see how each method of buffering could interfere with the ability of any organization to accomplish its intended mission, but since organizational effectiveness is often difficult to measure, the consequences of buffering may be difficult to observe. This is particularly true in schools and will be discussed in greater detail below.

Planned change and development, as an organizational response to environmental complexity, has its costs too. Such an active response often requires a substantial and systematic flow of information from the environment and within the organization. It requires a capacity for sophisticated problem-solving and often a major restructuring of the organization's roles and responsibilities. A higher level of role differentiation may be required, as well as greater interdependence and coordination. It puts strain on participants. In responding actively, more conflict is inevitable; greater time demands are certain. Finally, planned change and development requirestraining. For successful reorganization, participants need to be trained for roles radically different from those they have assumed in the past. To remark on the difficulties of planned change and development is superfluous. One needs only to reminisce over the past decade of efforts to change organizations. Planned change and development is a risky and costly response to environmental complexity.

The Predominant Response of Educational Organizations: Buffering

Applying this brief theoretical discussion to education we can see how schools have most often responded to complex environments. Bidwell's (1965) classic discussion of schools as organizations highlighted vertical segmentation, lateral dissociation, and technical fragmentation. Dreeben's (1970) discussion of the technology of teaching emphasized the lack of any link between means and ends, or instructional fragmentation. Lortie (1964), Pellegrin (1970), Meyer and Cohen (1971), and Miles (1967) have commented on the lack of interaction, or lateral dissociation, among teachers in the same school. Deal, Meyer, and Scott (1974) and Meyer, Scott, Intili, and Main (1974) have shown the segmented character of organizational patterns at both the school and school district levels. Deal, Meyer, and Scott (1974) and Dornbusch and Scott (1975) have focused on the tenuous relationship between the formal organizational characteristics of schools or school districts and instruction or teaching.

Summarizing these studies, it appears that schools have responded to environmental complexity by vertical, lateral, and technical buffering. They have adopted organizational patterns that buffer levels, divisions, and technical linkages, thereby reducing the need for interdependence and internal coordination (Meyer, 1975). This passive stance has permitted schools to adapt successfully to environmental complexity, but only because until recently there have been sufficient slack resources to absorb the costs of this response. Slack resources compensate for decreased effectiveness.

The possible cost of buffering. As noted earlier, while buffering to reduce the effect of environmental complexity minimizes the costs of coordination, organizational effectiveness is potentially affected also. Thus, although buffering is a workable response to environmental complexity, it reduces the ability of an organization to produce the desired outcomes, to maintain high levels of participant morale, and to maintain a reasonable level of cost-effectiveness. Whether buffering is a workable response depends heavily on the availability of slack, or surplus, resources to absorb the other, often hidden, organizational costs.

Consider this example of how slack resources can support buffering (from Galbraith, 1973). A medical clinic is organized in a highly differentiated fashion. Patients come to the clinic and often see two or three specialists before a diagnosis is made. The patients move from doctor to doctor, but because of the high costs of coordination, no attempt is made to coordinate schedules so that a patient can move quickly from one doctor to the next. The result is that patients have to wait. But because the clinic is located in a rural setting, the patients see the waiting period as a relaxing, legitimate expenditure of time. The length of the waiting period is a slack resource available to this clinic which makes buffering a workable response to complexity.

By comparison, a clinic located in a metropolitan area was forced to coordinate doctors' schedules because patients were unwilling to spend large amounts of time waiting (Galbraith, 1973). The lack of slack resources, in this case, made buffering an unworkable response to complexity. The clinic was forced to develop a centralized system of coordinating doctors' schedules.

In schools, organizational effectiveness is particularly difficult to measure. Within individual classrooms, isolated from hierarchical inspection, isolated from colleagues, and emphasizing teaching procedures above educational outcomes, teachers have conducted instructional activities for an age-graded group of students. Coordination costs as well as the problems of interdependence have been kept to a minimum. But buffering has been successful for four principal reasons: (1) because students have been willing to tolerate denial, delay, interruption, and boredom (Jackson, 1968); (2) because parents have had few other available educational options; (3) because educational outcomes have not been measured and made public; and (4) because, until recently, there have been ample resources available to support the adoption of one educational fad after another.

Now these slack resources, for various reasons, are being reduced, and social and political changes are occurring as well, all of which may make buffering less workable. The harmful effect on students of educational programs designed mainly to reduce the strains on the classroom teacher

or the organizational structure of the school or districts are regularly pushed into public view (Kozol, 1967; Jackson, 1968). For example, California's proposed plan to integrate handicapped children into regular classrooms was influenced by an analysis of the deleterious impact of segregation on students. Parents now have educational alternatives within and outside the public system: schools within schools, private schools, and voucher systems are examples. The outcomes of basic skill instruction at the school level are made public and are being inspected. Parents and communities are now able to see how their schools perform compared to others with similar clientele. The high costs of education are being questioned, and taxpayers are unwilling to support educational experimentation and large numbers of teachers and administrators.

In summary, while the complexity of educational environments is increasing, the availability of slack resources to absorb the previously hidden costs of buffering is decreasing. Schools are therefore less able, now, to maintain this organizational response to complexity.

Producing Planned Change and Development

Let us suppose that a school or school district wishes to respond more actively to the demands of a complex environment. What needs to be done? How does an educational organization go about doing it? What resources are needed? What costs are involved? How do these costs compare to those of buffering?

At a minimum, a school or school district wishing to experiment with active strategies rather than simply trying to endure, needs the following: (1) a systematic process of gathering information, (2) a systematic process for recognizing critical organizational problems and deciding what is to be done, and (3) a procedure for choosing and implementing new patterns of social organization. Each of these three processes requires (4) modifications in the structure of the organization and (5) activities for training participants to assume new organizational roles and responsibilities.

Systematic and Objective Information

There is a need for the appropriate tools and a system for obtaining information about the environment, current organizational and instructional

patterns, and indicators of educational effectiveness. Educational organizations presently collect some of this information, but often it is fragmented and incomplete. For instance, information about a school's performance on skill objectives is now made public, but there is no comparable information available about the community, the organizational patterns of the school, the instructional program, or other indicators of the school's performance. Where these gaps exist and information is lacking, rumor, speculation, and informal channels of information in both the school and community obscure underlying problems and frustrate the system's ability to solve problems and to plan rationally. As an example of how objective information can offset speculation, a superintendent of a local school district recently received telephone calls and finally met with community representatives who were criticizing the schools for emphasizing social, as opposed to basic, skills. This group claimed to speak for the entire community. The superintendent placed before the group the results of a community-wide survey which showed that 90 percent of the community expected the schools to deal directly with the social growth of students. The meeting agenda then shifted to a discussion of how the expectations of the other 5 percent could be met.

Problem-Solving Capabilities

A school or district wishing to respond actively to a complex environment must have more than objective information. It must have a system for processing the information. This requires two additional capabilities.

The first is a commonly shared or system-wide framework for interpreting or assigning meaning to information. Administrators, teachers, and parents all have theories about learning and organizations. Often these theories are diverse and conflicting. As a result, objective information is interpreted in a variety of ways, and this produces disagreements which lead to power struggles or paralysis. A school must, therefore, have a method of developing a shared framework for interpreting information. This capability, of course, will never be fully realized. What is essential is enough consensus so that a school has a basis for its active response--one that is supported by most of those who will ultimately be

affected. In addition to a shared framework, an active response to a complex environment requires a system-wide process for defining and solving problems. In this process, information and a shared perspective are combined to define critical organizational problems and to propose alternative solutions. Participants in the process are chosen to represent various points of view. In schools, for example, representatives from students, teachers, parents, administrators, and the community might participate in the problem-solving process.

An Implementation Plan

Once the school's problems have been identified and solutions selected, an active response to a complex environment requires a plan for implementing the decisions. This plan would include the target of the change, the procedures, and the responsibilities for making, supervising, and evaluating the change. A school responding actively to a complex environment may decide that more specialized roles and formal means of coordinating these roles are necessary for carrying out instruction. The implementation plan would state these changes in specific terms and identify the responsibilities for seeing that the changes were implemented as specified or modified on the basis of new information yielded as the changes progress.

New Patterns of Organization

Each of the three processes just described requires many modifications in the existing organization. Roles must be created to obtain and process information. New skills and relationships are required for using the information to solve problems. The problem-solving process itself superimposes new role relationships. The implementation plan requires formalization of roles and clarification of objectives and responsibilities. Ultimately the problems identified by these processes will be solved by changes in the organization of the school. Theoretically, complex environments require differentiated, well-coordinated organizations. Teams, environmental liaison positions, formal integrating roles, and high levels of evaluation, communication, and face-to-face interaction are characteristic of organizations that have taken an active stance toward a complex

environment. A school responding actively to its environment may look quite different from one adapting more passively. And since complexity will differ greatly among communities, schools responding actively may also vary greatly in their patterns of social organization.

Training

The need for new processes and patterns of social organization inevitably will make demands on administrators, teachers, students--even on parents and community members. New skills, attitudes, and outlooks will be necessary if the participants are to assume new roles successfully. For example, where teachers in teams specialize they will often need to develop the ability to make decisions collectively and to resolve conflicts. Similarly, where diverse participants identify and solve problems collectively they will need highly sophisticated techniques of group interaction and communication. Schools or school districts that take a planned developmental stance toward a complex environment must provide resources to retrain people. This implies a knowledge of available resources for training as well as the monetary resources to purchase the services.

Even a quick inspection of these capabilities supports the point that planned, rational responses to environmental complexity are difficult and costly. These capabilities include many areas which, historically, schools have been reluctant to change. Organizational patterns that increase role differentiation or interdependence are one example. Differentiated staffing, teaming, and new evaluation systems have been attempted in educational organizations before (see especially Charters, 1973; Gross, Giacquinta, and Bernstein, 1971; Smith and Keith, 1971; Deal and Baldridge, 1974), but their success has been meager. This fate is not entirely attributable to schools' internal workings. It has been significantly influenced by communities that have been reluctant to see educational organizations adapt in a way that violates social myths about education (Meyer, 1975).

To summarize: Active adaptation to environmental complexity is difficult, costly, and risky. But even if schools or school districts are willing to be more active, are the knowledge and tools available to assist with the development of necessary capabilities?

The Resources and Limitations of the Field of Organizational Development

Developing the abilities of schools or school districts to respond actively to complex environments falls within the scope of organizational development (OD). This is a field with the primary purpose of applying knowledge about organizations to help organizations (including schools) solve the problems they face. The field is presently somewhat ill-defined and fragmented, but over the past decade OD has contributed significantly to the repertoire of problem-solving techniques that schools have available. Specifically, the important work of Richard Schmuck and Philip Runkle and Matthew Miles can be cited (see References).

As OD has been applied in education, however, there are two limitations that reduce the assistance it can give schools which wish to respond actively to problems. The first limitation is that OD has emphasized training and specific change strategies over diagnosis and problem definition. Miles, Schmuck and Runkle are exceptions. In fact, they are on record in support of defining problems before providing solutions. But, generally, organizational development specialists have been far too willing to provide cures before checking their appropriateness.

Of the capabilities schools need to respond to complex environments, two (information and problem-solving) are clearly diagnostic activities, and they need to take place before schools decide what course of action to take. Once a problem is defined and the definition is shared among the participants, then various strategies may be suggested or implemented and training activities provided. Sensitivity training, laboratory group experiences, communication workshops, team-building, and other OD techniques are strategies for solving specific organizational problems. But their effectiveness is greatly reduced if the problems are not defined first.

The consequences of all-purpose solutions adopted by schools are comparable to those experienced by "trapped" administrators (Campbell, 1969). Trapped administrators tie themselves to specific solutions. They pin their hopes--often their jobs--on a specific strategy, which, given normal conditions, will probably not work. In contrast "experimental" administrators push for consensus on the problems and then outline several

strategies, ary one of which may solve the problem. The success of experimental administrators--and schools and school districts--depends primarily on their ability to define problems adequately.

The second characteristic that limits OD's usefulness is its socio-psychological emphasis (Deal, 1974). OD has focused mainly on individual and small group processes in organizations to the exclusion of structural properties such as interdependence, role differentiation, specialization, coordination, and formal evaluation.

Schools that wish to respond actively to complex environments will often need to reorganize. They will need to respond to environmental complexity with more differentiated, complex internal arrangements. In addition, schools will require more sophisticated ways of monitoring and coordinating individual and group efforts and resolving the internal conflicts that arise as highly specialized people work interdependently. Organizational development, as it is now applied to schools, does not provide an adequate basis for designing complex organizations. It has, instead, emphasized the skills that individuals require to work effectively in existing structures. While the acquisition of such skills has sometimes resulted in more complex work arrangements, the success rate has been low.

In short, of the capabilities that schools need to confront complex, uncertain environments, OD has provided assistance in only one area--training. It has not provided diagnostic tools and techniques, nor has it emphasized the structural properties of organizations or provided adequate conceptual frameworks for social reorganization.

The argument of the paper to this point can be summarized in this way: Schools are faced with complex environments. Generally they have responded to this complexity through internal buffering. While this response has incurred costs, the costs have often been invisible or have been absorbed by resources that could always be found. Now, however, the reduction of slack resources has made the sizeable costs of planned change and development more competitive with the costs of buffering. The assistance available to schools wishing to respond in such fashion is limited, however.

The one field that provides such assistance has not provided the needed diagnostic or conceptual emphasis.

The remainder of this paper will be devoted to describing one OD method whose use or adaptation may provide assistance for schools wishing to respond actively to environmental complexity.

The Survey-Feedback Approach

The survey-feedback approach is not new--either to the field of organizational development in general, or to the field as it has been applied to schools. Mann (1957) and Neff (1965) are among the first proponents of the survey-feedback process as a technique for organizational development and change. Miles et al. (1969), McElvaney and Miles (1971), and Likert (1961) have used the survey-feedback method in schools. The approach is not a panacea; by itself it is not sufficient to assist schools in adapting to environmental complexity. It is, however, a useful tool for problem definition. And with the right emphasis it may provide the basis for the social reorganization of a school, where such reorganization is indicated, so as to increase the ability of the school to deal with environmental complexity. In this way, survey feedback can be used to supplement the training, specific change strategies, and techniques now provided by the field of organizational development.

Essentially, the survey-feedback approach has four stages: (1) an information gathering stage--the survey; (2) a feedback stage; (3) a problem-definition or discussion stage; and (4) a solution-generating stage. Of course, the basic sequence has been modified as the approach has been applied. Other social scientists have also organized each stage differently or emphasized certain stages as they have used the technique with ongoing organizations.

There are three questions about the survey-feedback approach that can profitably be explored, in brief, using previous work in the area as a source of information. What type of information is gathered? What is the procedure for feeding back the information? What results has the approach shown in stimulating organizational change?

The Information Gathered

The type of information gathered depends partially on the nature of the organization's problem as originally presented, but is influenced to perhaps an equal degree by the conceptual emphasis of the social scientist carrying out the survey. This conceptual emphasis determines the survey design and questions. The range of types of information gathered is as great as the variety of perspectives that organization theorists currently hold--a rather substantial variation. As examples, Klein, Kraut, and Wolfson (1971) gathered information on employee attitudes and morale, as did Mann and Likert (1952). Alderfer and Holbrook (1972) emphasized the attitudes of participants and morale but also obtained participants' perceptions of selected structural variables in the organization. Survey feedback as used by Schmuck (1973) is primarily aimed at indicators of small group processes. In comparison, Miles et al. (1969) and McElvaney and Miles (1971) obtained information aimed at assessing dimensions of "organizational health"--a decidedly structural emphasis. The work of Coughlan, Cooke, and Safer (1972) likewise focuses on the formal properties of school organizations. Bowers' (1973) work in survey feedback comes from an organizational climate tradition.

Thus, different researchers focus on different organizational variables as important. The theoretical stance, in turn, determines to a large extent the questions that are asked, as well as the meaning assigned to the information--decisions that ultimately influence the way in which the problem is defined and the solutions that are developed.

The Feedback Process

The situation and procedures for feedback vary nearly as greatly as the type of information gathered. Neff (1965) and Mann and Likert (1952) advocated the use of "family" groups, i.e. groups composed of a supervisor and subordinates, as the most productive structure for processing survey-feedback information into a defined problem and possible solutions. Klein, Kraut, and Wolfson (1971) emphasized the role of the natural leader in reporting the information and leading the problem-solving sessions in

groups composed of peers. Alderfer and Holbrook (1972) and McElvaney and Miles (1971) fed the results of their survey to a group of administrators. The administrators discussed the information, used the results to define problems and develop solutions, and then conducted similar sessions with their respective faculties. The feedback design of Coughlan, Cooke, and Safer (1972) is probably the most complex. They combined the family group and peer group settings, using the natural work groups as peer groups, a school-wide "family group" review committee, and a district-wide policy committee to discuss survey results. In effect, a collective decision-making structure was superimposed on the existing authority structure of the school system.

The three basic types of feedback settings are: (1) peer group, (2) "family" group, and (3) combinations of peer and family group settings. In all, outside consultants may act as advisors to the problem-solving process or play an active role.

The Effects of Survey Feedback

Perhaps the third question is the most important: How effective has the approach been in solving problems or stimulating organizational change? Here survey feedback has a somewhat spotty record. In some cases it has been effective; in others not. If we accept Bowers' (1973) evidence that survey feedback, compared to other OD techniques, produced significant and lasting changes in the climate of schools, the record looks reasonable. Coughlan, Cooke, and Safer (1972), too, demonstrate significant impact on the structure and effectiveness of the elementary schools in their sample. Alderfer and Holbrook (1972) show significant effects of survey feedback on participant attitudes and the structure of the organization. Anecdotal evidence suggests that even the act of conducting the survey causes participants to ask new questions and to look at their situation in new ways.

The results reported by Miles et al. (1969) and McElvaney and Miles (1971) are not as clear. In these studies, survey feedback appears to have had an impact on the problem-solving process, but its effect on organizational variables is not impressive. Klein, Kraut, and Wolfson (1971)

show a differential impact of various methods of survey feedback on satisfaction with the survey and utilization of the results; however, they offer no evidence of any impact on the organization itself.

To summarize, the survey-feedback approach appears to work in some situations but not in others. In all cases it appears to assist in developing diagnoses and problem definitions, but it successfully produces desired organizational changes only in some situations. Given the variation in information-feedback situations and feedback procedures, such a mottled past might be expected. More systematic studies are certainly needed in order to test the effectiveness of the survey-feedback approach in varied conditions. Until that time, however, the technique looks promising--particularly when compared to the results of other organizational development interventions and in view of the case made previously for the importance of diagnosis in organizational development.

In the next section, the survey-feedback approach of the Environment for Teaching Program at Stanford will be compared to previous efforts in terms of conceptual framework and information gathered, the feedback situation, and intended effects.

Survey Feedback in the Environment for Teaching Program

Like other versions of survey feedback, that of the Environment for Teaching Program reflects a particular approach to the study of organizations (Deal, Duckworth, and Robbins, 1975). It is based on both the conceptual framework of the Environment for Teaching Program and the results of a major survey of 188 elementary schools and 34 school districts, a random sample of elementary schools in the San Francisco Bay Area.

The Environment for Teaching's research focuses on the formal patterns, or structure, of school organizations. These formal patterns include: vertical differentiation (How is authority to make decisions or to control others distributed?); lateral differentiation (How are the organization's various functions divided?); interdependence (To what extent do various participants depend on each other in accomplishing their work?); coordination (What mechanisms are used to integrate the efforts of participants?);

formalization (To what extent are the actions of participants guided by explicit rules, policies, or procedures?); and evaluation structure (Who sets evaluation criteria, samples and appraises performance, communicates this judgment to participants, and ultimately distributes organizational sanctions?). This list is not exhaustive, but it should illustrate the structural emphasis of the Environment for Teaching Program.

Our basic hypothesis is that as either the environment or the technical processes (or technology) of an organization becomes more complex (i.e., diverse, unstable, and uncertain), the structure must, in turn, become more differentiated and complex. A simple organization under conditions of environmental or technical complexity is not likely to be very effective. In schools, we expected that more complex organizational arrangements, such as differentiated staffing and the use of specialists or small teacher work groups, would provide higher levels of support for sophisticated instructional programs developed in response to environmental complexity.

The preliminary analysis of our survey results, however, shows the predicted structure-instruction relationship only at the classroom level. We have found rather substantial evidence of vertical segmentation--that is, districts, schools, and classrooms operating relatively independent of one another in the area of instruction (Deal, Meyer, and Scott, 1974). We have also found some evidence of lateral dissociation--participants within the same level performing their jobs separately. At the school level, for example, the work of teachers, reading specialists, and speech therapists is organized, in many cases, in a way that reduces their interdependence or need for working closely together (Cohen and Bredo, 1974). Finally, we have some evidence of technical fragmentation, where instructional activities are performed without much attention being given to their impact on learning (Deal, Meyer, and Scott, 1974).

On the theoretical grounds discussed earlier we believe these patterns are characteristic of the passive stance schools take toward an increasingly complex environment. The costs of buffering are absorbed in organizational slack and are not readily apparent. But we believe that the structural patterns of segmentation, dissociation, and instructional fragmentation

will contribute to reduced organizational effectiveness, whether measured by group maintenance, goal accomplishment, public support, or cost-effectiveness. Specifically, we believe that the high mortality of educational innovations, teacher and administrator stress and turnover, the susceptibility of educators to educational fads, and other problems in education may be attributed, in large measure, to the way schools are organized. We will be testing such propositions in the second phase of our survey in Bay Area schools.

If our theories are valid, active adaptation and new patterns of organization may help remedy some of these problems. The main barrier is one of comparative costs. The costs of passive adaptation are often obscured by societal myths about education (Meyer, 1975) or the difficulties involved in measuring learning outcomes. The costs of reorganization, on the other hand, are highly visible. Any attempt to increase organizational coordination and interdependence in education will produce conflict and new demands on teachers and administrators. Similarly, as these newer patterns violate societal expectations about education, parents and local communities will undoubtedly place additional pressures on the school to revert to a more well understood position.

As noted earlier, we believe that in order to adapt more actively and to solve the problems caused by new organizational patterns, educational organizations must have the capabilities to gather information from relevant participants in the educational process, namely, teachers, students, administrators, parents, and community members; to analyze and use this information to identify problems and the direction for change; to decide on change strategies; and to anticipate the resistance to proposed changes and the support that will be required to sustain the changes over time.

In sum, our approach to educational problems emphasizes the importance of structural reorganization. But there must be some basis for this reorganization. Our theories suggest that the design of educational organizations must be determined by the complexity of the instructional program and of the environment. There is no one best way to organize; rather, given certain communities there are certain design options. Each option has some benefits and some costs. Although general guidelines can

be developed for selecting an "appropriate" organization, the actual configuration must be developed by the individual district or school. Consequently, schools need a method for defining problems and developing a planned organizational response. Survey feedback may be an important diagnostic tool in assisting schools and school districts to alter internal patterns or in other ways to cope actively with a wide variety of educational environments and instructional programs--most notably those that are uncertain and complex.

The Information Gathered

Like other survey-feedback activities, our conceptual emphasis is reflected in the instruments we have designed for gathering information. To illustrate: we ask questions about the instructional program, the environment, the current organization of the school, and organizational effectiveness. In the area of instruction, for example, we include items to measure instructional differentiation and decision making, teaching methods, educational expectations, and several aspects of classroom organization. To tap environmental complexity we measure educational expectations, diversity, stability, activity, and supportiveness. To assess present organizational patterns we look at such areas as decision making, role differentiation, formalization, interdependence, conflict, and evaluation processes. These survey instruments are completed by students, teachers, administrators, parents, and, in some instances, members of the community. The questionnaires are supplemented by informal and formal interviews.

Our approach differs from other survey-feedback methods because of its structural emphasis. It is also distinctive in that we share this emphasis systematically with participants. We have developed and field tested a series of workshops to give teachers and administrators an "organizational" frame of reference for defining and solving problems. These workshops are designed to create the common perspective for interpreting information discussed earlier.

The Feedback Process

Our survey-feedback approach differs from others in the setting used to feed back the survey results. It combines the family group and peer group designs used in previous studies. The family group, which we call a policy group, is convened at the beginning of the study. It is composed of representatives from all relevant constituencies. In an elementary school, for example, the policy group would include the principal and representatives from the district office, the community, parents, and various factions within the faculty. In a high school, the policy group would include, in addition, students and representatives from specialist groups within the school, such as the counseling staff.

Peer groups are convened as the survey results are reported back. These peer groups are the natural work groups within the school. The peer groups might be departments, grade level committees, or teaching teams. The administrative team, the counseling staff, or the classified staff are also peer groups.

The third group in the process is the advisory team. This group is analogous to the outside consultant of previous studies, and, in our case, includes representatives from the Environment for Teaching Program staff.

The policy group, peer groups, and the advisory team together form a temporary problem-solving structure. Each group has specific responsibilities as the survey information is reported and used.

The Policy Group

1. Reviews questionnaires and determines field procedures.
2. Provides legitimacy for the study among various constituencies.
3. Participates in problem-solving workshops.
4. Uses survey results and input from peer groups to define school-wide problems.
5. Develops school-wide change strategies and oversees their implementation.
6. Takes an active role in evaluating the results of change strategies.

The Peer Groups

1. Discuss survey information that pertains specifically to the work group.
2. Participate in problem-solving workshops.
3. Define the problems of the work group and develop tentative strategies for their solution.
4. Discuss the school-wide problems and solutions identified by the policy group.
5. React to proposed school-wide changes.
6. Implement both specific peer group and school-wide solutions.

The Environment for Teaching Advisory Team

1. Provides criteria for selecting the policy groups.
2. Provides survey instruments and works closely with the policy group in developing field procedures.
3. Supervises the collection of information.
4. Analyzes information and highlights possible problem areas.
5. Conducts problem-solving workshops to provide a common framework for discussing information, defining problems and proposing solutions. Trains discussion leaders for each peer group.
6. Advises on process and suggests alternative formulations as problems are defined and solutions are proposed.
7. Assists in determining the effectiveness of change strategies.

The survey-feedback process in a school unfolds in the following sequence:

Step 1. Orientation

Advisory Team introduces survey feedback to faculty, administration, and other groups. Discusses Policy Group formation (desired roles: representatives from district, the principal, teachers, students, and parents) and suggests procedures for selection.

Step 2. First Survey Design Meeting

Policy Group meets with Advisory Team to (a) identify relevant target areas, (b) identify groups to be surveyed, (c) discuss and assist with informal information gathering.

Step 3. Second Survey Design Meeting

Design procedures for gathering information. Advisory Team meets with Policy Group to (a) review instruments and (b) establish procedures for collecting data.

Step 4. Data Collection

Survey school staff, students, district personnel, parents, etc.

Step 5. Data Analysis and Preliminary Diagnosis

Advisory Team analyzes data, defines problem areas, assesses "match" among preferences, instructional program, and school organization.

Step 6. Problem-Solving Workshop

Advisory Team meets with Policy Group and Peer Groups to (a) introduce organizational approach to problem solving and (b) train discussion leaders for feedback sessions.

Step 7. Feedback to Peer Groups

Advisory Team meets with Peer Group leaders to feed back relevant results concerning their group.

Step 8. Feedback to Policy Groups

Each Peer Group leader reports his/her group's results from survey and strategy suggestions. Advisory Team presents overall results and findings. Entire group discusses organizational strategies, proposals for changes, etc.

Step 9. Feedback to Peer Groups

Peer Group leaders again feed back overall findings and suggestions from Policy Group meeting, especially as it concerns implications for their particular group, in addition to organizational strategies.

Step 10. Strategy Session

Policy Group and Advisory Team meet to discuss and confirm actual plan to implement strategies.

Step 11. Evaluation of Results

After specified time, parts of survey are readministered.

Intended Effects

The survey-feedback approach is a diagnostic method to assist schools or school districts as they respond actively to complex, uncertain environments. We believe that in many cases the approach will define problems organizationally and therefore suggest solutions that require a reorganization of human resources.

Educational environments and instruction have become complex. Our theories suggest that structural patterns in schools or districts will often need to become more highly differentiated and coordinated in response. The primary purpose of the survey-feedback process is to provide objective information and a systematic approach to problem solving that will enable educational organizations to change features of social organization in a planned, rational, and thoughtful manner. But the survey-feedback approach is only a means to this end. It assists schools in identifying problems and developing solutions. It provides some guidelines for reorganization. By providing objective information and the involvement of key personnel, it increases system-wide consensus on important problems and possible solutions. In doing this, it increases the probability that solutions will be implemented.

Because survey feedback is only a means to reorganization or a tool for helping schools adapt actively to complex environments, it is hard to judge its effectiveness on the basis of the subsequent performance of the school. There are too many intervening variables, many outside the control of the survey staff--and perhaps even the school participants--that will influence organizational performance overall. Ultimately, the approach is designed to increase school effectiveness in a variety of environments. However, at this time the process can be judged on other criteria. For example, were the peer groups able to identify problems and propose specific solutions? Was the policy group able to reach a consensus on school-wide problems? Did the policy group formulate specific strategies for change and oversee their implementation? Did the policy group evaluate the input of school-wide changes and continue to function as a problem-solving process?

The survey-feedback process is essentially one of formative evaluation. Evaluation, of course, is not new in education. Many schools or districts have already been evaluated. Their instructional programs, management systems, and special programs, such as Title I or Early Childhood Education, have been assessed. Many school communities have been evaluated on needs assessment activities. But often evaluations of these various elements have not been related to one another, the evaluators have

taken their shots and run, and the evaluation reports have been filed but not used. As a result, diagnosis and action have been separate enterprises --to the detriment of successful change in education. The purpose of the survey-feedback process is to bring diagnosis and action together as a way of helping schools adapt to the demands posed by complex and uncertain educational environments.

Summary

This paper's prime purpose is to build a case for survey feedback as a method of assisting schools to adapt actively to environmental uncertainty and complexity. The main argument is that passive organizational patterns which buffer the institution instead of producing coordination and interdependence within it contribute to educational problems. Planned change and development, however, require schools to develop new capabilities, including new forms of organization. Although organizational development is a field that exists to provide assistance, often its assistance has been only partial. In providing the diagnostic capabilities schools need to respond actively to complex environments, survey feedback can be an important tool. The survey-feedback approach of the Environment for Teaching is designed to provide the information, problem-solving capabilities, and participation necessary for designing school organizations equal to complex educational environments.

References

Alderfer, Clayton P., and Holbrook, John. "A New Design for Survey Feedback." Yale University, Dept. of Administrative Sciences, 1972.

Bidwell, Charles E. "The School as a Formal Organization," in James G. March, ed., The Handbook of Organizations. Chicago: Rand McNally, 1965.

Bowers, David G. "O. D. Techniques and Their Results in Twenty-three Organizations," Journal of Applied Behavioral Science, 9 (1973), 21-43.

Campbell, Donald T. "Reforms as Experiments," American Psychologist, 24, No. 4 (1969), 187-223.

Charters, W. W., Jr. et al. The Process of Planned Change in the School's Instructional Organization. Eugene Ore.: Center for the Advanced Study of Educational Administration, University of Oregon, 1973.

Cohen, Elizabeth G., and Bredo, Eric. "Organizational Support for Innovative Instructional Programs: Staff Level." Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, April 1974.

Coughlan, Robert S., Cooke, Robert A., and Safer, L. Arthur, Jr. An Assessment of a Survey Feedback Problem-Solving Collective-Decision Intervention in Schools. Final Report to U.S. Office of Education. Chicago, 1972.

Deal, Terrence E. "The Neglected Structural Side of Organizational Development, or Human Relations is Not Enough," Thrust (Association of California School Administrators), 4, No. 2 (1974), 21-24.

Deal, Terrence E., and Baldridge, J. Victor. An Organizational View of Educational Innovation. (Stanford Center for Research and Development in Teaching, R&D Memorandum No. 126) Stanford University, October 1974.

Deal, Terrence E., Duckworth, Kenneth, and Robbins, Susan Hurevitz. A Survey-Feedback Approach to Developing Self-Renewing School Organizations. (Stanford Center for Research and Development in Teaching, R&D Memorandum No. 131) Stanford University, January 1975.

Deal, Terrence E., Meyer, John W., and Scott, W. Richard. "Organizational Support for Innovative Instructional Programs: District and School Levels." Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, April 1974.

Dornbusch, Sanford M., and Scott, W. Richard. Evaluation and the Exercise of Authority: A Theory of Control Applied to Diverse Organizations. San Francisco: Jossey-Bass, 1975.

Dreeben, Robert. The Nature of Teaching: Schools and the Work of Teachers. Glenview, Ill.: Scott, Foresman and Company, 1970.

Emery, F. E. "The Next Thirty Years: Concepts, Methods, and Anticipations," Human Relations, 20 (1967), 199-237.

Galbraith, Jay. Designing Complex Organizations. Reading, Mass.: Addison-Wesley Publishing Company, 1973.

Gross, Neal, Giacquinta, Joseph B., and Bernstein, Marilyn. Implementing Organizational Innovations: A Sociological Analysis of Planned Educational Change. New York: Basic Books, 1971.

Jackson, Philip W. Life in Classrooms. New York: Holt, Rinehart and Winston, 1968.

Kingdon, Donald Ralph. Matrix Organization: Managing Information Technologies. London: Tavistock Publications, 1973. Distributed in USA by Harper & Row.

Klein, Stuart M., Kraut, Allen I., and Wolfson, Alan. "Employee Reactions to Attitude Survey Feedback: A Study of the Impact of Structure and Process," Administrative Science Quarterly, 14, No. 4 (December 1971), 497-514.

Kozol, Jonathan. Death at an Early Age. Boston, Mass.: Houghton Mifflin, 1967.

Lawrence, Paul R., and Lorsch, Jay W. Developing Organizations: Diagnosis and Action. Reading, Mass.: Addison-Wesley, 1969.

Likert, Rensis. New Patterns of Management. New York: McGraw-Hill, 1961.

Lortie, Daniel C. "The Teacher and Team Teaching: Suggestions for Long-range Research," in J. S. Shaplin and Henry Olds, Jr., eds., Team Teaching. New York: Harper & Row, 1964.

Mann, Floyd. "Studing and Creating Change: A Means to Understanding Social Organization," in C. Arensberger, et al., eds., Research in Industrial Human Relations. New York: Harper & Brothers, 1957.

Mann, Floyd, and Likert, Rensis. "The Need for Research on the Communication of Research Results," Human Organization, 11, No. 4 (Winter 1952), 15-19.

McElvaney, Charles T., and Miles, Matthew B. "Using Survey Feedback and Consultation," in Richard Schmuck and Matthew B. Miles, eds., Organizational Development in Schools. Palo Alto, Cal.: National Press Books, 1971.

Meyer, John W. "Notes on the Structure of Educational Organizations." Paper prepared for the N.I.E. conference on Educational Systems as Loosely Coupled Organizations, La Jolla, California, February 2, 1975.

Meyer, John, and Cohen, Elizabeth, with Brunetti, Frank, Molnar, Sheila, and Lueders-Salmon, Erika. The Impact of the Open-Space School upon Teacher Influence and Autonomy: The Effects of an Organizational Innovation. (Stanford Center for Research and Development in Teaching, Technical Report No. 21) Stanford University, October 1971.

Meyer, John; Scott, W. Richard; Intili, Jo-Ann; and Main, Sally. "The Degree of Coordination Characteristic of Schools and Districts as Organizations: Consensus in the Description of Policy and Practice Within and Between Organizational Levels." Preliminary draft, Stanford Center for Research and Development in Teaching, December 1974.

Miles, Matthew. "Some Properties of Schools as Social Systems," in G. Watson, ed., Change in School Systems. Washington, D. C.: National Training Laboratory, 1967.

Miles, Matthew B. "Planned Change and Organizational Health: Figure and Ground," in Change Processes in the Public Schools. Eugene, Ore.: Center for the Advanced Study of Educational Administration, University of Oregon, 1965.

Miles, M. B., Hornstein, H. A., Callahan, D. M., Clader, P. H., and Schiavo, R. S. "The Consequence of Survey Feedback: Theory and Evaluation," in W. G. Bennis, K. D. Benne, and R. Chin, eds., The Planning of Change (2nd ed.). New York: Holt, Rinehart and Winston, 1969.

Neff, F. W. "A Tool for Problem Diagnosis and Improvement in Organizations," in A. W. Gouldner and S. M. Miller, eds., Applied Sociology. New York: Free Press, 1965.

Pellegrin, Roland J. Some Organizational Characteristics of Multiunit Schools. Eugene Ore.: Center for the Advanced Study of Educational Administration, University of Oregon, 1970.

Schmuck, Richard A. "Incorporating Survey Feedback in OD Interventions." For a symposium entitled Survey Feedback in Educational Organization Development, Annual Meeting of the American Educational Research Association, New Orleans, 1973.

Schmuck, Richard A., Runkel, Philip J., Saturen, Steven L., Martell, Ronald T., and Derr, C. Brooklyn. Handbook of Organizational Development in Schools. Palo Alto, Cal.: National Press Books, 1972.

Smith, Louis M., and Keith, Pat M. Anatomy of Educational Innovation: An Organizational Analysis of an Elementary School. New York: John Wiley & Sons, 1971.