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ABSTRACT

The goal of this panel was to generate scientific knowledge on how the organizational, administrative, physical, personal, and social aspects of the classroom, school, district, and community support instructional personnel in reaching educational goals. A matrix was developed using locational variables (within school and outside school) and operational variables (organizational/administrative, physical, and personal/social), to contain and display five "approaches" developed by the panel. The first approach dealt with the ways in which organizational and administrative aspects of the classroom and school can support instructional personnel in attaining educational goals. The second approach was concerned with the ways in which the organizational and administrative aspects of the school district and the community affect educational personnel in reaching educational goals. The third approach was concerned with the effects on staff functioning of the physical environment of the classroom and school. The fourth approach dealt with the ways in which personal and social aspects of the classroom and school aid staff in reaching educational goals. The fifth approach was concerned with similar informal social-personal influences outside the school or classroom context. Within these five approaches, 21 programs were formulated and rated as to their priority. (BD)

NIE CONFERENCE ON STUDIES IN TEACHING

PANEL 7

# INSTRUCTIONAL PERSONNEL UTILIZATION

## GOAL STATEMENT

To generate scientific knowledge on how the organizational, administrative, physical, personal, and social aspects of the classroom, school, district, and community support instructional personnel in reaching educational goals.

## PARTICIPANTS

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*Was invited but was not able to take part in the Conference.

WASHINGTON, D.C.

AUGUST, 1975

N. L. Gage, Editor

Kent Vichoeur, Coordinating Editor

# TABLE OF CONTENTS

# PREFACE

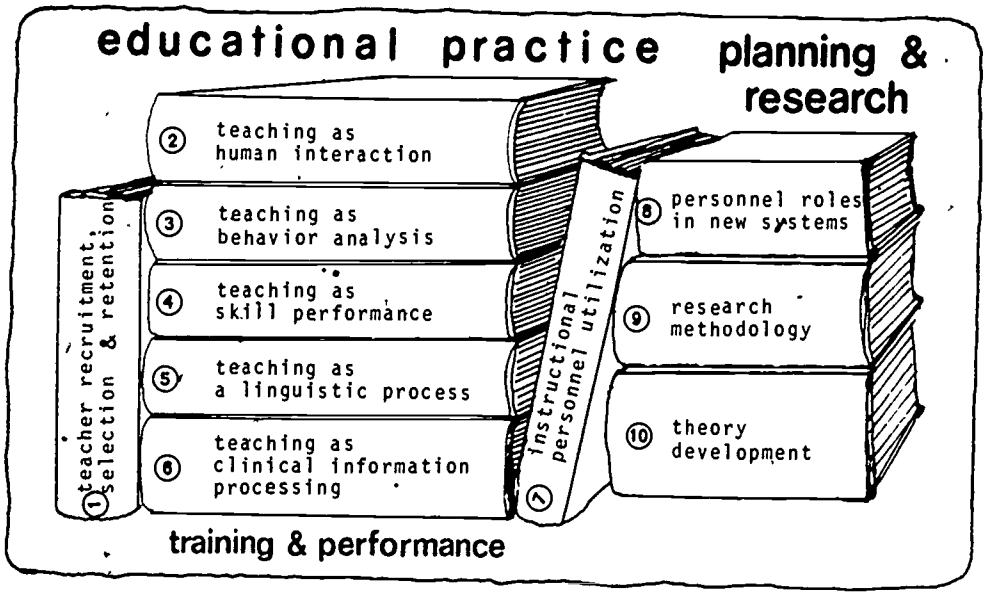
The volume before you is the report of one of ten panels that participated in a five-day conference in Washington during the summer of 1974. The primary objective of this Conference was to provide an agenda for further research and development to guide the Institute in its planning and funding over the next several years. Both by the involvement of some 100 respected practitioners, administrators, and researchers as panelists, and by the public debate and criticism of the panel reports, the Institute aims to create a major role for the practitioner and research communities in determining the direction of government funding.

The Conference itself is seen as only an event in the middle of the process. In many months of preparation for the Conference, the staff met with a number of groups--students, teachers, administrators, etc.--to develop coherent problem statements which served as a charge to the panelists. Panel chairmen and others met both before and after the Conference. Several other panelists were commissioned to pull together the major themes and recommendations that kept recurring in different panels (being reported in a separate Conference Summary Report). Reports are being distributed to practitioner and research communities. The Institute encourages other interest groups to debate and critique relevant panel reports from their own perspectives.

The Conference rationale stems from the frank acknowledgment that much of the funding for educational research and development projects has not been coordinated and sequenced in such a way as to avoid undue duplication yet fill significant gaps, or in such a way as to build a cumulative impact relevant to educational practice. Nor have an agency's affected constituencies ordinarily had the opportunity for public discussion of funding alternatives and proposed directions prior to the actual allocation of funds. The Conference is thus seen as the first major Federal effort to develop a coordinated research effort in the social sciences, the only comparable efforts being the National Cancer Plan and the National Heart and Lung Institute Plan, which served as models for the present Conference.

As one of the Conference panels points out, education in the United States is moving toward change, whether we do anything about it or not. The outcomes of sound research and development--though enlisting only a minute protion of the education dollar--provide the leverage by which such change can be afforded coherent direction.

In implementing these notions for the area of teaching, the Conference panels were organized around the major points in the career of a teacher: the teacher's recruitment and selection (one panel), training (five panels), and utilization (one panel). In addition, a panel was formed to examine the roles of the personnel in new instructional systems. Finally, there were two panels dealing with research methodology and theory development.




Within its specific problem area, each panel refined its goal statement, outlined several "approaches" or overall strategies, identified potential "programs" within each approach, and sketched out illustrative projects so far as this was appropriate and feasible.

Since the brunt of this work was done in concentrated sessions in the space of a few days, the resulting documents are not polished, internally consistent, or exhaustive. They are working papers, and their publication is intended to stimulate debate and refinement. The full list of panel reports is given on the following page. We expect serious and concerned readers of the reports to have suggestions and comments. Such comments, or requests for other panel reports, should be directed to:

Assistant Director
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As the organizer and overall chairman for the Conference and editor for this series of reports, Professor N. L. Gage of Stanford University richly deserves the appreciation of those in the field of teaching research and development. The panel chairpersons, singly and together, did remarkable jobs with the ambitious charge placed before them. Special acknowledgments are due to Philip Winne of Stanford University and to Arthur Young & Company for coordination and arrangements before, during, and after the Conference. But in sum toto, it is the expert panelists--each of whom made unique contributions in his or her respective area--who must be given credit for making the Conference productive up to the present stage. It is now up to the reader to carry through the refinement that the panelists have placed in your hands.

Garry L. McDaniels
Program on Teaching and Curriculum

LIST OF PANEL REPORTS AND CHAIRPERSONS

1. Teacher Recruitment, Selection, and Retention, Dr. James Deneen, Educational Testing Service
2. Teaching as Human Interaction, Dr. Ned A. Flanders, Far West Laboratory for Educational Research and Development
3. Teaching as Behavior Analysis, Dr. Don Bushell, Jr., University of Kansas
4. Teaching as Skill Performance, Dr. Richard Turner, Indiana University.
5. Teaching as a Linguistic Process in a Cultural Setting, Dr. Courtney Cazden, Harvard University
6. Teaching as Clinical Information Processing, Dr. Lee S. Shulman, Michigan State University
7. Instructional Personnel Utilization, Dean Robert Egbert, University of Nebraska
8. Personnel Roles in New Instructional Systems, Dr. Susan Meyer Markle, University of Illinois
9. Research Methodology, Dr. Andrew Porter, Michigan State University
10. Theory Development, Dr. Richard Snow, Stanford University

- Conference on Studies in Teaching: Summary Report, Dr. N. L. Gage, Stanford University

# INTRODUCTION

Early in the conference, members of Panel 7 expressed doubt that it is possible to carry out straightline planning toward particular goals and objectives in a field such as educational research which lacks an extensive, organized knowledge base. Questions have been raised about this kind of planning process in cancer research; yet such a procedure is a hundredfold more questionable in a field like education and, in particular, in an area like teacher utilization where there is not yet a successful paradigm for scientific research. Indeed, within the teacher utilization area, there is very little research and certainly not enough to form a systems model.

A possible price for straightline planning in an area like teacher utilization is that the investment in research projects by NIE could be extremely conservative and "low-risk." The panel felt that the creative researcher who looks at things very differently than the group at this conference may have little chance of being supported by NIE.

Panel 7 members agreed to a considerable extent that much of the earlier work on teacher utilization had a manipulative quality, as if teachers were uninformed, poorly motivated employees with whom a firm hand was advisable. The Panel deliberately structured its programs to reflect a change in underlying values with respect to the goals of research relevant to teachers, a change which recognizes the responsible, professional status and performance of teachers and other school personnel.

There was also consensus that "pupil outcomes" was not the only dependent variable with which the Panel should be concerned; but that other dependent variables would be included only where there is a demonstrably strong linkage to student outcomes. Thus, the dependent variables should include such issues as the nature of the teacher's planning behavior and the nature of the teacher's interaction with pupils and with other instructional personnel. On the other hand, activities of the principal, counselor, and teachers in areas where there is little or no relationship to student outcomes would be omitted as dependent variables.

In preparation for the week's activities, Panel members were initially presented with two types of documentation:

1. The NIE Conference on Studies in Teaching Handbook, which included for Panel 7 the Problem Area statement along with preliminary suggestions for Approaches and programs (Section 5: pp. 48-49), as written at a pre-conference chairpersons' meeting held earlier.
2. Tables showing the results of the chairman's preparatory survey of selected respondents (including the Panel members), which obtained (a) judgments of critical issues in instructional personnel utilization, and (b) subsequent priority ratings concerning the assembled list of issues.

This documentation served as a base for the Panel's work in shaping the Panel goal statement and in deriving the Approaches and programs.

Statement of Goal

The original problem area statement contained in the pre-conference outline was:

> "Develop the means to improve the ways in which teacher and other educational personnel are utilized in the organizational, administrative, and physical environment of the classroom, school, and community."

The Panel discussed a number of the points embodied in this problem area statement and reached the following agreements:

- The phrase "develop the means" was changed to "generate scientific knowledge." The modification was made to reflect the research-based nature of the Panel's task.
- The scope of the problem area should include classroom teachers, other people in the classroom, principals, and specialists; other school personnel such as secretarial and clerical personnel, maintenance staff, lunchroom staff, and bus drivers are included only to the extent that they are judged to interact with students in an instructional manner.
- To avoid possible misinterpretation of the term "Utilization," the statement should focus instead on support of the teacher toward shared educational goals.
- Personal and social aspects of the problem area were added, to include the informal interactions among students, instructional personnel, administrative staff, and parents.

- The impact of the school district setting was recognized as a part of the physical environment.

Accordingly, the new definition of the problem area as adopted by the Panel was:

> "Generate scientific knowledge on how the organizational, administrative, physical, personal, and social aspects of the classroom, school, district, and community support instructional personnel in reaching educational goals."

Derivation of Approaches

Prior to refining the problem area statement, the Panel had taken time to brainstorm some of the issues suggested by the "community of constituents" responding to the preparatory survey. A number of possible program areas were thereby discussed under the following headings:

- Effects of Bargaining Agreements on Utilization of Teachers
- Supporting Risk Taking
- Developing a Knowledge Base on How the Physical Environment Supports Teachers in Reaching Educational Objectives
- Effects of Different Ways of Organizing Staff Resources.

After revising the problem area statement suggested for Panel 7 in the pre-conference document, the Panel considered the four suggested Approaches associated with that statement. These had been written in the form:

> "Develop the means to improve the effects of . . . on teacher functioning,"

and included as the respective independent variables (a) administrative arrangements and requirements, (b) organizational arrangements, (c) physical environment and facilities, and (d) incentives in relation to new utilization patterns.

In accord with the five changes in the problem area statement, the Panel changed the basic format for the Approach statements to:

> "Generate scientific knowledge on how the { (a) administrative, (b) organizational, (c) physical, (d) personal & social } aspects of the classroom, school, district, and community support instructional personnel in reaching educational goals."

The projecting of the four central variables across the four locations results in the matrix shown in Figure 1.

| LOCUS / VARIABLES | Classroom | School | District | Community |
|---|---|---|---|---|
| Administrative | | | | |
| Organizational | | | | |
| Physical | | | | |
| Personal/Social | | | | |

Figure 1. Matrix for Tentative Identification of Approaches

The matrix in Figure 1 could have generated 16 different approaches, if each cell were identified as a separate Approach. After further discussion, it was tentatively decided that the rows of the matrix would form the proposed Approaches for Panel 7; the columns would be considered as possible programs within the separate Approaches.

As orientation to the further conference process and as a test of the structure thus far, one proposed program (dealing with the Relationships Among Types of Educational Accountability Systems, Staff Utilization Patterns, and Teacher Risk Taking) was considered in detail and shredded out into possible projects. As a result of the ensuing discussion, the Panel arrived at its final structure for the Approaches by collapsing the matrix in two ways:

1. The Panel agreed that a definitional distinction between the administrative and organizational approaches was operationally difficult, and these were then combined into a single row.
2. The columns of the matrix were also collapsed by combining the classroom and school aspects into a single "in-school" category, and by similarly combining the district and community aspects into a single "out-of-school" category. (NOTE: The cell conjunction formed by application of the physical aspects to a locus outside the school purview was excluded as not being a reasonable source of variables for this problem area.)

As a result of these revisions, the Approach matrix was modified to appear as shown in Figure 2. The five remaining cells of this matrix were each assigned to a team of two Panel members for further elaboration prior to the final adoption of these cells as Panel Approaches.

| LOCUS / VARIABLES | Inside School | Outside School |
|---|---|---|
| Organizational/Administrative | Approach 7.1 | Approach 7.2 |
| Physical | Approach 7.3 | |
| Personal/Social | Approach 7.4 | Approach 7.5 |

Figure 2. Matrix for Adopted Approaches: Variables Impinging on Staff Assignment and Function

In the report which follows, the five Approaches are described in detail. Within these five Approach areas, a total of 21 programs are suggested. Some of these programs have been developed in considerable detail, while others have been only superficially treated. Still others are represented only by titles. This non-uniformity of detail was dictated by the Panel's time constraints and by priority ratings established by the Panel.

Priority Ratings of Programs

In obtaining the priority ratings upon which the Panel's allocation of effort was based, the Panel members rated the adopted programs according to the following numerical scale:

1 = extremely important
2 = moderately important
3 = minimally important
4 = unimportant

Figure 3 lists the programs within each Approach in order of their judged importance, and shows the average rating given each program by the nine voting Panel members.

PANEL 7. TEACHER UTILIZATION....PROGRAMS IN ORDER OF IMPORTANCE AS RATED BY PANEL

| | Inside School | | Outside School | |
|---|---|---|---|---|
| | Program | Rating | Program | Rating |
| Organiz'l/ Admin. (Approaches 1 & 2) | **7.11-Org'n. of Staff Resources for Continuing School Problem-Solving | 1.1 | 7.22-External Influences on School District Instr'l. Goals/Policies/ Processes that Affect Staff Assignment & Functioning | 1.4 |
| | 7.14-Types of Accountability & Effects on Teacher Group & Indiv. Behavior | 1.3 | **7.21-Consultative Activities within District for Continuing School Problem-Solving | 1.6 |
| | 7.13-Authority & Evaluation re Staff Ability in Instructional Tasks | 1.6 | **7.23-Effects of Community Participation re Staff Support for Instr'l. Programs | 2.0 |
| | 7.12-Group Process Skills & Staff Capability | 1.7 | | |
| | 7.16-Effects of Org'l./Admin. Arrangements on Teachers' Initiative | 1.7 | | |
| | 7.15-Socialization of Teachers into Various Admin. & Aorg'l. Arrangements | 2.0 | | |
| | 7.17-Career Patterns & Instructional Personnel | 2.8 | | |
| Physical (Approach 3) | 7.31-Effects of Physical Environment on Innovative Staffing & Instr'l. Strategies for Teaching | 1.2 | | |
| | 7.32-Learning Resource Materials & Equipment re Staff Assignments & Functions | 2.0 | | |
| | 7.34-Standards for Selecting Equipment/ Supplies & Quality of Instr'n. | 2.1 | | |
| | 7.33-Esthetic Quality of Sch. Physical Envt. & Staff Functioning & Morale | 2.3 | | |
| Personal/ Social (Approaches 4 & 5) | 7.41-Informal Rewards & Costs (Punishing Conditions) re Staff Functioning & Morale | 1.1 | **7.51-Effects of Social Settings & Pop. Composition of School Community on Assignment & Functions of Tchrs. | 1.1 |
| | 7.42-Informal Processes & Personal Characteristics re Staff Assignments & Functioning | 1.1 | 7.52-Effects of Teacher Status (as Communicated Informally Outside the School) on Assignment & Function of Teachers | 1.9 |
| | | | 7.54-Community Mobility & Effect on Teacher Assignments & Functions | 2.1 |
| | | | 7.53-Patterns of Informal Citizenry Influence on Schools & Effect of their Values on Tchng. Assignments and Functions | 2.3 |
| | | | 7.55-Student Progress thru the Educational System & Effects on Tchng. Assignments & Functions | 2.6 |

**Double asterisk indicates those programs for which a specific project was outlined in detail.

APPROACH 7.1

# GENERATE SCIENTIFIC KNOWLEDGE ON HOW THE ORGANIZATIONAL AND ADMINISTRATIVE ASPECTS OF THE CLASSROOM AND SCHOOL SUPPORT INSTRUCTIONAL PERSONNEL IN REACHING EDUCATIONAL GOALS

## General Background

Today's teacher is being asked to do a far more difficult task than ever before. Society no longer tolerates failure and early school-leaving as an acceptable outcome for a large proportion of students. Techniques of teaching have been greatly complicated by the introduction of a variety of materials and media. No longer is it satisfactory to parents and professionals for teachers to use a combination of lecture and recitation based on a single text per subject area. Content and process must somehow be "individualized" so as to maximize learning. The progress of individuals and the planning for their activities must be monitored and coordinated; the teacher has become a classroom director.

In order for these innovations in the technology of teaching to result in desired student outcomes, the administration and organization of the school must undergo certain changes. In addition, staffing and organization patterns must provide greater support for the classroom teacher. To make effective use of the new technology, teachers require the support of the principal and new types of school personnel such as aides and resource specialists.

Bruce Joyce, in a review of research on staff utilization in 1967, described the 1950s and 1960s as a time when the conception of staffing the schools with only one kind of person (the multipurpose classroom teacher) and only one kind of material (textbooks and tradebooks) was replaced with the view of the school as a complex of man-machine systems in which teachers of many kinds work with technicians and other personnel with different skills and functions and work in a matrix of technological devices and instructional resource centers.

In the 1970s it is clear that most schools and school districts cannot afford to install this complex new version of a school. Accordingly, along with innovation in the instructional area have come

innovations in the number and arrangement of school personnel: team teaching, differentiated staffing, and the addition of specialized personnel. All these personnel innovations were designed, at least in part, to bring additional support and assistance to the classroom teacher.

Each of these organizational additions or changes shows promise of improving the classroom teacher's ability to achieve instructional goals. However, each of these changes implies a whole series of role changes and a need for new and different skills on the part of the classroom teachers. For example if the teacher acquires a teacher aide, the teacher must become a supervisor and learn how to direct and guide an adult worker. If teachers are formed into teams, they must learn how to function in an adult work group; they must be able to conceive of clear goals, make group decisions, and devise ways to implement those decisions. If specialists are added to the staff, their roles must be worked out so that they function to assist the teacher in the new technology.

Recent research reveals a high level of innovation in the areas of school organization and educational technology. The fact that these innovations are frequently dropped leads to a general cynicism about the possibility of a pay-off in terms of student achievement. Some of these innovations may indeed be of poor quality. Other innovations are felt to show great promise, but the school staff is unable to solve the problems they entail and thus get them coordinated into the classroom and the school.

Approach 7.1 is based on the assumption that the persistent organizational failure to support the classroom teacher is a prime cause of (a) the rapid disappearance of once-promising instructional innovations and (b) the failure of these innovations to result in improved student achievement.

Recent research on the relationship between organizational change in the teacher role and the use of new instructional strategies suggests the need for closely linking additional support for the teacher role to the application of new complex instructional strategies. For example, in a survey of teaching team members, Cohen and Bredo (1974) reported a strong relationship between the degree to which teams actually teach jointly (instead of "turn teaching") and the use of such complex, non-routine strategies as instructional groups with frequently changing membership. Joint teaching was also associated with more released time for planning.

## Theoretical Framework of the Approach

The traditionally organized school does not give sufficient support to the classroom teacher's instructional role. In that school, the least supported or controlled decision is the decision on instructional

strategy made by classroom personnel. Although the school, particularly the elementary school, has the appearance of a bureaucratic structure with the principal supervising the classroom teachers, analysis and research indicates that the classroom teacher is typically totally isolated in making important educational decisions.

Lortie (1969) observed that bureaucratic control is clearly expected in areas concerning buildings, records and money; as one approaches instruction, the number and tone of administratively initiated changes undergo a transformation, and the "suggestion becomes more characteristic than the order." That which is most central and unique to instruction seems to be least controlled by specific and literally enforced rules and regulations.

This state of affairs would be entirely acceptable if teachers were given a strong technical-theoretical training and the support of a group of professional colleagues who might evaluate, reward and sanction the performance of their fellow teachers. But pedagogy does not have a firm scientific basis; and teachers are dealing with new developments for which their training did not prepare them. Furthermore, teachers rarely interact with one another on a professional level. Experienced elementary school teachers are left pretty much to their own devices (Meyer, Cohen, et al. 1971).

The evaluation of teachers takes place infrequently. Those teachers who do receive more frequent evaluations are more satisfied with their jobs (Thompson, Dornbusch & Scott, 1975). The principal spends most of his time and effort in enforcing hard rules, performing routine duties, and engaging in public relations (Pellegrin, 1970). With so little guidance from training, administrative directives, or collegial control, teachers' instructional strategies show wide variation, just as does the achievement of the students of those teachers. Is it any wonder that significant variation in student achievement is found from classroom to classroom?

It is hypothesized that if the school were integrated and coordinated around instructional goals, instructional personnel could be assisted to try out various ways to improve their effectiveness. This general proposition implies that (a) supervisory evaluation by the principal and/or fellow teachers would be improved. It may also be inferred from this proposition that (b) the relationships of teachers to each other must change so that they can learn from each other the most effective strategies for their particular school. Lastly, it can be inferred that (c) auxiliary personnel such as teacher aides and specialists must have their roles integrated with that of the teacher so that the teacher's job is restricted to the most demanding instructional tasks and so that the specialist can assist with new materials and techniques as well as in solving instructional problems.

In this approach to the support of the teacher, he or she is seen as a person who is willing to experiment, innovate, and take some risks in order to improve effectiveness. Such a role requires not only organizational support but administrative support in terms of resources, encouragement, planning time, and freedom from undue interference as to the means used to gain ends which are agreed upon as educationally desirable.

Underlying this Approach are several assumptions concerning effective work organizations: (a) The structure of an organization must change as the technology changes so as to assist in carrying out the new tasks. (b) Changes in technology and organization must be accompanied by clear understanding of the expectations associated with the new roles, and by acquisition of new skills relevant to the interaction required of new roles. (c) School personnel must acquire the ability to learn through experimentation over time how to solve the problems generated by innovation in both structure and technology.

The objective of Approach 7.1 is to change organizational and administrative arrangements in such a way as to reduce the isolation of the classroom teacher, provide more supervisory and expert time and resources, and at the same time delegate certain aspects of the teacher's role to aides or volunteers. By redirecting personnel toward the central objective of instruction, it should be possible to take full advantage of improved technology in producing desired student outcomes.

The concepts and theories related to this Approach stem from organizational theory and from what we know concerning roles within organizations. Studies of organizations frequently reveal that changes in organization produce unintended consequences. People must learn new roles and the relationship between new and old roles must be worked out. Furthermore, technological changes imply structural changes in the organization of work.

Even before the period of educational innovation, schools appear to have been poorly controlled and integrated around the business of teaching. Now that the technology has changed, the weaknesses in school organization have become grossly exacerbated. If society-valued educational goals are to be achieved, classroom teachers will have to be integrated into a network of support and assistance for the mutual accomplishment of instructional aims.

Program 7.1.1: Organization of Staff Resources for Continual School Problem-Solving.

General Background. At the present time there is abundant evidence that school staffs are not organized in such a way as to be effective in solving problems stemming from the attempts to improve student achievement, from the use of new curricula, from the changed patterns of student autonomy, or from the changed role relationships in the process of

innovation. The burden of solving these problems falls on the principal and on the teachers working individually without contact with either the intellectual resources of the broader educational community or other practitioners facing similar problems.

It is clear that prepackaged programs placed into the schools require elaborate adaptation to the particular clientele of the school. Who is going to carry out this process of adaptation? Schools cannot afford the continual services of consultants. The burden therefore falls on classroom teachers who must find the extra time to adapt the materials the best they can, working either alone or in lengthy overtime sessions with other school staff members. This task is so difficult and time-consuming that many teachers find themselves forced to drop the new curricula and return to the familiar methods which do not present so many operational problems.

This problem of adaptation of aid to new programs is not a new one. We have been through a period of rapid innovation in the attempt to provide the classroom teacher with the kind of support necessary to improve his or her ability to function on a higher professional level. We have added teacher aides in an attempt to reduce the routine, non-technical component of the teacher's role. We have added curriculum resource specialists and reading specialists to increase the pool of intellectual resources at the disposal of the school. We have experimented with learning in an attempt to allow teachers to pool resources more effectively.

One difficulty with organizational innovations has been the consistent gap between teacher changes that are supposed to take place according to the plans for reorganization and the changes that actually do take place. Studies show that the addition of teacher aides, instead of simplifying the classroom teacher's role, often adds to its complexity by requiring the instructor to become a supervisor of a subordinate, a role for which he or she is given little assistance. The evidence is not at all clear that the routine aspect of a teacher's role has been reduced by the addition of a teacher's aide.

Likewise, studies of teaming find that teachers do not really pool their intellectual resources to solve problems. Instead, they frequently divide the labor through mechanisms such as crossgrouping without meeting to solve problems. Teams also develop problems in group interaction; some teachers dominate the team interaction, and the other members become unhappy and dissatisfied.

Furthermore, it is not at all clear how the principal can assist the team to become more interdependent, solve their group process problems, and enable them to deal clearly and carefully with problems deserving of sustained investment of their time.

Lastly, studies of differentiated staffing reveal that it often fails to be implemented. Teams do not really interact. Team leaders are not the focus of professional esteem; the governing structure of the school remains essentially unchanged (Charters, 1973).

At this juncture, what is needed is not a new and different approach to the organization of staff resources. Rather, what is needed is a series of research and development activities which will take what has been learned from this ferment of organizational innovation and will develop (a) the connections between the organizational structure and the actual solution of school problems, and (b) techniques for assisting principals and teachers to implement and sustain programs of staff reorganization. Here are some of the questions that need further investigation:

1. How can teachers and the principal develop a sense of efficacy and power about their ability to solve problems of student achievement, student behavior, and curricular innovation?
2. How can teams of teachers be assisted to work together more closely and effectively so as to act as a forum for mutual problem-solving? How can more joint teaching and less "turn teaching" be promoted?
3. How can the principal be assisted to support collaborative teacher groups with resources, encouragement, constructive evaluation and the sharing of decision-making?
4. How can the teacher-aide role be used for maximal impact in assisting the instructional process by reducing some of the classroom teacher's burden?

Illustrative Projects. The answer to these questions requires a variety of projects, some of which have to do with the application of theory to the problems of practice and some of which are developmental. An example of a theoretical project is a study of the change in the governance structure of the typical elementary school which would enable the principal to share in decision-making with collaborative groups of leaders. This underlying change in the patterns of decision-making may be a necessary condition for effective problem-solving at the school level.

An example of a developmental project would be one that would yield a low-cost training technique to assist teacher teams in clarifying problems and using group process skills in solving typical team problems, as outlined below.

Project 7.1.1.1: An Experiment in Using Teacher Teams in Solving Problems at the School Level. Principals and teachers are isolated from each other and frequently feel helpless in making major changes in the education of their students or being able to sustain an innovation as it continues to generate new problems calling for immediate schoolwide adjustment. If we could demonstrate empirically that it is possible to build a sense of staff efficacy and influence-sharing through teaming, the principal would have a ready source of assistance in solving major problems in the school. He or she could then turn to the problem of how to mediate community influence for change in the school.

Teaming brings increased sense of teacher influence (Meyer, Cohen, et al., 1971; Pellegrin, 1969). Broader participation in decision-making has been seen as a sound management practice (Golembiewski, 1965). Less routine activity, as in innovative or problem schools, is associated with broader participation in decision-making in various organizational situations (Hage & Aiken, 1967). Johnson (1975) has found that, in intensively and

extensively teamed schools, principals report teachers share in decision-making in more schoolwide tasks. As would be predicted by Tannenbaum (1968), principals do not feel less influential as a result of this shared decision-making. But there are not many intensively and extensively teamed schools, partly because many teams develop interaction problems. Some teams are not given the planning time associated with joint teaching (Bredo, 1975).

The specific objective of this project is to show that we can produce an effective schoolwide problem-solving mechanism through the experimental means of assisting the principal to empower the faculty through intensive and extensive teaming. The resulting measures of effectiveness in problem-solving at the end of the treatment would test the underlying theory of how the process operated: It progresses from small work group influence processes through an increased sense of teacher efficacy to an eventual change in the governance processes. The alternative theory of a direct change in governance processes as a route to improved school problem-solving will be tested in a matched set of schools which do not have teams. The specific target group to which this project would directly relate would be teachers in any school that has had problems in attempting innovation. Such a school would be one where the total environment must be considered in solving problems of the staff in improving the behavior and learning of students.

In terms of availability of skill and facility resources to conduct this project, it can be stated that many schools would like to participate in such an experiment because of the assistance that would be offered to principals in the process of team building. The measures of team functioning and sharing in decision-making have already been developed and used in previous studies.

Several problems would arise, however, in conducting this project. Before principals can be helped with team building, a project on assisting teams in improving problem-solving skills would have to be completed. The results of such a project can be used as a tool in this experiment. The experiment might take more time than planned before problems of making a school's teams fully operative could be solved so that the effect on the members' sense of influence and efficacy and the purported effect of this change on schoolwide problem-solving could be examined. The problem of developing a good measure of effectiveness of schoolwide problem-solving could be examined.

The specific plan for achieving the project objective would include the following steps:

1. Work out the theoretical framework for explaining the effects of teaming on change in ability of staff to solve problems.
2. Pick out the two sets of experimental and control schools, matched on their expressed need to solve problems at the schoolwide level.
3. Work out methods of assisting principals in the two experimental treatments. In one experimental treatment principals will be assisted with team building. In the other experimental treatment the principal will be assisted with building a new governance structure designed to share power with the teachers in solving school problems. This will not be a school with teams. In the first experimental treatment, teams will have to be examined for their interaction patterns, and their interdependence will be measured. The extent to which teachers share in schoolwide decision-making must be measured before treatment. The effectiveness of schoolwide problem-solving

must also be measured at the start of the experiment. The same variables must be measured after a year has passed. Furthermore, the teachers' sense of efficacy must be measured in the initial wave and in the final wave.

The suggested schedule for this project is (a) Theoretical framework and developing instruments and school contacts--Year 1; (b) Initial measurements and treatment--Year 2; (c) Final measurement--Year 3; (d) Project write-up--Year 4. Early memoranda can be evaluated theoretically and methodologically. Experimental evidence in the final report will be analyzed statistically. The hypothesis that the most improved problem-solving will be found in the team-treated schools can be tested. It will also be predicted that the direct treatment of changed governance processes will have an effect intermediate between those of the team-treated schools and the no-treatment control schools.

The impact of this project will deal with a proposed method of empowering the principal and teachers to solve their own problems. The method reduces the isolation of classroom teachers, allowing them a degree of control over their own working conditions and over the schoolwide conditions which affect the learning and behavior of their students. This is especially important in schools attempting broad innovation, and is one phase of the organizational and administrative changes that are needed to provide better support of the classroom teacher. Other programs under this approach deal with other necessary changes in organization and other dependent variables.

In relation to other projects, this project is considered by the Panel to be critical in meeting the goals and objectives of the program and approach to which this project relates. This project should be carried out after we know how to assist teacher teams in their interaction process.

The probability of success of this project, on a high-medium-low scale, was rated by the Panel as medium since some schools might drop out of the sample and the project might not be successful in carrying out the teaming treatment. The potential "return on investment," on a high-medium-low scale, was rated as high. It is obvious that if teachers and principals could feel efficacious in solving their own problems at the school level, the impact of a good school on student achievement and attitudes could be strengthened and broadened with minimum cost. The estimated budget for this project, as described, is $280,000--$60,000 per year for three years for personnel and $100,000 for other direct and indirect expenses.

Program 7.1.2: Studies of Group Process Skills as Related to Staff Capability.

General Background. The purpose of this program is to generate scientific knowledge on how formal group process skills of the classroom and school support instructional personnel in reaching educational goals. Projects will examine, both theoretically and empirically, critical group processes within teams of teachers and other organized groups of school personnel. Special attention will be given to group operation, quality of individual performance, and follow through that is coordinated and collaborative.

Taxonomies including theory, research results, and practical procedures having to do with group processes--both in the classroom and in the school organization--have been well worked out (Schmuck and Schmuck, Group Processes in the Classroom, 1971; Schmuck & Miles, Organization Development in Schools, 1971; and Schmuck, Runkel, et al., Handbook of Organization Development in Schools, 1972). The variables included deal with such processes as communication, goal setting, leadership, attraction, norms, problem-solving, and decision-making. Also focused upon are issues of interpersonal expectations, uncovering and working with conflicts, and improving meetings. Each of these variables and its attendant processes requires careful attention within the context of teaching teams.

Suggested Projects. Projects suggested by the Panel in this area include:

1. Studies on the relationships between meetings of teaching teams and the problem-solving effectiveness of the instructional units within the team.
2. Studies of the advantages and disadvantages of different methods for goal-setting and decision-making in teams.
3. Studies on leadership behavior in teams.

The first series of projects funded should have high practical value for elementary schools moving toward teaming. The next series should focus more on the group process issues present in secondary schools.

Program 7.1.3: Studies on Authority and Evaluation in Relation to Staff Ability to Carry Out Instructional Tasks.

General Background. The program objective is to generate scientific knowledge on how the organizational aspects of classroom and school support instructional personnel in reaching educational goals. Information is needed concerning the linkage between a functioning evaluation system, and support for instructional decisions and the improved functioning of classroom personnel. How does evaluation assist the classroom teacher in improving the effectiveness of instructional strategies? Does an improved evaluation system in a school attempting a complex instructional strategy result in improved student achievement? What are the benefits and drawbacks of a collegial as against a hierarchical evaluation in improving the instructional effectiveness of teachers working in differing social contexts? What is the effectiveness of a low-cost evaluation manual in assisting the principal or teachers to develop a sound collegial evaluation system? What is the relationship of teacher morale to an improved evaluation system?

Owing to weak evaluation systems within schools, neither principals nor school boards are able to assist teachers in becoming more effective. Until the school is integrated around the evaluation and support of

instructional decisions, programs of change and improvement which come from outside the school or from the principal will not have a strong effect on instruction, and will, therefore, have little effect on students.

Most educators agree that something should be done about teacher evaluation in order to strengthen the effectiveness of classroom instruction. Without the evaluation component, it is unlikely that other administrative and organizational changes will result in improved effectiveness. It is, indeed, vital to separate the kind of administrative evaluation necessary to make different kinds of decisions--such as that concerning a probationary teacher and the kind of supervisory evaluation discussed in this program. No teacher should feel that he or she is solving problems in total isolation. Some corrective feedback is needed in this area as in any professional endeavor, such as space technology or medicine.

Suggested Projects. A suggested sequence of projects includes four steps:

1. Develop a theoretical and empirical understanding of how principal and collegial evaluation assist the instructor in achieving objectives. As teachers attempt complex instructional strategies, they tend to report "helpful principals." A project which focuses on the principal-teacher relationship in such settings is quite critical. This project would contrast (a) principal-teacher relationships in elementary schools where teachers who are attempting complex instructional strategies report frequent principal evaluation and helpful principals with (b) schools which are similar in all respects except that their teachers do not report that their principals are helpful. The same design would be useful for the secondary school. A suggested title for such a project might be "Relationship of Evaluation to Improved Classroom Performance for Teachers." In such a study, it would be critical to follow up changes in classroom performance taking place after the evaluation. A parallel study could be done in a school with collegial evaluation structures.
2. With a theoretically rationalized and empirically tested method of tracing the effect of a sound evaluation system on classroom behavior, carry out a project which experimented with the actual accomplishment of educational objectives in a setting where the evaluation system had undergone improvement in terms of its perceived soundness, its perceived importance, and the clarity of the criterion for evaluation. An experimental study might work with schools to improve the evaluation system measuring both the state of the evaluation system and the accomplishment of instructional objectives before and after the organizational change.

3. Compare a hierarchical integration of the school through principal or department chairman evaluation with a system of collegial evaluation. Theoretically, modes of integration of an organization should bear a causal relationship to the social setting of that organization. Schools operate under differing degrees of environmental pressure. A theoretical and empirical project could study the relationship between the environment of the school and the satisfaction of personnel with a hierarchical as against a collegial evaluation system.
4. Assess the effectiveness on a widespread basis of a low-cost evaluation manual designed to assist principals and teachers in developing a sound collegial evaluation system.

This program could be monitored at the critical points of finding satisfactory ways to trace the relationship between improved evaluation systems and improvement of classroom performance. If this project is satisfactory, many hypotheses concerning the improvement of evaluation systems will be generated. Until this step is completed, there is little need to examine student achievement and attitudes. Another key checkpoint is that of determining the possibility of developing a low-cost method of improving evaluation systems. If improving evaluation systems involves lengthy consultations with experts, it is hardly feasible on a national basis. This possibility can be evaluated by a panel of administrators, teachers, and researchers.

Program 7.1.4: Relationship Between Various Types of Accountability and the Group and Individual Behavior of Teachers.

General Background. Pressures for accountability are felt to have important effects on staffing patterns and willingness of the staff to undertake risks in order to gain educational objectives. Although no one argues against the general principle of accountability, there is considerable disagreement as to what kind of accountability is desirable and whether the individual teacher, principal or school should be held responsible. Glass (1972), Dyer (1970), and other writers have identified various types and methods of accountability.

Suggested Projects. It is hypothesized that accounting systems such as PPBS (Program Planning and Budgeting Systems) or PBTE (Performance-Based Teacher Education) certification have the unanticipated consequence of standardizing personnel patterns across a system. One project under this program would be the study of staffing practices and their possible rigidities in PPBS monitored systems and in systems using PBTE components.

Other systems of accountability stressing achievement scores of an individual teacher's students have historically had the effect of causing teachers to narrow their educational objective to "teaching for the test".

As some systems interpret accountability in this narrow fashion, the unanticipated consequence may be to discourage risk-taking on the part of the staff, with respect to both shifting role allocations between personnel and devising instructional strategies. At least two projects may be envisioned under this heading. One might be a historical study of the effects of accountability when it has been attempted in the past.

Another project would be a longitudinal study of the effects on risk-taking of teachers in communities where pressures for the accountability of individual teachers are strong or where cost effectiveness pressures are strong. Effects on teacher and administrator morale, breadth of instructional objectives, willingness to experiment with instructional strategies, and learning and socialization effects on children would be included.

Program 7.1.5: Studies of the Socialization of Teachers into Various Administrative and Organizational Arrangements.

Due to the Panel's time constraints and the relatively low priorities assigned to this program, the program was not further developed.

Program 7.1.6: Effects of Organizational and Administrative Arrangements on Teacher Initiative.

This program will generate scientific knowledge on those contextual and social aspects of the school organization that facilitate or inhibit such teacher group and individual behavior as active attempts to solve problems, take risks, initiate new procedures, and generally take responsibility in relation to instructional tasks. Such dependent variables are viewed as crucial to obtaining continuous improvement and innovativeness in a school's instructional program. The organizational and administrative dimensions of a school organization have too often been neglected as determiners of such outcomes. Yet, the work of such organizational psychologists as Likert, Katz, and Kahn and the social psychological research of DeCharms, Rotter, and Coleman indicate that organizational conditions set the stage for the sort of interpersonal interactions that influence personal and group potency or alienation. A program of this kind of investigation is strongly needed in education.

Program 7.1.7: Studies of the Career Patterns of Instructional Personnel.

Due to the Panel's time constraints, the relatively low priorities assigned to this program, and the indication that this program area was being covered in detail by Panel 1, the program was not further developed.

## APPROACH 7.2

## GENERATE SCIENTIFIC KNOWLEDGE ON HOW THE ORGANIZATIONAL AND ADMINISTRATIVE ASPECTS OF THE DISTRICT AND COMMUNITY SUPPORT INSTRUCTIONAL PERSONNEL IN REACHING EDUCATIONAL GOALS

### General Background

This Approach is concerned with ways in which formal organizational and administrative aspects of environments (district and community) external to the local school affect the ways in which classroom personnel are utilized in their jobs and supported for the improvement of instruction.

A summary of the background and current knowledge related to this Approach must be divided into two fairly different but often overlapping traditions. One has to do with those formal managerial arrangements of the school district that relate to the effective utilization of teachers. The second concerns community dynamics and how these affect the ways in which classroom personnel are supported or not supported in attempts to improve classroom instruction.

The School District. Supervisory relationships with teachers have been a formal part of the administration of school districts since the eighteenth century. During the early period lay committees had the authority to deploy teachers, to inspect and monitor the teacher's performance, to enforce rules and regulations, and to determine the competencies of teachers. Generally, historical studies indicate that these lay committees were more concerned about dismissing inadequate or immoral teachers than in helping teachers to improve the quality of their instruction. Gradually school personnel themselves took over supervisory functions--first as superintendents, next as principals, and most recently as specialists in curriculum and instruction hired especially to serve as supervisors.

Supervision of the deployment and support of teachers has become a specialized administrative component in public education. There are numerous graduate programs in educational supervision, and many states now require formal certification for the role of supervisor. These

processes of supervision, however, are gradually changing from enforcement and inspection to consultation and facilitation. Contemporary textbooks on administration and scholars of educational management increasingly view the primary methods of teacher supervision as consultative and stress the guidance functions of central office supervisors. Supervisors are being urged to collaborate with teachers in finding joint solutions to individual and classroom problems. This district office consultative orientation grants the teacher his or her own instructional goals and aims at helping the teacher to achieve those goals. The supervisor is expected to enhance a teacher's continued growth and development in ways that are important to the teacher.

Research on such supervision has not demonstrably benefited teacher utilization and improvement. Few studies, for instance, indicate that supervisors have helped teachers to improve their instruction. The studies do tend to show that the job titles, functions, and tactics of supervisors vary enormously from district to district and even within districts, and that most of a supervisor's work time is taken up with noninstructional administrative details rather than consultation with teachers.

Many district personnel may carry out specific supervisory functions related to teacher utilization. There may be coordinators for special academic subjects such as mathematics, music, or language arts. There may be so-called curriculum generalists. There may be supervisors for special services, such as counseling and guidance, testing, and nursing. Sometimes cooperating teachers from other schools serve as supervisors of new teachers, etc. However, even though the possibility for consultative help is great, very little actual facilitation seems to take place.

Thus, it seems fair to question whether central office supervisors are working effectively for the improvement of teacher utilization and teacher instructional performance. Indeed, we might hypothesize that certain organizational and administrative arrangements in school districts actually lead to poor teacher utilization and away from planned striving for improvement. More needs to be known about these organizational dynamics. We need more information about just how the organization of a district office with respect to structure, communication, goals, norms, and skills relates to the utilization and improvement of classroom teaching.

The Community. Influential local citizens typically have had access to, and some impact on, teachers. In the early days of America, in fact, schools were formed only after community members supported buying a building as well as paying for a teacher who typically was granted payment in the form of free room and board at someone's home. As schools became larger and districts were created, economic control by some citizens still continued. Indeed, throughout our history richer communities typically have spent more money on schools and have been happier with their schools than poorer communities. (The unequal distribution of money among American school districts is now being seriously challenged in the courts.)

Presently, many school districts--regardless of the wealth or community influence of the parents--are being confronted with community dissatisfaction, mostly in the form of defeated budgets and bond issues. Such economic control is, however, futile as a way of producing instructional improvement; a defeated budget and bond issue is not a direct way of improving teacher utilization. Besides helping to build economic influence, concerned citizens (especially parents) have been involved in the schools only in very superficial ways. They have served as "room mothers," as cooks and bakers, as PTA officers, as helpers at open houses and fairs, etc. They have attended conferences, plays, and musical performances, and it is clear that some of this involvement is important for their child's success in school. Indeed, research evidence has shown that a student's perception of how his parents view the importance of school is closely associated with the student's own attitudes toward school and his or her academic performance.

Although baking cookies and attending fairs probably will always be important activities for some parents, the last decade has seen significant changes in the mode of citizen participation in the schools. There now appear to be three ways, at least, in which citizen participation in schools may have a significant impact on the utilization and quality of teachers: (1) the increasing use of local nonprofessionals as paraprofessionals and aides; (2) attempted control of schools through community protests and organized efforts; and (3) the concept of the community school, which sees the school as a site for learning for all members of the community.

It should be possible to generate many hypotheses linking community processes to the utilization and improvement of teaching. For instance, hypotheses should be generated on how to use nonprofessionals from the community to change current teacher utilization patterns, on how to handle in a rational fashion organized protests against the school, and on how to relate the "community school organization" to increased support or nonsupport of teachers. This subapproach has great promise. Present knowledge in this area is very limited.

## Theoretical Framework of the Approach

Social psychologists who write about general systems theory describe groups and organizations as open, living systems; they are open to environmental resources and they are living in the sense that they use such resources to develop outcomes that are put back into the environment. Both learning groups and school organizations are examples of such open, living systems. Learning groups are embedded within, and are constantly influencing and being influenced by, the culture of the school as a whole. In turn, schools are open systems contained within the larger context of a district and a community.

Some assumptions that grow out of this orientation and that underlie the research in this Approach are:

1. Although the importance of human interaction often is overlooked by educators (and other citizens), it is people who represent the primary resources entering, being processed and utilized by, and leaving the school.
2. It is the quality of the group interaction processes mediating the incoming "people-resources" and the outgoing "people products" that will determine the school's instructional performance.
3. Because schools are open systems, interpersonal interactions at the "organizational interface" influence ways in which the "people-resources" are utilized and supported.
4. A key perspective for studying such interactions as the "organizational interface" (e.g., "district personnel--school personnel" and "community participants--school personnel") is to view them as interpersonal transactions involving social influence processes.
5. Different bases of social influence characterize their interactions and will affect educational output differently.
6. Social influence in such interpersonal transactions is not usually inevitably a "zero-sum game," i.e., increased supervisory influence need not lead to decreased teacher influence, and increased citizen influence need not lead to decreased teacher influence. As shown in 15 years of research at the Institute for Social Research of the University of Michigan, all parties in the organizational influence interaction can gain at the same time in terms of shared and valued outcomes.

The specific purpose of this Approach will be to generate scientific knowledge and practical procedures for increasing the mutual influence between district personnel and teachers (on the one hand), and between citizens in the local community and teachers (on the other hand) to improve the utilization and performance of instructional personnel within schools.

Useful theories for this Approach will come from organizational sociology, social psychology, and group dynamics. Concerns will overlap with those studied under the rubrics of personal-social aspects of school life and with those organizational and administrative aspects of the interpersonal transactions within the school itself.

Program 7.2.1: Consultative Activities Within the District for Continual School Problem-Solving.

General Background. As school districts have become larger and more differentiated, they have tended to add many new roles at supporting teachers. Such specialists as curriculum coordinators, school psychologists,

and social workers are examples of such new roles. Such personnel often are referred to as supportive staff members. At the same time, inputs and challenges from the community have grown to such proportions that central office personnel must spend a great deal of time and energy just responding, coping, and defending. Moreover, state and federal programs have required devoting increased time to record-keeping, proposal writing, and reporting. The net results have been increased size and increased distance between classroom personnel and the central office support staff. As teachers attempt to cope with the changing demands of their roles, they greatly need supportive consultation to help them in their problem-solving.

Research is needed on ways in which organizational size and complexity, community input, and staff roles in the district office relate to the delivery or non-delivery of helpful consultation to teachers. Knowledge is needed on the communication networks that now exist within district staffs and between district staffs and teachers for delivering such consultation; on the interpersonal norms that define relationships between district staff and classroom personnel, and on the interpersonal skills involved in effective consultation for continual school problem-solving.

Few systematic studies bear directly on these issues. Some relevant research, however, does show the sorts of communicative difficulties that arise as organizational size and complexity increase. We also know that teachers tend, by and large, not to accept and act on the infrequent influence attempts of supervisors. Instead, as Tuckman and Oliver (1968) have shown, teachers tend to be influenced more by systematic feedback from their students. Much anecdotal evidence and experience indicate that district consultants tend to posses's rather narrow repertoires, implementing their consultative skills only in very specific content areas. This means that few district consultants are skilled at helping teachers solve their problems.

Getting help to classroom personnel has been recognized previously as a problem in education. Many attempts have been made to bring supportive resources to teachers. The introduction of various district specialists outside and within the school has represented one attempt. The initiation of many special inservice courses has been another. Granting teachers increased pay for accumulating additional graduate credits has been another. Most of these attempts have been weak in not recognizing where the teacher is and how the teacher wants to grow; they have tended to treat teachers as pawns, in a way, rather than as origins. The situation as presented to teachers has been either that of consultants coming down to them or that of teachers going out toward experts in colleges and universities.

Theoretical Framework. This program aims at generating scientific knowledge and research-based practical procedures about the sorts of school-district consultation that will help teachers and teams of

classroom personnel to solve their own problems. First, it will focus on the district organizational structures that help or hinder the delivery of consultative help to teachers. This research problem deals with those organizational and administrative processes that facilitate or discourage genuine interpersonal engagement between consultant and teacher. Second, it will focus on the interpersonal skills necessary to enable consultants and teachers to solve instructional problems together. This research problem calls for the identification of those problem-solving procedures that are most useful in relation to classroom problems.

Illustrative Projects. Several examples of projects in such a program can be offered.

1. Studies of relationships between alternative forms of district-organizational role structure and the delivery of problem-solving consultation in schools. A specific concern here might be the sorts of line and staff patterns of the district. Other concerns will be the role definitions and functions of curriculum specialists, school psychologists, etc.
2. Studies of deliberate interventions intended to change organizational structures for delivering consultation of a problem-solving sort, e.g., the role of a social psychologist in a district, the cadre of organizational development specialists across schools, or the human development specialist as an elementary school counselor.
3. Studies of interpersonal consulting techniques that encourage feelings of potency, efficacy, and self-renewal on the part of the recipients.

Project 7.2.1.1: A Study of the Advantages and Disadvantages of Two Sorts of Districtwide Structures for Delivering Group Process Consultation to Teaching Teams. This project relates to the Panel's concerns about the lack of effective group process skills in teaching teams and to the ineffective organizational structure within most school districts for delivering the sort of helpful consultation that will improve the group process skills of teaching teams. This project is needed to provide school districts with knowledge useful in changing their structures so as to improve the group process skills of teams.

Knowledge and practical procedures for improving group processes have been well developed. Documents have been made available by the National Training Laboratories, University Associates, the Northwest Regional Educational Laboratory, and the Center for the Advanced Study of Educational Administration (CASEA), to name only a few. Moreover at the last named R&D center, group process skills have been systematically applied to schools and to teaching teams in particular (see Schmuck, Runkel, et al., 1972; Schmuck, Murray, et al., 1975). At the same time, CASEA has had experience in helping to establish and study the introduction and implementation of cadres of OD specialists in several school districts. Records of these experiences and what was learned from them have been published. Group process skills have also been taught to various sorts of school personnel. Much of this research has been reported in the Journal of Applied Behavioral Science and in books by Miles (1959), Buchanan (1965), etc. For some of this information see Miles and Charters (1970).

The specific objective of this project is to extend previous work on the advantages and disadvantages of trying to deliver group process consultation to teaching teams through two different organizational mechanisms within school districts. The primary target groups to which this project would directly apply are district office administrators, teachers, school consultants, school boards, educational research and development personnel, social psychologists, group dynamics professionals, and organization development consultants.

To achieve the specific project objective outlined above, the following sequence of events is suggested:

1. Develop an experimental intervention design to include two sorts of strategies: (a) district office supervisors as group process consultants, and (b) a mixed cadre of administrators, teachers, and students as group process consultants.
2. Develop hypothesis, variables, and instrumentation.
3. Seek entry into and build contacts with school districts including control districts.
4. Carry out the experimental intervention, carry out detailed formative evaluations, and study the transitional phases in detail.
5. Monitor school districts for two years after the intervention.
6. Analyze and write up results.
7. Prepare dissemination materials for various audiences.

This project would require four to five years and, in relationship with other projects in this report, could be started immediately.

The impact of this project would be significant in increasing knowledge about how to deliver group process consultation to teaching teams.

This project was rated by the Panel, on a high-medium-low scale, as having a high probability of success, inasmuch as somewhat similar work has previously been successfully carried out. The only barrier to successful completion of the project is the possibility that the experimental or control districts will not choose to remain in the project for the full duration. The potential "return on investment" was also rated high on a high-medium-low scale, since results of the project would be likely to provide school districts with ways of helping themselves.

The estimated budget for Project 7.2.1.1, as described above, is $150,000 per year for four to five years.

## Program 7.2.2: External Influences on School District Instructional Goals, Policies, and Processes that Affect School District Staff Assignment and Functioning.

General Background. The objective of this program is to develop reliable and useful methods of evolving school staffing policies and implementing staffing practices that are sensitive to both community concerns and interests and compatible with the goals, objectives, and functions of teachers and administrators.

There is little doubt that the environment in which schools operate is changing. Yet, when change goes beyond the development of new things, when it begins to affect the ways in which schools and people are accustomed to getting things done, citizens, school board members, administrators, teachers, and support personnel often become anxious and resistant. Moreover, when change is urged by special interest groups to achieve their goals and values more realistically, opposition or foot-dragging tends to occur. Recently, protests and disorders have contributed significantly to changes in the use and function of educational personnel, and some normal educational processes and programs have been disrupted by such protest activities.

All across the country an awareness has developed of what happens when the established school power structure uses traditional strategies and policies to confront the new posture of activist groups. Experience shows that the move from conflict to cooperation generally requires some kind of mediation. In addition to a growing number of sociological studies that bear on this problem, other studies have examined the problem from a school-community information viewpoint. This program should build on both kinds of efforts to ascertain better methods of developing community interest as a means of improving school staffing and functioning.

Illustrative Projects. Examples of projects which need to be carried out to obtain the information required by this program include:

1. A study of the effect of teachers' organizations and collective bargaining on role changes and changes in staff patterns in school.
2. A study of the effect of special community interests on school staffing patterns.
3. A study of past and present school-community conflict situations to identify their impact on school staffing patterns and teachers' roles.
4. A study of the applicability of intervention and mediation techniques adapted from industrial, governmental, and social settings to the school-community setting.

Program 7.2.3: The Effects of Community Participation in Relation to Staff Support for Instructional Programs.

General Background. This program will generate scientific knowledge on how the organizational and administrative characteristics of the district and community support instructional personnel in reaching educational goals. Contemporary trends toward increasing formally organized community impact on schools will make this information particularly useful.

Research within this program should relate to some of the concerns of Panel 8 on Personnel Roles in New Instructional Systems and also to Programs 7.2.1 and 7.2.2.

Studies of the impact of the community on teacher utilization have not been plentiful. Relevant work on school boards has been reviewed by Charters (1970) and work on the political dynamics of the community has been reviewed by Zeigler (1973). Pearl and Riessman (1965) have written about non-professional citizens as teacher aides, while Lippitt and Lohman (1965) have written about older students helping younger ones (across schools). There is an anecdotal literature on the Mott-sponsored community school. Recent attempts at community control of Harlem schools have been reviewed by Guttentag (1972). Community interest in control of schools has been described by Wilcox (1967). Problems of preparing non-professionals for teaching-aide functions have further been studied by Riessman and Gartner (1969).

Project 7.2.3.1: A Study of the Effects of Several Types of Parent Participation on Instructional Personnel. Since very little is known about the effects of parent participation on instructional personnel, and since more and more schools are trying to bring about more parent participation, this project could be highly significant. Current knowledge about the issues involved in this research is at a low level. Most reports on parent participation are largely ideological and anecdotal. Although many critics are asking for increased parent participation in schools, they do so without information about the likely effects. To move on to programs in which parents are effectively used in schools, we will need more scientific data about effects. Accounts of alternative schools in which parents participated are available, but these are almost entirely descriptive. Informal studies of the Mott Community schools and of the Morgan school in Washington, D.C., offer other examples. No systematic data appear to be available.

The specific objective of this project would be to generate suitable knowledge about the efforts of several different types of parent participation on instructional personnel. The groups to which the findings of this project would directly apply are school boards, school administrators, teachers, administrative training program directors, parents, professional educator associations, and research and development personnel.

The following action plan should be followed by those undertaking such a study:

1. Develop a research design--to include survey and experimental comparisons.
2. Identify and procure schools.
3. Develop instruments for carrying out a multi-variable, multi-method design.
4. Carry out the survey.
5. Form independent variables for experimental comparisons.
6. Carry out the experiment.
7. Analyze data.
8. Write up research reports.
9. Develop products on how to start up effective parent participation programs.
10. Test these products--carry out evaluation.
11. Put the improved products into final form.

After each step itemized above, a review should be carried out. The project could be begun almost immediately. It is estimated that the project could be completed in three to four years.

The results of this project could have an impact in several ways. For Approach 7.2,-this project would be significant because little is known in this area, in which many policy-oriented groups are intensely interested. This project could also be significant for Panel 8 on Personnel Roles in New Instructional Systems.

The Panel's rating of the probability for success of this project on a high-medium-low scale was high. Only one constraint on the completion of the project was noted, namely, the possible need to stimulate the initiation of some programs in order to study them. The potential "return on investment" was also rated high on a high-medium-low scale.

APPROACH 7.3

GENERATE SCIENTIFIC KNOWLEDGE
ON HOW THE PHYSICAL ASPECTS
OF THE CLASSROOM AND SCHOOL
SUPPORT INSTRUCTIONAL PERSONNEL
IN REACHING EDUCATIONAL GOALS

General Background

Until recently, the facilities provided for formal learning activities were standardized and had remained relatively unchanged over a long period of time. So long as teaching was perceived as "telling", the only basic support requirement was rooms for lecturing. Suitable to this view, work stations for younger learners were simply desks that provided a place at which to listen and to read and write, and which, for logistical purposes, could be permanently arranged in fixed rows. Room sizes were determined by the number of students which a single teacher could conveniently instruct. Buildings for learning were collections of like-sized and interchangeable rooms. The only common variations on this arrangement have been provisions of a separate room for the collection of books (the library), a place for indoor exercise (the gymnasium), and a place for large group occasions (the auditorium).

Child-centered learning theory and the emphasis on learning by doing gradually created different facility requirements. The rapid proliferation of new devices and new technologies has offered some new, even if limited, opportunity to mediate the learning experience. Curriculum planners have developed new instructional modes which imply new uses of space. The impact of recent changes, such as individualized instruction and pre-packaged or programmed instructional materials, has created a need for different facilities and different spatial managements. The evolution of specialized instructional roles and auxiliary staff to support instruction has caused the organization of instructional teams and created new facility needs. It has become increasingly apparent that traditional school facilities are dysfunctional for this variety of new approaches.

A whole new field of environmental psychology (note book by Proshansky, Ittelson, & Rivlin, 1970) is developing which may provide more definitive answers to the broader aspects of the effect of the

environment on individuals. Except for generalized notions that pleasing or esthetic environments are desirable settings for children's learning activities, there is little evidence that the design of school facilities has taken this new body of knowledge into account.

In the same way that schools were once standardized as a collection of interchangeable classrooms, there is some evidence that much recent construction has taken the "open design." For example, a national survey of 43 state directors of school planning reported in 1970 that over 50 percent of all new schools constructed in the previous three years had an open design, and in some states, such as California, virtually all new schools had open space. (Open space Schools Project Bulletin #1, Stanford, 1970.)

The shift to open space construction carries with it a new potential for mismatch between facilities and programs. Instructional staffs have varying degrees of readiness to use such facilities. Many of the programs anticipated for newer types of space or appropriate to the changed facilities do not, on closer examination, actually exist. Staffs are desperately in need of retraining that will better equip them to design and carry out programs that take advantage of the new kinds of facilities.

Data on these matters are scarce. Nevertheless, preliminary studies on the effects of open-space environments at the elementary school level suggest that the impact of environment may be underestimated. Lueders-Salmon (1972) reported, for example, that open-space environments strongly influenced the activity level of children. More important, perhaps, is the development in this research of some quantitative measures describing one aspect of school environment that can be used for future research. Marram, Dornbusch, and Scott (1972), as another example, have established that increase in visibility (a function of space arrangement) leads to greater staff acceptance of the concept of collegial evaluation. Meyer, Cohen, et al. (1971) found a positive relationship between working in open-space environments and job satisfaction. Other work, such as Sommer's study of the relationship of seating arrangements to classroom interaction (1967), supports the idea that environment and arrangement are important.

This Approach hypothesizes that instructional staff increasingly find that their functioning is controlled or restricted by the available physical environment. It further hypothesizes that broader knowledge about the relationship between environment and staff functioning is needed so that environments can be designed so as to support rather than impede the work of the instructional staff. It also hypothesizes that the influences of environment are of major rather than incidental importance.

Although the research cited above tends to underscore the significance of environmental factors to staff functioning, there does not appear to be a great deal of activity by educational researchers dealing directly with the problem. Findings in the broader field of

environmental psychology need to be translated into their specific meanings for education. Likewise, the field of sociology needs to be explored for its obvious contributions to the problem.

Theoretical Framework of the Approach

It is assumed that the way staff is used is a function of the physical environment. It is further assumed that, if program goals are to be reached, the physical environment must be one of the supportive factors which contribute to achievement of the goals. This being the case, it becomes necessary to establish the cause and effect relationships between the physical environment and staff functioning as well as the relative importance of the physical environment in carrying out the instructional program. An additional assumption underlying this Approach is that the questions needing answers are researchable and that there will be significant early findings that will contribute to the improvement of staff behavior.

The objective of this Approach is to generate a coordinated series of studies which will document the cause and effect relationships between physical environment in the school and the functioning of instructional staff.

The concepts or theories affecting this Approach will be drawn from the disciplines of psychology and sociology. Within the problem areas developed at the NIE conference, the most likely overlap is with the work proposed in Panel 8, on Personnel Roles in New Instructional Systems. If the premises of this Approach are valid, physical environment will be found to strongly influence emerging role structure.

Program 7.3.1: Studies of the Relationship of Physical Environment to Innovative Staffing and Instructional Strategies for Teaching.

General Background. The objective of this program is to develop a body of knowledge which establishes the cause and effect relationship of physical environment to the capability of staff to organize themselves in new and more appropriate staffing patterns and to use newer instructional strategies.

New and emerging instructional modes imply new uses of space. For example, the individualization of instruction requires a different use of space than does large group instruction. Likewise, extensive use of newly available media brings about its own space demands. Also, changes in the way staffs organize for instruction bring about different space requirements, as when teaching teams need planning spaces. On the other hand, the trend to provide flexible or open facilities has, in many instances, exceeded the staff's readiness to use different kinds of space.

There is general understanding of the need for different facilities to support newer instructional programs but very little available theoretical explanation of just how the environment affects social interaction. There is evidence that in open-space schools students are more active and more likely to be seen working on educational tasks independently (Lueders-Salmon, 1972). Research also indicates a strong relationship between being able to see others at work and the levels of collegial interaction, influence, satisfaction, and willingness to consider a system of formal collegial evaluation (Meyer, Cohen, et al., 1971).

The extent to which facilities inhibit or induce desirable changes in staffing patterns is probably more often judged by conventional wisdom than by any base of research-produced information. Research on the impact of physical environment on the teaching staff is not plentiful. Hence, there is great need for a program of this nature.

Suggested Projects. The recommended sequence of events encompasses a series of projects including three types: (a) basic research to expand knowledge concerning open-space schools and their effect on social interaction processes; (b) applied research on staffs currently implementing complex instructional patterns; (c) development of guidelines for staff training in the use or development of new spatial arrangements.

Program 7.3.2: Relationship of the Use of Learning Resource Materials and Equipment to Staff Assignments and Functions.

Teaching has traditionally been regarded as being undercapitalized in the sense that the teacher was provided with little in the way of tools or equipment with which to work toward educational goals. It has been only a short time since standard equipment was limited to chalk, chalkboard, paper, pencils, and books. Recently, however, the advance of technology has made available a large array of devices for supporting the work of the instructional staff. The proliferation of these new devices is compounded rather than simply additive because, for example, film not only provides the possibility of repeated projection and easy storage through miniaturization, but it also can be transmitted over great distances. The most sophisticated uses of media generally consist of combinations of media so that, for example, computer-assisted instruction frequently depends on telephone transmission.

These new capabilities can have an enormous impact on staff utilization. It appears to some that the capabilities of new media have modified or made obsolete the information-disseminating function of the instructional staff. Similarly, the computer is probably a more able monitor of student progress than the traditional teacher record book or the child's guidance folder.

Potential difficulties for educational staff arise from the classic concern that machines will replace men or women, with attendant psychological, economic, and sociological repercussions. It is also apparent that if the emerging capability is to be used, instructional roles will need to be changed or adjusted.

It is hypothesized that the relationships between staff functioning and the increased availability of resource materials and equipment need to be studied with greater care if, in fact, the new capability is to support rather than overpower instructional staffs.

Program 7.3.3: Relationship between Esthetic Quality of School Physical Environment and Staff Functioning and Morale.

Beyond a generalized agreement that an esthetic environment contributes positively to staff functioning and morale, there is little definitive information about how and to what degree these influences function. It is hypothesized that these influences may be more important than conventional wisdom supposes, but that these influences will not be understood until they can be documented by the creation of a more specific knowledge base. This program proposes to determine whether there are specific cause and effect relationships.

Program 7.3.4: Relationship of Standards Used by Districts in Selecting Equipment and Supplies to Quality of Instruction.

This program is designed to determine how staffing patterns and functions change or can be changed as a result of changes in the standards used by school districts in selecting equipment and supplies. It is hypothesized that modifications of selection standards can result in modifications in teacher behavior. The reverse of this process is also possible. For example, teachers who are allowed to purchase greater varieties of materials with fewer restrictions and obtain these materials quickly are more likely to feel free to organize themselves into more productive instructional patterns. Conversely, if teachers are concerned that their method of operation is dependent upon ready access to materials not available because of district policy or standards, creative use of their talent may be inhibited.

Research is needed to substantiate the extent to which teaching patterns and staff utilization are dependent upon availability of supplies and equipment. Likewise, information is needed on the kinds of pressures or demands for supplies and equipment created by the adoption of new staffing patterns. It is hypothesized that many innovative staffing patterns fail for lack of support in the form of supplies and equipment.

APPROACH 7.4

# GENERATE SCIENTIFIC KNOWLEDGE ON HOW THE PERSONAL AND SOCIAL ASPECTS OF THE CLASSROOM AND SCHOOL SUPPORT INSTRUCTIONAL PERSONNEL IN REACHING EDUCATIONAL GOALS

## General Background

Teaching is a very personal act in which the feelings, attitudes, beliefs, and values of the teacher have a most significant impact on how he or she functions as a teacher. Teaching is carried out by the instructor within a social context which affects how the teacher does his or her work. More specifically, the nature of the personal and social support that a teacher receives influences the following factors, each of which can be hypothesized to bear a relationship to student achievement of instructional goals: (a) the ways the teacher relates to students, (b) the teacher's willingness and ability to create and innovate, (c) the teacher's willingness to profit from staff development experiences and to implement them in instructional and program plans, (d) the teacher's job satisfaction, and (e) the energy the teacher can devote to instruction.

Historically, the attention to personal support for the teacher has been focused mainly on teacher pay and formal working conditions and on the administrator-teacher relationship. Improvement in pay and working conditions over the past two decades has been in some measure a response to the argument that teachers will teach more effectively if they are paid better, have longer lunch hours, are paid sick leave, have more materials and individual work areas, etc. The effect of these improvements in conditions on teacher competence has not really been documented, however, at least in part because many other changes in the teaching profession and in schools took place concurrently with them. A variety of studies in the area of administrator-teacher relationships have provided support for the hypothesis that cooperative relationships positively affect teacher-classroom performance. For example, the "National Principalship Study" (Gross & Herriott, 1965) suggested that teachers treat students in a manner consistent with how they are dealt with by their administrators.

Research on personal-social support for workers in business and industry has suggested the need for similar studies in education. Particularly, the studies in business and industry have focused on various "job enrichment" techniques for increasing workers' job satisfaction and willingness to accept innovation, and on the influence of certain dynamics of group interaction on productivity. The whole field of group dynamics research provides important background for the research needed in this approach. The same is true of research in the areas of role theory and leadership.

Research in schools that is particularly relevant to this approach includes studies of teacher involvement in decision-making. A number of studies have examined the relationship between such involvement and the implementation of curricular and instructional plans. Also, a few studies suggest that informal relationships among teachers may affect teaching effectiveness. However, although educators have been especially interested in identifying reinforcers for students, little attention has been given to determining what reinforces teachers. While some studies have shed light on informal communication among teachers, particularly as it influences the spread of innovations, little has been learned concerning how status promotes or interferes with teacher effectiveness, although some knowledge about the status relationships between teachers and specialists has been obtained.

Overall, past research in this area has been spotty and not directly focused on identifying how the total personal-social support structure within which the teacher works assists or hinders him or her in reaching instructional goals. Considerable conventional wisdom exists in this area, but it has not been verified by careful research. Personal-social support for the teacher would seem to be essential to other approaches aimed at assisting the teacher to become more effective.

## Theoretical Framework of the Approach

The basic assumption underlying this Approach is that the personal-social support teachers receive is related to their effectiveness in reaching instructional objectives, particularly when the teacher believes himself or herself to be an important part of a significant undertaking.

The specific purposes of this Approach then become (a) to determine whether in fact such a relationship between personal-social support and teacher effectiveness does exist and, if so, (b) to identify ways to produce such personal-social support.

This Approach basically emphasizes informal, primarily unofficial, at least partially unplanned types of personal-social support. Research in this area might, however, make the personal-social support structure of a school more formal, official, and planned.

Study in this area is closely related to the study of the personal-social support climate for teachers in the district and community and to certain aspects of the organizational pattern and physical structure of the school.

Related to this approach are the principles: (a) that behavior which is reinforced tends to recur (thus the school must know what behavior its personal-social structure is reinforcing); (b) that people are more willing to carry out decisions when they feel accepted in the group in which they are functioning (thus the school must know how to produce a personal-social support system which will promote such acceptance); (c) that the behavior of models is a significant factor in the learning process (thus the school must learn to control what behaviors are being modeled by leaders in the school); (d) that people's perception of their position in a group tends to influence their behavior (thus the administration and staff must know how to identify and modify these perceptions); and (e) that effectiveness in working together depends on a variety of affective, self-image, and logical factors (thus, the administration and staff must understand these factors in developing work groups).

Research in this area must focus on identifying how the individual teacher and groups of teachers respond to the personal-social support system of the school. Differences among teachers are likely to be great, these being at least partially the result of differences in their self-reinforcing systems (as suggested by Bandura & Perloff, 1967). If this research is to be useful to the school administrator, it must enable him or her to understand the personal-social support structure as experienced by teachers both as individuals and as a total staff.

Program 7.4.1: Studies of Informal Rewards and Costs (Punishing Conditions) in Relation to Staff Functioning and Morale.

General Background. Considerable information has been gathered in other contexts concerning what is rewarding and punishing to adult workers and to persons in positions requiring high-level cognitive and affective behavior. Business and industrial research has focused on the identification of various kinds of incentives and working conditions and their effect on productivity. Within education, studies have generally been limited to the areas of administrator-teacher relationships and to getting teachers to implement new programs.

A general research attack on the question of what conditions teachers find rewarding and punishing has not been undertaken. Teachers are now expecting more out of their careers than just a job. Furthermore, they are being asked to perform at more demanding levels than before. A knowledge of the personal-social conditions which they find rewarding is thus essential.

Two check points should be included as a part of this program: (a) Establishing procedures which isolate the effect of the rewarding or punishing factors being considered; (b) Establishing an appropriate relationship between the teacher actions produced and the achievement of instructional objectives.

Suggested Projects. Projects such as the following can be conducted to generate the information needed in this program:

1. The effects of the extra work required of a teacher in being involved in an innovative or developmental situation.
2. The effects on teacher morale and functioning of factors such as the following: (a) praise by administrators, (b) public recognition, (c) selection for special assignments, (d) being kept informed on school issues, (e) being asked for their ideas on school issues, (f) selection to represent their school on statewide committees, etc., (g) promotion to supervisory posts, (h) special privileges, and (i) control over one's own assignment.
3. The effects of informal evaluations of the teacher's work on his or her functioning and morale.
4. The development of a plan to establish the conditions within which various kinds of personal-social support will take place.

Program 7.4.2: Studies on Ways in Which Informal Processes and Personal Characteristics Relate to Staff Assignments and Functioning.

This program should generate studies of informal communication patterns, role interpretation, and personal and staff status problems. The resulting knowledge will be of scientific interest; it should also lead to development (under Approaches 7.1, 7.2, and 7.3) of organizational and administrative patterns and physical surroundings more conducive to productive informal social processes.

Much of the work conducted under this program will be sociological or anthropological in nature, utilizing extensive observation and interview procedures. Initial efforts may concentrate on descriptions of informal communication patterns, role interpretations, and personal and staff status problems. Later studies should illuminate both the genesis and the results of varieties of the respective patterns, interpretations, and problems. This new information may lead to the development of revised administrative and organization patterns and to different architectural designs for buildings.

APPROACH 7.5

GENERATE SCIENTIFIC KNOWLEDGE ON
HOW THE PERSONAL AND SOCIAL ASPECTS
OF THE DISTRICT AND COMMUNITY SUPPORT
INSTRUCTIONAL PERSONNEL IN REACHING INSTRUCTIONAL GOALS

General Background

The purpose of this Approach is to delineate empirically the relationships among value messages and teacher motivations as determined by various independent variables, such as social class, ethnic composition of community, and rural-urban settings.

Potent social and personal influences in the life of a teacher impinge upon that person's effectiveness as a member of a group whose job it is to "keep school." One way of categorizing these personal-social influences is to refer to (a) those informal messages and social encounters (interactions) which occur within the work-station to which a teacher is assigned in a particular school building, and (b) those that occur within the school building itself. The Panel on Instructional Personnel Utilization has referred to these as the internal influences--those directly related to the day-to-day work context of the teacher. Included in this category are the informal interactions between children and teachers, between teachers and principals, and between teachers and teachers. Such influences have been discussed under Approach 7.4.

In addition to these internal influences are those that occur outside the specific context of the school, classroom, or area in which a teacher performs his or her duties. The Panel has referred to these as external influences. The external social-personal influences include those associated with (a) teachers who perform their duties in other school buildings, (b) central office personnel who do not routinely come into personal-social contact with teachers, (c) parents and other community persons, (d) friends, (e) family, and (f) acquaintances. More formal influence may be exerted on the social-personal level through teachers' associations, unions, or other professional groups.

The approach suggested here is to develop knowledge concerning the latter set of "external, informal, social-personal" influences which in some measure limit, or free, the way in which the teacher will utilize his or her skills or will be willing to be assigned (i.e., be deployed, made a member of a team, selected as a team leader, asked to work with "special" children, given developmental tasks such as writing new curricula, asked to participate in special projects, and so on). The Panel recognizes that the social-personal influences to which we are referring may not have the most obvious and direct connection with our basic focus on teacher assignment and function. But it holds that messages are conveyed to teachers within this society which do influence their feelings about themselves, about their schooling, and about the limits of their discretionary powers as professionals; and that these feelings in turn affect their performance. These messages are conveyed in a myriad of informal ways, often unintentional but nevertheless real. The messages affect motivation which in turn determines entrance into the teaching field, risk-taking and exploratory behavior once in the field, and exit from the field of direct contact with children and from education in general.

## Examples of Personal Influence

Some examples of personal influence may help to further delineate the approach being suggested. The concept of professionalism implies a certain amount of discretionary power on the part of the professional practitioner. Formally, at least within educational circles, teaching is referred to as a profession. Informally, both within the teacher's work setting and within the larger social context, many messages are conveyed to the "professional" teacher that contradict the definition of professionalism. Internally, teachers sign in, are required to be at their work station at time X and must not leave the area before time Y. There is no discretion permitted here. Externally, a curriculum is specified by an authority having power over more than a single school building. Often, the various aspects of the curriculum are required to be taught a specified number of minutes per day or hours per week. There is no discretion permitted here. Also externally, but less formally, there is the message that, while teaching may be a profession, it is not of the same order as the medical, dental, law, or accounting professions. Only a few persons know how to file a writ of habeas corpus, but many can do arithmetic and can, therefore, if they have to, teach others how to put two and two together. The simplicity of teaching is apparent to the lay public, and the message conveyed to the would-be "professional" teacher is that, somehow, educators have deliberately made a simple task extremely complicated in order to attain the professional label, increase paychecks, and enjoy the more elite status afforded some segments of American society.

Examples of Social Influence

Social factors also influence instructional personnel in reaching instructional goals. The status of teachers as viewed by the public is low (Cohen, 1967). Teaching staffs do, however, reflect the power hierarchy of the community in which the school is located, and these power relationships help to determine the division of labor, the willingness to change, and the willingness to foster innovation within a school. The community social order is reflected in the schools in other ways. The values of the community power groups are reflected in the schools, often to the exclusion of the values of the lower-status segments of the society. This situation tends to reinforce the social biases already existing in the community and, instead of allowing the school to be an agent of change, channels the school into being an agent of the status quo.

The degree to which the values of a community are communicated to teachers and, thereby, affect teacher behavior is related to the degree to which the community power structure becomes concerned with the operation of the schools. It may also depend upon the number of teaching staff who live in the school community and who are, therefore, subject to more of the informal social contacts than other teachers who live outside the community.

Survey results indicate that teachers in small towns are more satisfied with their jobs than are teachers in large cities. These same surveys indicate however, that there are more constraints on the behavior of the small town teachers. These results may be explainable by reference to the relatively higher status of teachers in the smaller towns. Teaching in a small town may be less complex, and the society may demand less in the way of innovation than the larger communities.

School staffs reflect the external social order in another way with child-care (teaching) being in the domain of the female, but administration being in the care of the male. In some instances there is a further reflection of some societal values through the hiring of white teachers but minority-group teacher aides. That there is frequently no career ladder for the aides is another reflection of the external social order as it has existed in many communities.

The Coleman Report (Coleman et al., 1966) indicated regional differences in student outcome related to urban-rural distinctions. The data also indicated that children of lower status were more dependent on schools than were children of higher status.

Criteria for success in many professions are obvious. Criteria for success in teaching are more nebulous. Within schools and a particular school community, success is measured with respect to order, noise level, and cooperative behavior as far as principals (and often other teachers) are concerned. Externally, success is

measured by the messages of parents who want their children to be placed in Ms. Jones' class or who fear the year in which their child must endure a certain dreadful person because there is no alternative. These informal criteria for success appear to vary from situation to situation depending, perhaps, on such elements as the predominant social class of the families whose children go to a given school, or the ethnic group which makes up the major portion of the community population. Thus the values of the community within which a particular school is located may be conveyed in many informal ways on a very personal and social level and do, in fact, help to determine how much freedom a teacher or teaching staff possesses as to how it uses its time. Personal-social values (which are, therefore, educational values) and the way these are communicated to teachers constitute a legitimate area of study. The ways in which these values help to determine the school's freedom, or lack thereof, to explore newer ways of staff utilization also are legitimate, important, and timely areas of concern.

Values are also communicated within an educational system outside a specific school. The not too far removed practice of assigning inexperienced teachers to the "bad" schools for their first few years must certainly convey a message that influences the longevity of a teacher's career if not his or her willingness to participate in exploratory modes of staff utilization. The unwritten criteria for success in such a setting may be survival rather than teaching competence. That inexperienced teachers are likely to be assigned to poorer schools has been documented (Herriott & St. John, 1966).

Schools within large urban areas certainly come to be known, at least informally by reputation, as being tough or bad, pleasant or good, chaotic or orderly. We do know that teachers try to move to schools of higher status (Becker, 1963). The informal social network within the communities and among the teachers is an effective way of spreading and maintaining these reputations. Our questions become: In what ways do these reputations influence the availability of those willing to work in schools of certain repute? And in what ways, and to what degree, do these reputations determine the innovative, risk-taking, exploratory behavior of teachers (and principals)? Another way of stating the basic hypothesis is that social-personal influences external to a particular work setting partially determine (limit) the options which a teacher is willing to consider in dealing with his or her instructional responsibilities.

## Theoretical Framework of the Approach

The above discussion suggests the following related hypotheses: (a) A school's social setting and community composition have measurable effects on staff assignments, functioning, and morale; (b) The status of the staff in the external community has measurable effects on communication and functioning within the school; (c) Informal citizen influence

and community values have measurable effects on teacher assignments and functions; and (d) Community mobility has measurable effects on teacher assignments and function.

Despite the suggestive implication sketched out in the previous discussion, definitive knowledge is limited in this area. There is little literature connecting the values and expectancies communicated through informal social-personal means with the change behavior or motivation of teachers. Theoretic concepts relevant to this area can be found in (a) the status and power concepts of Gerhartt Lensky and William Gamson, (b) the theory of status characteristics and expectation states (Berger, Cohen, and Zelditch, 1966), and (c) theories of the growth, maintenance, and reduction of stereotypes.

The basic assumptions underlying this Approach are that (a) expectancies (values) are communicated through social-personal systems external to a school; (b) teachers are sensitive to these communications and derive estimates of their own status from them; (c) there is a positive correlation between status and motivation to improve; and (d) the schools reflect the social power hierarchy of the community.

Program 7.5.1: The Effects of the Social Settings and Population Composition of a School Community on the Assignment and Functions of Teachers.

General Background. The objective of this program is to gain an understanding of how status patterns within personnel assignments reinforce inequities present in the community. Assignment of teachers, teacher aides, and principals and promotion from one rank to another within the school are clearly related to social class structure and the balance of power in the community at large. Teacher aides who are frequently brought in to represent the community often fail to make that contribution because of their low social status within the school. Similarly, women infrequently aspire to principal positions at least in part because their representation in those ranks has been so small for so long. Likewise, in rural areas, children are not likely to learn much about the outside world because their teachers represent the local community.

Surveys have documented the local origin of rural teachers. Among the current studies on female teachers, there is some attempt to document the failure of women teachers to be represented in administration. The same can be said of teacher aides and their failure to interact with children or other staff members. The impact of such status problems on staff interrelationships and on children's achievement is not known. Some information is available from the work of Patricia C. Sexton (1961) and James S. Coleman (1966) concerning social class interaction, ethnic

background, and child achievement. The fact that these studies do not address the issue of how background variables and relationships to achievement variables are mediated is indicative of the lack of attention given to this program area.

Status problems are possibly the most powerful way in which the external environment makes an impact on the socialization of children and information from this program of research should assist in recruiting and placing teachers in appropriate settings thereby maximizing the potential for success in the socialization of children.

Illustrative Projects. Titles of specific projects for carrying forth this program might include:

1. (7.5.1.1) The effects of desegregation on racial composition of teaching staffs.
2. (7.5.1.2) The effect of male administrators on teachers and the socialization of girls.
3. (7.5.1.3) The relationship between the low status of the teacher aides and the representation of minority and social-class groups in such positions.
4. (7.5.1.4) The development of a method for treating staff interaction problems when the staff is multiracial.
5. (7.5.1.5) The relationship between career ladder opportunities for teacher aides and their effectiveness in the school setting.

Since the Panel felt that the first of these was particularly critical to the program objective, a description of that project follows:

Project 7.5.1.1: The Effects of Desegregation on Racial Composition of Teaching Staffs. Desegregation may have unwittingly resulted in injustice to qualified black teachers and principals, causing them in some parts of the country to lose their jobs. It is not the task of this Panel to investigate the injustice purely as a racial problem. Rather, this historical occurrence has resulted in a pattern of school personnel for schools with many black students, where the staffing pattern is seriously imbalanced racially. It is vital that the extent of this imbalance be documented. Secondly, it is critical to investigate the impact of this imbalance on the effective functioning of the black professional in the setting and, indirectly, on the aspiration, values, and learning of the black students.

National teacher organizations are currently gathering information through human rights studies on the number of displaced teachers and principals. There is little available research on the impact of the racial composition of the entire school staff on teachers and children. There is some literature comparing the relationship of black and white teachers on black children. Gottlieb (1964) found that black teachers viewed black children more favorably than did white teachers. In an experimental summer school called the Center for Interracial Cooperation, Cohen, Lohman, and Lockheed (in press) created an organization with a racially balanced staff. In interpreting their results, they hypothesized that the impact of seeing and working with adults who modeled equal status interaction, even though they were members of different races, had a profound effect in producing equal status interaction among the children. Finally, there is theoretical and empirical work in the area

of the interaction of workers of different social status to support the proposition that when black teachers are badly outnumbered, they are unlikely to bring forward their contribution to staff meetings and to the solution of school-wide problems (Berger, Cohen, & Zelditch, 1966; Cohen, 1973).

This project has two objectives: First, through a survey technique, it aims to document the effects of the desegregation process on the composition of school staffs. Second, it aims to study the impact within schools of this externally caused variation in teacher personnel. The within-schools study should include the impact on interaction of the teaching staffs and the impact on the children's learning and feeling about their own futures. The groups to which this project would directly apply are Federal officials concerned with the desegregation process, parent-community groups working to correct racial imbalance, professional organizations, and the Black Caucus within NEA.

The survey work already done by the NEA provides a natural starting point for the survey. Secondly, there are already developed instruments for scoring the effects of status on staff meetings. Thirdly, there are available measures for studying the effects on interracial interaction of children (Cohen & Roper, 1972). However, some school systems may not be willing to cooperate in providing the relevant information about staff composition by race.

The suggested work plan for this project is as follows:

1. Identify the universe of schools desegregated under Federal order in selected sections of the nation.
2. Devise a sampling plan, preferably stratified by urban and rural systems.
3. Obtain the information on staff composition by race.
4. Compare racial composition of staff with racial composition of students.
5. Within the random sample, a subset of communities should be selected where the number of displaced black teachers should be studied by means of a historical study of school directories.

In the second phase of the project, a sample of schools with differing patterns of staff racial composition, but with students of the same racial and social class composition, should be scored in staff meetings and in classrooms. Through questionnaire administration, the race of influential teachers can be determined. Also, the children's sense of efficacy about their own futures can be measured as well as data collected on their performance on achievement measures. The student outcomes of interest include how well the white students are doing in interacting with the blacks. The question of interest in this phase of the study is, Are the white children learning from the status relationships of the personnel that they will continue to dominate the society as their elders have?

The initial survey should take at least two years. It may be delayed by difficulties in acquiring data. The backing of important groups such as the NEA is vital.

Preparation for the second phase can go on while the survey is being done. In any case, preparation for this study will take a year. Collection of data, including observation at the various sites selected for intensive study, will take another year. Analysis and write-up will take a third year.

The survey results can be reviewed for its methodological rigor by technical experts, and for its direct policy implications by a panel of policy makers from organizations of teachers and from state departments

of education. The study results can be monitored and evaluated at the typical design and instrumentation milestones. The final technical report can also be evaluated.

This may seem like a small sector of the influence of the external environment on effective utilization of personnel inside the school. However, some students of the problem are beginning to suspect that the school organization contains a hidden cirriculum for staff and students assuring them that the status quo cannot be disturbed and that "if you are black, stay black." This is what the sociologists call role typification in the society. Children quickly learn that it is unwise to deviate from the typical role allocated to one's racial group, sex group, etc. If the results of this project were to show detrimental effects of staff imbalance on staff interaction and on the interaction and values of the students, there would be excellent social-science evidence for taking action. The same lesson could then be applied to the staff distribution of other ethnic groups in other areas of the country and to the problem of the male domination of administrative posts on school staffs.

In terms of impact on other problem areas, this project has obvious implications for recruitment of teachers and for studies of teacher expectancy. To the extent that status and power relationships in the community come to be reflected in the allocation of personnel positions according to race, the internal personal and social environment of teaching comes to reflect the external personal and social environment of teaching. If the position of principal is usually held by a white person, while black persons hold only some positions as teachers and many positions as teacher aides, then the effectiveness of the instruction of black children may be deeply impaired because it is clear to them that education is not a successful route to positions of status and authority for black people.

The potential return on the project is expected to be high because of its direct social impact on the parties involved and because the effect of alternating staff composition on the teaching of children has potentially strong future implications.

The estimated budget for this project as described would include $257,000 in personnel costs (for a total 402 person-months) plus approximately $200,000 in other project costs.

Program 7.5.2: Studies of the Effects of the Status of Teachers, as Communicated Through Informal Communications Outside a Particular School, on the Assignment and Function of Teachers.

General Background. The objective of this program is to provide empirical data on the relationship of external expectancies of teachers to the motivation of teachers to implement and sustain different administrative arrangements designed to enhance the attainment of educational goals.

Many persons are convinced that persons outside the educational process hold preconceived ideas of teacher behavior which, in most instances, are diametrically opposed to the teacher concept of duties and obligations; and that these expectancies exert a powerful influence on teacher behavior. If this is so, then it is certainly imperative

that we identify how such expectancies are communicated and what ways can be developed for bridging these divergencies and channeling them into constructive purposes in the facilitation of teaching.

A relatively new but increasingly sophisticated literature is developing in the area of the effects of teacher expectancy on the performance of children, and the effects of labeling on the performance of different children. In fact, there is a theory of labeling which, although of recent origin, appears to explain much about the maintenance of apathetic, fearful, or deviant behavior (Rist, 1973). An earlier literature on the development and use of stereotypes of groups of people connected by race, ethnicity, occupation, and sex is also relevant to the problems posed within this approach.

Some data indicate that innovations proposed and tested over the last twenty years are difficult to find in operation in the majority of schools (Goodlad, et al., 1970). Such data probably reflect the results of many variables operating within the schools to prevent the maintenance of innovations. This complex of variables is likely to include the status and status expectancies of teachers and administrators.

Illustrative Projects. Research projects related to this program include the following:

7.5.2.1: The analysis of community definitions of teacher responsibilities,

7.5.2.2: The relationships of different community settings to the interpretation of status among teaching staffs,

7.5.2.4: The relationship of communications from local media to the interpretation of status among teaching staffs.

Development projects related to this program include the following:

7.5.2.5: The development of alternative ways of communicating positive status indicators to teaching staff,

7.5.2.6: The development of alternative ways of helping teachers identify positive messages concerning their staffs,

7.5.2.7: The development of alternative messages to the community to influence community definitions of teacher responsibilities.

Program 7.5.3: Varying Patterns of Informal Influence by Citizens on Schools and the Effect of Citizens' Values on Teacher Assignments and Functions.

This program reflects a concern with the expectations and values of the community, how these are communicated to teachers, and how the

behavior of teachers is affected by the knowledge. Theories of expectancy are relevant here and parallel to the work being done on teacher expectancies and values vis-à-vis children. The expectancies of teachers concerning children determine ways in which teachers act toward children. For example, teachers who hold low achievement expectancies for certain children will tend to interact less with these children. In similar fashion, it can be hypothesized that parents who hold expectancies for teachers will behave in certain predictable ways toward teachers. For example, parents who expect teachers to demonstrate authoritarian patterns toward them will tend to be less likely to approach the teacher with a problem. This effectively limits the scope of the teacher's influence.

This program would emphasize communities' expectancies and values vis-à-vis teachers. Data in this program should help to make more explicit a major set of constraints imposed by communities on teachers.

Program 7.5.4: Community Mobility and Its Effects on Teacher Assignments and Functions.

The program proposed in this statement will examine the influences that high mobility of the families within a school community have upon the ways in which a school staff can be organized and the tasks which it tries to accomplish. The rapid transition of communities where the balance of ethnic groups is in a state of flux must surely dictate staff changes. We know little about what these effects may be when compared with what is possible in more stable communities. There are other types of mobility within school areas such as those in low-income sections of cities which maintain a fairly stable ethnic composition, but where there is much mobility in and out of the community for other reasons. The speed and efficiency with which a staff is able to accommodate rapid change due to this mobility are variables that should be studied. Data from this program are relevant to the approach and are important for decisions about how to best manage staff in the multitude of high mobility neighborhoods in metropolitan areas.

Program 7.5.5: The Effect of Student Progress Through the Educational System and Its Effect on Teacher Assignment and Function.

Because of the low priority assigned to this program and the Panel's time constraints, it was decided not to provide further detail on this program.

## SUMMARY

This Panel was concerned with developing knowledge on the ways in which organizational, administrative, physical, personal, and social aspects of the classroom, school, district, and community can provide support for instructional personnel in attaining educational goals. This general concern explicitly avoids such terms as "utilization" to avoid any misinterpretation of the Panel's intent. It also refers to "instructional personnel" rather than "teachers" to insure including all persons associated in an important way with the instructional process. Also, it refers to two kinds of variables--operational and locational--that are related to educational outcomes.

Although educational outcomes in terms of student growth must ultimately be considered, other kinds of dependent variables should also be considered worthwhile. These would include the behavior of teachers, principals, counselors, and other school personnel when these behaviors are demonstrably linked to student development. Other school personnel--such as secretarial, clerical, and maintenance staff--should be considered only to the extent that they are judged to interact with students in instructional ways.

In identifying approaches, Panel 7 developed a matrix with the operational variables on one axis and the locational variables on the other. Three kinds of operational variables were identified: organizational-administrative, physical, and personal-social. Two major kinds of locational variables were identified: those inside the school and those outside the school. With one of the cells of this 2 x 3 matrix eliminated (namely, the cell for physical variables outside the school), five Approaches were derived. Within these five Approaches, 21 programs were formulated and rated as to their priority.

| LOCUS / VARIABLES | Inside School | Outside School |
|---|---|---|
| Organizational/Administrative | Approach 7.1 | Approach 7.2 |
| Physical | Approach 7.3 | |
| Personal/Social | Approach 7.4 | Approach 7.5 |

The first Approach dealt with the ways in which organizational and administrative aspects of the classroom and school could support instructional personnel in attaining educational goals. It led to programs

concerned with the organization of staff resources for school problem-solving; with group process skills; with authority and evaluation in relation to the staff's ability to carry out instructional tasks; and with the ways in which various types of accountability relate to teacher and group behavior. Also included in this Approach were programs concerned with the socialization of teachers into various administrative and organizational arrangements; with the effects of such arrangements on the initiative of teachers; and with the career patterns of instructional personnel.

The second Approach was concerned with the ways in which the organizational and administrative aspects of the school district and the community affect educational personnel in reaching educational goals. Here, the programs were concerned with the ways in which consultative activity within the district can facilitate school problem-solving; with other influences at the district level that can affect instructional staff functions and assignments; and with the effects of community participation.

The third Approach was concerned with the effects on staff functioning of the physical environment of the classroom and school--such aspects as its esthetic qualities, the use of learning resource materials, and standards for selecting equipment and supplies.

The fourth Approach dealt with the ways in which personal and social aspects of the classroom and school support staff toward reaching educational goals. The emphasis here is basically on informal, primarily unofficial, at least partially unplanned types of personal-social support. Thus the programs dealt with such processes as the informal rewards and punishing conditions affecting staff functioning.

The fifth Approach was concerned with similar informal social-personal influences outside the school or classroom context. Such external influences include those associated with (a) comparable teachers in other school buildings, (b) the often-unseen "central office" personnel, (c) parents and others in the community, (d) friends, (e) family, and (f) acquaintances. Programs thus dealt with such factors as population composition, citizenry values and influence, and community mobility.

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