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A study of factors facilitating continued implementation of educational change.

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A STUDY OF FACTORS FACILITATING CONTINUED IMPLEMENTATION OF EDUCATIONAL CHANGE

A Dissertation Presented

By

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ABSTRACT

A STUDY OF FACTORS FACILITATING CONTINUED IMPLEMENTATION OF EDUCATIONAL CHANGE

(May 1977)

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Purpose

The purpose of this study was to identify factors facilitating continued implementation of educational innovation, based on an analysis of two Title III projects in Maine which continue to be successfully implemented following termination of federal funding.

Procedure

Factors facilitating continued implementation as identified through the literature, were used as criteria for the selection of two Title III projects which were likely to continue to be implemented following withdrawal of federal funds. Only projects terminating use of federal funds in 1975 or 1976 were examined.

The actual level of implementation of the two projects selected for analysis was measured through the LoU (Level of Use) instrument, an instrument designed and tested by researchers at the Research and Development Center for Teacher Education at the University of Texas in Austin. This instrument was

chosen because it was designed specifically to measure the extent of implementation of an innovation, as assessed by the "users" behavior.

The projects selected for analysis were examined using the following instruments to collect data: the LoU instrument; personal interviews designed by this researcher with project and school personnel; and documentation of Title III projects. A list of characteristics facilitating implementation of innovation, as identified through the literature, was used as a guide in the determination of data collected. The following factors were analyzed: (1) characteristics of the innovation, (2) characteristics of the school system sponsoring the innovation, (3) interactions between the innovation, the users and the setting and changes that each undergo in the process of implementation.

Findings

The LoU instrument indicated that both Title III projects continued to be implemented following withdrawal of federal funds. Data from the investigation revealed several common ingredients for continued implementation. The following factors were identified as facilitators of continued implementation of change:

(1) congruence of project and teacher values and goals
(2) strong administrative support
(3) training and ongoing followup assistance
(4) limited target population
(5) provision of released time for training and assistance
(6) projects which replace and/or improve existing practices
(7) district support
(8) availability of necessary materials
(9) adaptation of teacher and project practices
(10) organizational climate supportive of educational growth and improvement.

CHAPTER I

BACKGROUND OF THE PROBLEM AND FOCUS OF THE STUDY

Statement of the Problem

> Most educators realize that the amount and pace of change has fallen far short of initial expectations. The problem is more profound than simply pointing at the unrealistic impatience of the sixties. Programs were planned, curriculum was developed, teaching/learning units were packaged, teachers were trained, and the results were frustrating, uneven, unexpected, and temporary. With hindsight it is easy to see that designing and disseminating change is not implementing* change. What happens inside the school, at the service delivery level, is absolutely related to our success or failure, yet the gap in our knowledge about implementing change in the schools is formidable. (Mann, 1976a, p. 313)

During the past decade numerous attempts at educational reform have been made. Millions of dollars have been spent by the federal government on programs promoting innovation in public school systems, in the name of educational improvement. Literature is replete with studies and theories on educational innovation and change. Studies in such areas as leadership style

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*The term implementation refers to the developmental process of putting an innovation into use. Implementation thus assumes participation by users of the innovation.

(Guest, et al, 1977; Hersey & Blanchard, 1969), change agents (Havelock, 1973), organizational development (Schmuck & Miles, 1971) school cultures (Goodlad, 1975; Sarason, 1971), and inservice education (Beery, 1974; Edlefelt, 1974, 1975; Rubin, 1968, 1969)--to name a few--have yielded numerous theories and principles about change. Despite the rhetoric espoused and dollars expended however, mounting evidence reveals that schools remain essentially the same and that most innovations are implemented poorly, if at all (Goodlad & Klein, 1970; Fullan & Estabrook, 1973; Gross, Giaquinta & Bernstein, 1971; McLaughlin, 1976a; Smith & Keith, 1971; Warren, 1976; Parkay, 1976; Jones, 1973; Wacaster, 1975; Packard, 1975; Bredo & Bredo, 1975; Pressman & Wildavsky, 1973; Reynolds, 1973; Hall & Loucks, 1976). The Experimental Elementary Programs (EEP) in New York is an example of a program which failed to leave its mark on schools where it was used. Bruce Dollar, an evaluator of EEP, commented:

> What was apalling was the way these schools managed to absorb $40 million (over 4 years) while we searched vainly for signs of implementation. All that for business as usual (Warren, 1976, p. 386).

The Rand Corporation (Berman & McLaughlin, 1975) recently conducted a major examination of federal aid programs that were designed to introduce and spread innovative practices in public schools, in an attempt to determine whether or not each of the projects they studied were actually implemented in the field. In the majority of cases the answer was that they were not.

The federal government has promoted educational reform through a variety of programs. One of the most conspicuous of these, in terms of its express intent to nurture innovation, is Title III, of the Elementary and Secondary Education Act. Title III, commonly known as Projects for the Advancement of Creativity in Education (PACE), was established in 1965 with the expressed purpose of promoting and supporting innovative and creative approaches to solving educational problems and improving school systems. Subsequent amendments, although consolidating Title III with other programs, maintained as its primary thrust the acceleration of change in education.

> The Title III program. . . is designed to encourage school districts to develop imaginative solutions to educational problems . . . Primary objectives are to translate the latest knowledge about teaching and learning into widespread practice and to create an awareness of new programs and services of high quality that can be incorporated in school programs. Therefore PACE seeks to (1) encourage the development of innovations, (2) demonstrate worthwhile innovations in educational practice through exemplary programs. . . The heart of the PACE program is in these provisions for bringing a creative force to the improvement of schools and for demonstrating that better practice can be applied (Manual of Guidelines for Project Applications, 1967).

Over 1-1/2 billion dollars has been spent over the past ten years, promoting and supporting educational innovation through Title III projects. Under the provisions of the Education Amendments of 1974, Title III was consolidated with six other programs into ESEA Title IV. Federal funding for Title IV was comparable to Title III funds for previous years through fiscal year 1976 and

although Title III is now phased out completely, money continues to be appropriated for innovative projects under Title IV.

Through Title III, each state was annually allotted its share of available federal funds by the U.S. Office of Education. The state then awarded three year grants to local school districts according to the merits of proposals submitted and relative to pressing needs which had been identified by each state. The intent was to return educational initiative to the local scene and support school districts in their efforts to deal with their own problems. Title III money acted as "seed" money to begin innovative projects and was phased out by the end of the third year. By then, projects were expected to have been incorporated into the school district. In order for the project to continue, new financial support--if necessary--and commitment had to be found by the end of the three year period.

Innovations funded by sources other than the local district--as Title III--are plagued by implementation problems. Lack of implementation was cited (Miller, 1967) as a weakness of Title III shortly after its inception and is recognized as a problem today as well. One factor inhibiting implementation of projects funded by outside sources is the fact that such projects are often initiated solely in response to the availability of funds rather than in response to a strong district need. (Reynolds, 1973; Pincus, 1974; Rutherford, 1975a; McLaughlin, 1976a; Worthen, 1967) The Rand Study (Berman & McLaughlin, 1975) found that projects initiated in such an "opportunistic" fashion were

characterized by a lack of interest and commitment and were usually not implemented. An innovation is unlikely to be successfully implemented and continued if the district and participants are not committed to it. Another problem of projects initiated and supported by outside funds is that they must build in means by continuing support following withdrawal of seed money. Many districts simply can not carry the added financial burden (Jacobs, 1967). Projects are then short term and cease altogether upon termination of funding. Some critics take a pessimistic view of the likelihood of success of innovations supported by outside funds. Goodlad (1975) contends that in such cases change will tend to be short-run, relatively expensive and accompanied by "excessive, exhortative rhetoric and equally unsubstantiated claims (p. 46)".

Acceptance of ideas and/or products is often confused with implementation of plans and "exhortative rhetoric"--as opposed to action--characterizes many new programs. Goodlad comments that "the rhetoric frequently sounded like advertisements for real estate or airline travel (Bentzen, 1974, p. xi)". Studies by Goodlad (1975) and others (Goodlad & Klein, 1970; Hall, G. E., Wallace, R. C., Dossett, W. F., 1973; Hall & Loucks, 1976; Smith & Keith, 1971; Worthen, 1967; Reynolds, 1973; Brickell, 1961) indicate that the rhetoric of reform far outweighs actual practices. Goodlad followed up reported claims of new programs and found that few practices claimed were actually in operation. Worthen (1967) reported phrases such as "establish a flexible automated instructional system" translated into "purchased two additional T.V. sets and one overhead projector" (p. 107).

Equating "acceptance of ideas" with "implementation of plans" has serious implications for evaluation of educational innovations. Implementation of plans is often assumed once an innovation has been accepted or adopted by a school district and evaluations of the effects of the project on the clients, usually the students, are made based on this assumption. Any conclusions drawn, however, are pointless if the project has not in fact been implemented. Evaluations must first ascertain whether or not and how the innovation under consideration has actually been used, before attempting to evaluate its effects. Hall and Loucks (1976) contend that the only way to know the extent of use of an innovation is to directly assess its use by each individual responsible for implementation. Few studies do this.

Several evaluations assessing the continued impact of Title III projects following termination of federal funds have been made. The studies reviewed in this investigation concluded that most Title III projects continue to be implemented or were likely to continue in some form:

> Sixty-three percent of Michigan's ESEA Title III projects were continued after federal funding ended. (ESEA Title III Report, 1965-1970, Michigan State Department of Education, p. 10)

> 67.1% of all respondents indicated that their projects continued. (Brightman, 1971, p. 7)

> The total number of 3 year Title III projects being continued was. . . 84.5%. (Hearn, 1970, p. 198)

> A large portion of the projects' activities are continued at the same or at a higher level (70%) while 80% of the materials and concepts continue in use at the same or higher level. (Kirkpatrick, 1973, p. 4)

> Sixty-nine percent of the Title III superintendents reported that their projects were being continued or we were likely to be continued after termination of funding. (Morrisett, 1972, p. 25)

The five studies cited, however, used questionnaires which were given to superintendents of school districts housing Title III projects. The data collected was thus restricted to the administrators' perceptions and totally ignored direct contact with and therefore the perspective of the persons directly responsible for implementing the innovations. Research (Goodlad, 1975; Gross, Giaquinta & Bernstein, 1971; Hall & Loucks, 1976; Deal, Meyer & Scott, 1975; Berman & Pauly, 1975; Greenwood, Mann & McLaughlin, 1975) shows that the perceptions of persons so removed from the scene of the innovation are open to question. Thus the usefulness of these studies in assessing the actual extent of continued use of the projects is limited. An accurate evaluation of the extent of continued implementation of Title III projects, as assessed by the users' behavior, is sorely needed.

In the state of Maine, approximately $710,500 was spent on Title III projects over a three year period which started in 1972. As of 1975, a cursory examination of existing documentation reveals that only one project has shown a strong likelihood of continued implementation following termination of federal funds. Why are some projects successfully implemented while others fail? What factors lead to successful, continued implementation, even when outside funding ceases? These questions need to be critically addressed if federal funds are to result in productive, enduring changes within our schools.

The need for such research on implementation of change has clearly been articulated in the literature (Berman & McLaughlin, 1974; Lieberman & Griffin, 1976; Pressman & Wildovsky, 1973; Scanlon, 1973; Giaquinta, 1973; Smith & Keith, 1971; Tempkin, 1974; Baldridge, 1974; Miles, 1964, 1974). Bennis (1966) commented that:

> What we know least about--and what continually vexes those of us who are vitally concerned with the effective utilization of knowledge--is implementation. (p. 175)

According to Scanlon (1973):

> There is clearly a need to expand the current level of knowledge about the installation of educational innovation. Although considerable efforts over the past thirty years have produced a quantity of theoretical research, there is still a paucity of practical know-how as to the implementation of innovative practices into schools. (p. 1)

McLaughlin (1976b) refers to the "unpredictability and inconsistency" of the innovation process as the "implementation problem" (p. 348), and Berman & McLaughlin (1974), when reviewing educational change efforts concluded that:

> Implementation problems dominate the outcomes of change processes in the educational system. Therefore, we conclude that research should be directed towards understanding the implementation of innovative projects within school districts, and how policy might affect implementation. (p. v-vi)

Lieberman and Griffin (1976) argue that a more systematic study is needed and they make a plea for "renewed and reinvigorated inquiry into the problems of implementing educational change" (p. 417). Miles (1974) succinctly sums up the present state of affairs:

> The point is that users, middlemen and researchers alike have agreed that we need to know much more than we do about the theory--and the practice--of implementation. (p. 206)

Implementation of change involves interaction among the innovation, the user, and the institutional setting. A full understanding of the process of implementation will emerge only through an analysis of characteristics of these three components and the interrelationships between them. The importance of these interactions can not be minimized. According to Schmuck and Miles (1971):

> many if not most attempts at educational reform have collapsed or have been absorbed without effect precisely because of the limited attention given to the organizational context in which the reforms have been attempted. (p. 1)

If innovation is to result in productive, enduring changes within our schools, it is necessary to understand more about conditions that facilitate effective incorporation of educational change into school systems. There are many examples of innovations which have failed, and the deficiencies of these programs are well documented. Successfully implemented projects have not been analyzed as well. Baldridge and Terrence (1975), in reviewing material for their book on educational change found it difficult to find even one success story. In order to isolate variables and practices characteristic of successful implementation, it will be necessary to identify and closely analyze successful projects. As Robert Merton (in Guest, Hersey & Blanchard, 1977) aptly comments:

> More is learned from a single success than from multiple failures. A single success proves it can be done. Therefore, it is necessary to learn what made it work. (p. v)

This thesis is an attempt to fill that need by analyzing two Title III projects which have continued functioning beyond the termination of federal funds.

Purpose of the Study

The major aim of this study is to identify and document factors which facilitate successful, continued implementation of innovations within school systems. This is accomplished through the identification and analysis of two Title III projects in Maine which continue to be successfully implemented following termination of federal funding. A review of related literature is included in the study and strategies for successful implementation are enumerated.

The following factors will be analyzed:

1. Characteristics of the innovation itself.
2. Characteristics of the users of the innovation.
3. Characteristics of the school systems sponsoring the innovations.
4. Interactions between the innovation, the users and the setting and changes that each undergo in the process of implementation.

Definition of Terms

The term innovation, as used in this study, refers to deliberate, planned change which is thought to be more efficacious than previous practices in accomplishing the goals of an educational system.

Implementation refers to the developmental process of putting an innovation--whether product or process--into use. Implementation thus assumes participation by users of the innovation.

Assessing the degree of implementation of an innovation within a system raises questions not only about the quality of use, but about the number of persons involved as well. For the purposes of this study, a successfully implemented project is defined as one in which the majority of users display at least a routine level of use, as measured by the Level of Use (LoU) instrument (see Appendix C, Level IVA). This instrument, developed and tested by Gene Hall and associates at the Research and Development Center for Teacher Education at the University of Texas, describes and documents whether and how an innovation is being implemented. It measures the degree to which any individual working with a change project is participating. Hall and his associates hypothesize that there are eight identifiable levels of use which an individual may demonstrate. These levels range from non-use (Level 0), "in which the user has little or no knowledge of the innovation, no involvement with the innovation", to mechanical use (Level III), when "the user focuses most effort on the short-term day-to-day use of the innovation with little time for reflection", to a highly sophisticated

level of renewal (Level VI), in which "the user evaluates the quality of use of the innovation, seeks major modifications of or alternatives to present innovation to increases impact on clients. . . explores new goals for self and the system" (p. 54).

The continuation of a project initially funded by sources other than the local district, refers to the extent to which project goals and activities continue to be implemented following withdrawal of outside funds. A project may be continued in part or in full, with or without local funding to replace outside funding.

A project is incorporated into a district when it has been implemented and becomes a part of the routine behavior of the institutional system.

Delimitations of the Study

This study is confined to two Title III projects in Maine which have terminated use of federal funds within the past two years. The large number of Title III projects and the difficulty in identifying successful ones prohibit examination of all completed Title III programs. Also, since the analysis involves communication with all persons involved in each project, a larger study would have been unwieldy as well as unrealistic. Only those projects in which teachers and/or administrators were responsible for implementation are considered for analysis. No attempt is made to evaluate the intrinsic value of the innovations or the effects of the innovations on the students.

Design of the Study

A review of literature within the past ten years on implementation of change is made. The focus of the review is on conditions facilitating successful implementation of innovation within school systems. Careful attention is paid to research on innovative projects funded by outside sources. A select review of literature on Title III is also included. From this investigation a list of factors which facilitate implementation of innovation is identified.

Through a careful examination of project documentation, two projects which appear most likely to continue to be implemented following withdrawal of federal funds are identified. Factors facilitating continuation, as identified through the literature, are used as criteria for selection. Only those projects which terminated use of federal funds in 1975 or 1976 are examined. The LoU instrument was applied to the teachers and/or administrators responsible for implementation of those projects in order to determine the actual level of implementation and the results are reported and evaluated.

The projects selected for analysis were examined using a variety of instruments including on-site visits, interviews and existing documentation to collect data. The list of characteristics facilitating implementation of innovation, as identified through the literature, was used as a guide in the determination of data to be collected. A compendium of variables and strategies facilitating successful, continued implementation of innovations, based on a study of these two projects, is then enumerated.

Chapter Outline

Chapter two reviews two areas of literature central to this study: (1) implementation of educational innovation; and (2) Title III. This chapter focuses on factors which facilitate successful implementation of innovation within school systems.

Chapter three describes procedures used in selecting projects to be analyzed as well as methods of collecting data and instrumentation utilized.

Chapter four presents a detailed description of the projects and an interpretation of data.

Chapter five presents conclusions about conditions that facilitate successful continued implementation of innovation. Recommendations for areas of further study are made.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The literature review is divided into two sections. The first section describes limitations and strengths of current literature on educational innovation and concludes with a review of factors facilitating implementation of educational change, as revealed through the literature. The second section reviews literature on federally funded innovations, including Title III. This section concludes with a review of research on Title III in Maine.

> Implementation in recent years has been much discussed but rarely studied. . . we have not been able to locate any thorough-going analysis to implementation. Complaints about implementation do not constitute serious efforts to grapple with the problem,(Pressman & Wildavsky, 1973, p. xiii)

Literature and research on the process of implementation of change is scarce, although growing (Zaltman, 1973; Pressman & Waldavsky, 1973; Smith & Keith, 1971; Baldridge, 1974; Scanlon, 1973). A symposium in 1974 entitled "What Do Research Findings Say About Getting Innovations Into Schools?" concluded that "Few, if any, research findings about how innovations get into schools are available" (p. vi). Gross, Giaquinta and Bernstein (1971) noted in

literature on organizational change that "there has been little concern for testing theories or generating testable hypothesis about factors influencing the degree of implementation" (p. 35). Pressman and Wildavsky (1973), in preparation for their book on Implementation, found few significant analytical studies dealing with implementation. Baldridge (1974) remarks that:

> Analysts and scholars studying the problem of educational change have been baffled by the difficulty of translating new educational designs into usable organizational forms which can be implemented in the field. Although hundreds of research articles have been added to the professional literature, there still seems to be a paucity of of understanding about the basic diffusion and implementation process. (p. 4)

Limitations of the Existing Literature

The limitations of current research on educational change have been pointed out by numerous critics (Gross, et al 1971; Lieberman & Griffin, 1976; Fullan, 1972; Baldridge, 1974; Miles, 1975; Tempkin, 1974; Giaquinta, 1973). These limitations include: focus on adoption, methodological weaknesses, limited scope, and failure to treat implementation as a process.

Focus on Adoption

The focus of most literature and research on organizational change has been on the adoption of innovation--defined by Rogers, 1962, as "acceptance of ideas"--rather than on the implementation of innovation (Baldridge, 1974; Gross, et al, 1971; Fullan, 1972). Educators and researchers alike assumed that the acceptance of a change plan would automatically lead to its utilization or implementation. Research efforts were thus centered on factors affecting

acceptance. Adoption, however, is not synonymous with nor does it necessarily lead to implementation (Fullan, 1972; Goodlad, 1975; Goodlad & Klein, 1970; Giaquinta, 1973; Sikorski, 1975; Fullan & Eastbrook, 1973; Berman & McLaughlin, 1975), and as Fullan (1972) says, "reported adoption does not necessarily tell us anything at all about the nature of actual use" (p. 5). Berman & McLaughlin (1974), in an extensive review of literature on educational change for Rand Corporation, concluded that the decision to adopt is only the beginning of a variable, uncertain process of change. McLaughlin (1976b) refers to the unpredictability and inconsistency of this process as the "implementation problem" (p. 348). It is the implementation problem, not the adoption problem, that dominates the degree of success or failure of innovation (Berman & McLaughlin, 1974, 1975).

Methodological Weaknesses

Methodological weaknesses are frequently cited as a serious limitation of many studies on educational innovation (Berman & McLaughlin, 1974; Fullan, 1972; Gross, et al, 1971; Tempkin, 1974; Giaquinta, 1973; Lieberman & Griffin, 1976; Program Plan, 1975). Gross et al (1971) comment that:

> Many criticisms can be made of the literature on methodological grounds. Conditions isolated as barriers or facilitators to implementation are generally not "uncovered" through rigorous and systematic analyses of organizations undergoing change. Rather, written largely from the perspective of practitioners and/or active change agents, most explanations are based on highly subjective accounts of their experiences during an effort to introduce an educational change. Typically, no supporting evidence is offered about conditions that are presumed to serve as important factors influencing organizational change. (p. 31)

Berman and McLaughlin (1974) note that most of the literature consists of single case studies which abound with claims of success without data to support or document the conclusions:

> Case study literature paints project accomplishments in glowing broadbrush terms, but it provides little information about specific successful innovative strategies about the components necessary to success, or even about what constitutes success. (p. 3)

Gross et al (1971) report that data collected in studies on change projects are typically obtained from the perspective of those who initiate or adopt them and generally ignore the point of view of those persons who actually implement the changes. Fullan (1972) cites such a failure to distinguish decision maker and user as a major shortcoming. Several studies assessing the impact of Title III projects serve as illustrations on this point (Hearn, 1976; Polemini, 1969; Kirkpatrick, 1973; Morrisett, 1972; Johnson, 1964; ESEA Title III Report, 1965-1970, Michigan State Department of Education; Title III ESEA Impact Study, Univ. of Kansas, State Dept. of Ed., July 1972; Drury, 1971; Innovation in the Schools of Connecticut, State Department of Educ., June 1974; Brightman, 1971). Eight of ten studies reviewed collected data through a questionnaire to the project director or superintendent. The Connecticut study relied heavily on information from the project director and the Kansas study, although interviewing a variety of persons associated with the project, collected most of the data from administrators. The perspective of the users of the projects was largely or totally ignored. Recent research has revealed, however, the limited value of obtaining data on the actual use of a project from persons so removed from the

scene of innovation. For example, when querying superintendents, project directors, principals and teachers, a study conducted by the Rand Corporation revealed that teachers' responses correlated most closely with perceptions of an objective observer, whereas responses from project directors and superintendents (in that order), correlated most weakly (Berman & Pauly, 1975; Greenwood, Mann & McLaughlin, 1975). Deal, Meyer and Scott (1975) concluded that reports by the principal on the adoption of an innovation are not necessarily significant. In their study, 73% of the principals interviewed reported having teacher teams in their schools. Further inquiry revealed, however, that only 30% of those reported actually implemented team teaching (p. 116). Research by Goodlad and Klein (1970) has shown that persons with vested interests are likely to report inflated estimates of the extent of actual practice or change. Data collected in this manner is thus of questionable validity.

Other methodological shortcomings of research include limited and inappropriate instrumentation (Gross, et al, 1971 ; Sikorski, 1975; Lieberman & Griffin, 1976); poor sampling methods (Sikorski, 1975); and failure to measure accurately the effects of an innovation (Hall & Loucks, 1976; Charters & Jones, 1975; Gross, et al, 1971).

Limited Scope

Many researchers and educators are critical of the limited scope of most literature on innovation (Miles, 1975; Baldridge, 1974; Deal & Baldridge, 1974; Zaltman, 1973; Katz & Kahn, 1975; Lieberman & Griffin, 1976). Much

literature focuses exclusively on the individuals adopting or implementing changes, or on the innovation itself. Baldridge (1974) deplores the "individualistic bias" of many studies which focus only on characteristics of the individual innovators. Miles (1975) draws attention to the overemphasis some studies place on properties of a particular innovation, rather than looking at the innovation within the context of the educational system as a whole. Lieberman and Griffin (1976) comment that "It is unlikely that such an isolated examination, isolated in the sense of being largely separated from the setting intended for the innovation, will result in a successful strategy for change" (p. 418). They contend, as do Miles and Baldridge, that the innovation, the organizational setting, and the fusion of the two, need and demand careful questioning and analysis, not in isolation, but in conjunction.

Failure to Treat Implementation as a Process

Much of the research on innovation fails to treat implementation as a process involving changes in behavior and instead concentrates on the products or results of implementation. Sikorski (1975), in an extensive review of literature on implementation of curriculum, contends that "a grave weakness in the literature on educational innovation is the persistent failure to measure the change in behavior--what is being done that is different" (p. 100). McCune (1974), in a review of research findings at a recent symposium on implementation, comments that "a limiting factor of many 'R&D' efforts for innovation has been their emphasis on the products without a similar emphasis on the human element necessary for delivery of the product" (p. 186). Numerous studies (Kirkpatrick,

1973; Hearn, 1970; Polemeni, 1969; Brightman, 1971) evaluating the impact of innovation report only products and pay little, if any, attention to the process leading to or the use of the product. An example is an ESEA Title III Impact Study in Kansas (1972). The study served "to determine the degree to which programs begun under federal funding have been continued since the end of federal aid and to investigate the educational changes which the programs have brought about" (p. 1). Only products such as "changes in school district programs, services and curriculum" were examined. No attempt was made to examine the users behavior or the processes leading to the changes.

Charters and Jones (1975) identify four levels of implementation which distinguish products of change from behavioral changes:

Level 1. Institutional Commitment. This level is an authoritative statement by system leaders of intensions and promises "designed to set directions and goals for staff members, to legitimize the reallocation of resources, to elicit enthusiasm and support" (p. 348). This stage is similar to Roger's adoption stage.

Level 2. Structural Context. Structural alterations refer to those changes in formal arrangements (i.e., forming committees, employing people) and physical conditions (i.e., purchasing materials, removing a wall) necessary for staff members to carry out an educational program. These changes are easily documented.

Level 3. Role Performance. (staff perspective). This level corresponds closely to the "degree of actual implementation" (Gross, et al, 1971) in which behavior patterns of teachers actually change in accordance with the role performance required by the innovation.

Level 4. Learning Activities. (student perspective). This refers to the educational program as experienced and enacted by students.

Studies which are product oriented, as the Kansas study, evaluate only the structural

context or Level 2 of implementation and reveal little about actual behavioral changes, or "degree of actual implementation" manifest at Level 3 of implementation.

Strengths of Existing Literature

The process of implementation is increasingly being recognized as the key to the success or failure of educational change and improvement and a growing number of research centers and individuals are concentrating efforts on understanding it. A brief review of sources of data providing relevant information on the process of implementation is presented in this section. These sources include research centers, individual investigators and program evaluations.

The bulk of research on implementation is being conducted through such centers as Research for Better Schools (Philadelphia); The Center for Advanced Study in Educational Administration (University of Oregon); National Institute for Education (Washington); Research and Development Center for Teacher Education (University of Texas); Far West Laboratory for Educational Research and Development (San Francisco); and The Stanford Research Institute (Menlo Park, California). Communication with the centers was made by the researcher and information relevant to this study was shared and reviewed (see Appendix A).

In addition, a number of individual investigators have focused specifically on the process of implementation. Pressman and Wildavsky (1971) examine factors underlying implementation of a project funded by the Economic Development Administration. Their findings have relevance for other federally funded programs as well. Detailed, intensive studies of change in school systems, revealing valuable information about the process of implementation of change, have been made by Gross, Bernstein & Giaquinta (1971); Smith and Keith (1971);

Goodlad (1975) and Bentzen (1974). Other case studies, varying in depths of sophistication and analysis, also provide relevant information on factors affecting implementation of change (Packard, 1975; Bredo & Bredo, 1975; Wacaster, 1975; Kester & Howard, 1975; Smith, 1972; Carswell, 1967; Wilkie, 1967; Jones, 1973; Reynolds, 1973; Parkay, 1976; Davis, 1975).

Several evaluations of innovative programs have yielded valuable information about the implementation process. Two important ones referred to in this study were conducted by the Ford Foundation and the Rand Corporation. The Ford Foundation poured thirty million dollars into twenty-five projects in the 1960's through the Comprehensive School Improvement Program (CSIP). In 1972, a report critically analyzing the CSIP, based on data collected through available documents and on-site visits and interviews, was published. This evaluation examined the rationale, implementation and impact of the projects and provided some relevant data about the implementation process. The most comprehensive analysis, however, of factors affecting implementation of innovation within school systems has recently been conducted by the Rand Corporation. In 1974 Rand started a two year study under the sponsorship of the United States Office of Education of federally funded programs designed to introduce and spread innovative practices. Four federal change agent programs were examined: ESEA Title III; ESEA Title IV, Bilingual Projects; Vocational Education Act Part D; and Right to Read. The results of the first year of study are reported in a series of five reports (Berman & McLaughlin, Vol. I, 1974; Berman & Pauly, Vol. II, 1975; Greenwood, Mann & McLaughlin, Vol. III,

1975; Berman & McLaughlin, Vol. IV , 1975; Berman, 1975). Three major questions were addressed in the study: (1) To what extent did differences between federal change programs affect implementation outcomes and continuation? (2) Which characteristics of innovative projects significantly affected implementation and continuation? (3) Were differences in institutional settings related to variations in implementation and continuation, and, if so, which institutional characteristics had significant effects? (Berman & Pauly, 1975) The conclusions drawn and accounts reported in these reports have been central to this study and are referred to continually throughout this study.

FACTORS AFFECTING IMPLEMENTATION OF EDUCATIONAL INNOVATION

Certain factors affecting implementation of educational change clearly emerge through a review of literature. The following factors are discussed in this section: organizational variables; characteristics of the innovation (including strategies for implementation); and characteristics of the users. Although much of the literature reviewed suffers from limitations described in the previous section--most notably the lack of hard data to support conclusions drawn--studies providing more detailed and sophisticated data are weighed heavily in this review.

Organizational Variables

Members of a school system are enmeshed in the social structure of the school and their behavior and attitudes are largely a reflection of the setting in which they are manifest (Sarason, 1971). The conditions characteristic of a particular school system may determine the nature of the innovation process. A growing number of educators attribute the failure of educational reform to the limited attention given to the organizational context in which reforms have been attempted (Goodlad, 1975; Sarason, 1971; Katz, 1953; Miles, 1975; Schmuck & Miles, 1971). Miles (1975) commented that "The state of health of an educational organization can tell us more than anything else about the probable success of any particular change effort" (p. 226). Data collected in the Rand study through on-site visits and interviews with project and non-project personnel support this proposition. The study concluded that the institutional setting, particularly the organizational climate and motivation for change, had more influence on a project's prospects for successful implementation of change than any other factor (Berman & McLaughlin, 1975).

Evidence suggests that the following organizational variables affect implementation of change: administrative and district support; decision-making; communication; motivation for change; district size and complexity; access to outside resources; district wealth; prior experience with innovation; interpersonal skills; and school level. These factors are reviewed below.

Administrative Support

Administrative support is essential to successful innovation. Administrators have the authority to determine what practices are allowed in a school and can effectively encourage or inhibit efforts at change. Brickell (1961) studied innovation in over 100 New York schools and 1,500 classrooms through observations and interviews with administrators and teachers and noted that the administrator "may not be--and frequently is not--the original source of interest in a new program, but unless he gives it his attention and actively promotes its use, it will not come into being" (p. 24). Innovation is frequently characterized by loss of confidence, turbulence and conflict (McLaughlin, 1976b; Runkel & Schmuck, 1974; Brickell, 1961; Fullan, 1972; Nisbet, 1975; Goodlad, 1975; Zaltman, 1973), and administrative support, encouragement and commitment is crucial at this time. The Rand (Berman & McLaughlin, 1975) study concluded that administrative support and commitment significantly influenced project implementation. A study by Skinner (1971) on factors affecting continuation of selected Title III projects in Maine revealed lack of administrative support as the major reason for discontinuation of several title III projects.

Research indicates that the superintendent plays an influential role in successful innovation (Goodlad, 1975; Carswell, 1967; Berman & Pauly, 1975; Brickell, 1961; McKenzie, 1964; Wilkie, 1967; Lin, Leu, Rogers & Swartz, 1966). Wilkie (1967), in an analysis of data collected through interviews with teachers, principal and students, identifies the superintendent's encouragement to the staff

to put forth their best efforts at the risk of a few mistakes, as a crucial ingredient to successful change in an elementary school in Kentucky. The Rand (Berman & McLaughlin, 1975) study observes that although superintendents tend to be remote from the actual scene of innovation, they provide generalizable support that may have made the schools more receptive to innovation.

> The building principal is the key to educational growth in schools. The principal sets the tone and can facilitate or inhibit needed systems and activities. (Beery, 1974, p. 49)

While the superintendent is influential in change efforts, it is the principal who is most crucial in affecting actual implementation of change (Goodlad, 1975; Nisbet, 1975; Bentzen, 1974; Sarason, 1971; Beery, 1974; Culver, Shiman & Lieberman, 1973; Tye, 1973; Lieberman, 1973; Lin, Leu, Rogers & Swartz, 1966; Mahan, 1972; Cheslie, Schmuck & Lippet, 1975; Mort, 1964). The Rand study identified the system's principal as a critical force to innovation in every project examined (Mann, 1976b). In projects which were poorly implemented, the principals redirected or subverted project efforts, and "in those few cases where principals did support the projects, the changes were as swift and dramatic as a proposal writer's fondest dream" (p. 332). Mahan (1972) concluded in a study on implementation of curricular innovations, based on intensive field experience in schools and survey responses of administrators and teachers, that the success of installations depended heavily on the nature of the supportive role played by the principal. Research by Cheslie, Schmuck and Lippet(1975) showed a high correlation between a staff's innovative-

ness and their perceptions of the principal's active support for innovative teachings. Such support may take different forms. Lieberman's study (1973) revealed that shared decision making and staff meetings designed to examine problems and practices were perceived by teachers as indications of concern and support. Other forms of support include provisions of release time for professional activities (Rasmussen & Bank, 1973; Kester & Howard, 1975; Widmer, 1972; Ford Foundation, 1972); visibility and communication (Goodlad, 1975; Ousiew, Tempkin & Maguire, 1975; Widmer, 1972; Lieberman, 1973); and funding and/or resources (Skinner, 1971; Widmer, 1972). Administrative support can lead to greater participation and commitment necessary for effective implementation of change.

District support

District support of the School Board, parents and citizens, can also influence innovation success or failure. Although school boards sometimes assume a passive role, giving authority for most school decisions to the administrators, it is the board that determines school policy and is in a position to inhibit change through lack of financial commitment and/or censure or dismissal. Brickell (1961) suggests that although it is not necessary to arouse active enthusiasm of the school board, it is necessary to avoid their opposition. According to Davis (1975), parent and citizen support was a key factor in the successful implementation of a system-wide organizational change in a large urban school district, and Bridge (1976) argues that parents can make the

difference between success and failure in school innovations. He cites some persuasive examples to substantiate his point:

> Item: In the fall of 1974, the public schools in Kanawha County, West Virginia, were rocked by violence over textbook adoptions. A school was bombed, and six men were arrested, including the protest leader, Rev. Martin Horan. Sheriff's deputies escorted school buses as protests continued. Over 2,000 people protested in Charleston, West Virginia, when 300 books which they believed to be "irreligious and unAmerican' were returned to school reading lists, and sometime later 200 people attended a Ku Klux Klan rally to protest the Kanawha County schools' use of books like Soul On Ice. Carl Marburger, in a New York Times column, argued that the school board had shown an "astonishing insensitivity to local cultural values," and he viewed their decisions as the equivalent of adopting Little Black Sambo in the largely black Newark, New Jersey schools. Marburger advised school boards to permit more parent participation in the selection of textbooks, and he recalled Thomas Jefferson's advice to trust the informed wisdom of the people.
>
> Item: Widespread taxpayer unhappiness over a 26 percent increase in Milwaukee's school taxes led to an attempt to recall the entire fifteen member Board of Education. In Farmingdale, New York, the townspeople rejected the school district's budget by a three-to-one ratio and ousted the incumbent school board members. In east Meadow, New York, several hundred angry parents demonstrated against the district's decision to close an elementary school because of dwindling enrollments. Similar protests were staged in two nearby school districts where declining enrollments forced cutbacks in school services.(p. 366)

Parents, as a group, can exert a powerful force in determining school practices.

Decision Making

Patterns of decision making within a school system or a school building may affect the outcome of innovation efforts. Innovation can take place only through the involvement and commitment of participants and shared decision making is one way of promoting involvement. The Rand (Berman & McLaughlin, 1975) study found that early and continuing participation in decision making by participants of change projects led to greater commitment and involvement and more effective implementation. A study by Johansen (1963) examining the relationships between shared decision-making and implementation of curriculum revealed that increased teacher participation significantly increased the likelihood of implementation. Numerous accounts of non-implemented projects cite lack of shared decision making as a major reason for failure (Warren, 1976; Parkay, 1976; Channon, 1937) and several studies on successfully implemented innovations identify participation or "sharing of power" (Davis, 1975) as a major reason for success (Wilkie, 1967; Carswell, 1967).

Although participation has been called the sine qua non of educational innovation (Giaquinta, 1973), the exact nature of sharing decisions is not clear. Fieldwork from the Rand (Berman & Pauly, 1975) study revealed that both democratic and authoritarian leadership styles characterized successfully implemented projects. Zaltman, (1973) suggests that the nature of decision making leading to effective implementation will differ in accordance with the stage of innovation and Lieberman's (1973) findings indicate that different staffs need different types of leaders. The nature of the innovation may also determine the

most effective decision making style. Wirt's (1976) investigation of the implementation of a reading program in six districts revealed that a coercive approach to implementation was the most successful in changing teacher behavior. In this particular situation, "The project director used his exceptional authority to literally force all the project teachers into conforming to his highly specified instructional program" (p. 356). Sikorski (1975) suggests that in cases where the change is highly explicit, as in this situation, a mandate might be the only way to effect change, since such materials are often resisted. Whether or not teachers sustain the practices, however, is open to question. Sikorski maintains that while authoritarian decision making structures can perhaps facilitate simple changes, participative structures are needed to promote lasting change. Research indicates that many innovations which are mandated through a centralized authoritarian structure are met with resistance, resulting in little, if any change (Hall & Rutherford, 1975; Hall, 1975; Rutherford, 1975b; Reynolds, 1973; Warren, 1976; Porter & McLucki, 1967; Bredo & Bredo, 1975; Havelock, 1974). A middleground between authoritarian and democratic approaches to change needs to be reached. As was aptly stated in the critical analysis of the Comprehensive School Improvement Program (Ford Foundation, 1972):

> It is essential that more systematic methods be developed for drawing the line between imposing change on groups that might have cooperated had they participated in the creation of the proposals for change, and delaying needed changes in naive anticipation of good communication and democratic harmony.(p. 39)

Overall, the literature suggests that while there may be no one appropriate governing style, decision making structures must be such that they promote involvement and commitment by participants of change.

Communication

Open communication between members of a school system is frequently cited in literature as a necessary ingredient for successful change (Parkay, 1976; Schmuck & Miles, 1971; Runkle & Schmuck, 1974; Miles, 1975; Davis, 1975; Marsh, 1964; Zaltman, 1973; Carlson, 1975; Lin, Leu, Rogers & Swartz, 1966). Berman and Pauly (1975) concluded in the Rand study that good communication is an important variable reflecting the organizational climate, that is significantly related to successful implementation. Both Wilkie (1967) and Carswell (1967) identify open communication inside and outside of the school system as a major contributing factor to the success of the programs they report. Communication with other teachers in the throes of change was identified by teachers in the League of Schools--a cooperative League of 18 schools--as the single most important advantage of the League (Culver, Shiman & Lieberman, 1973). Various communication devices were designed within the League to exchange information internal to the system as well as to bring in ideas from the outside. The League offered opportunities for members to serve as sources of information, inspiration, and aid to fellow group members.

Effective channels of communication must include feedback mechanisms between initiators of change and those responsible for implementing it. Only through an efficient exchange of information can anticipated and unanticipated

problems which are likely to arise during implementation, be brought into the open and dealt with. Lack of feedback mechanisms was cited by Gross, Giaquinta and Bernstein (1971) as a major obstacle to the implementation of innovation in the elementary school they investigated. Davis (1975) describes a sophisticated feedback system integral to the success of change efforts in a large urban school district. The system involved staff members, parents and citizens, and was composed of a system-wide advisory structure to the superintendent, a professional growth committee, and organization by pyramids, in which the larger system was broken down into smaller units of authority and autonomy. Such a feedback system ensured open communication and greater involvement of the members of the system. Regularly scheduled meetings is another feedback mechanisms which may foster open communication. The Rand (Berman & Pauly, 1975) study found that projects which made a point of scheduling regular and frequent meetings had fewer serious implementation problems. Carswell (1967) cited regular, long (2 to 4 hours) faculty meetings as crucial to successful change. Through such feedback mechanisms, problems and conflict characteristic of implementation can be brought out into the open and dealt with constructively.

Motivation for Change

The Rand (Berman & McLaughlin, 1975) study found that motivations underlying the initiation of innovation played a pervasive role in implementation:

> Projects generated essentially by opportunism seemed to be a response to available funds and were characterized by a lack of interest and commitment on the part of local participants--from district administrators to classroom

> teachers. As a result, participants were often indifferent to project activities and outcomes, and little in the way of serious change was ever attempted--or occurred. The problem solving motive for projects emerged primarily in response to locally identified needs and was associated with a strong commitment to address these needs. Federal funds were viewed as a way to support the local solution--one which often broke new ground in educational practice.(p. 9)

Attitudes and commitments associated with problem solving characterized successful implementation of change. Such evidence supports the proposition underlying the League of Schools that "an effective change strategy is one through which the alternative best suited to the needs of a given institution come to the attention of those in it and are used in a continuous process of improvement" (Goodlad, 1975, p. 19). Baldridge (1974, 1975) and Gross (1973) also contend that an organizational capacity for problem solving is necessary to promote and sustain innovative behavior. This is in accordance with organizational training which holds that the key to successful organizational self-renewal lies in its capacity to solve its own problems (Schmuck & Miles, 1971). Reynolds (1973) describes an example of a non-implemented project which was initiated solely in response to the availability of funds. This is contrasted with Davis's (1975) account of successful change in a district in which Title III funds were used to meet a need already there. Availability of outside funds frequently leads to an opportunistic motivation for change (Rutherford, 1975a; Pincus, 1974; Sikorski, 1975; Berman & McLaughlin, 1975). Worthen (1967) found in an analysis of Title III proposals that the majority of the proposals were "mere attempts to procure additional funding and thus reduce the strain on the local budget" (p. 107).

Such an opportunistic approach frequently leads to failure. Skinner (1971) found in her analysis of six Title III projects that those that fulfilled local needs had the least difficulty. A problem solving approach in response to locally identified needs appears to lead to commitment necessary to sustain effective implementation of change within a system.

Size and Complexity

Certain demographic variables are correlated with implementation of change. Baldridge (1974) contends that both size and complexity are positively related to innovation. He suggests that structural complexity creates greater role differentiation, providing specialists, middle-level administrators and greater support services to teachers. In such an enriched atmosphere, he predicts a number of fruitful outcomes:

> First, innovations of greater difficulty can be undertaken because classroom teachers and others directly related to the innovation will have backup support, staff help, and specialized resources at their disposal. Second, middle-level management and increased centralization will have the effect of spreading innovations widely. The typical innovation is geared for classroom use, but with the social isolation of the classroom teacher, additional administrative support and middle-level management are needed to break down the insulation hindering the spread of innovation. Finally, we believe that increased complexity can provide teachers with a career ladder that stimulates the innovative behavior appropriate to different levels within the system. This is no small issue, for a major hindrance to educational innovation is the essentially "flat" teacher career line, with advancement usually restricted to administrative levels and with little incentive structure promoting innovative behavior. (p. 29)

Evidence offering support to this hypothesis was collected through a questionnaire to superintendents in which they were asked to identify innovations which their system had adopted. As stated earlier, however, adoption is not synonymous with implementation and the validity of a superintendent's perspective is questionable due to the remote nature of the role. The hypothesis put forth by Baldridge is thus largely speculative. Fleming (1974) questions the reality of such a view:

> I find it difficult not to predict an expanding bureaucracy and proliferating "red tape" as the likely result of increased structural complexity, as these personnel gain visibility and justify their function. (p. 159)

Zaltman (1973) points out that while complexity may facilitate adoption, it may inhibit implementation due to the potential conflict and difficulties characteristic of that stage. Added complexity and levels of decision making may simply increase implementation problems (Pressman & Wildavsky, 1973). Deal, Meyer and Scott (1975) found size, in fact, to constrain innovation. The Ford Foundation (1972) study revealed that small rural systems implemented change more rapidly than large systems. They tended to have less organizational inertia, or strong leadership that was capable of reducing inertia. Problems of large bureaucracies were almost absent in these systems. Innovations in these systems, however, were phased out most rapidly once the leadership changed. Charismatic and aggressive educational leaders prevailed temporarily, but the school traditionalists and the community did in the long run (p. 37). Baldridge (1975) suggests that undifferentiated school systems do not have enough problem solving capacity nor

enough specialized experts to promote innovative behavior. The Ford (1972) study concluded that

> In general, the most lasting application of the CSIP innovations appeared in the middle size suburbs. This occurred partly because these school systems were relatively wealthy and could afford to continue some innovations, and partly because their professional and parental constituencies were generally more favorable to change. But it also developed because these systems were small enough to avoid fatal stand off interest-group battles and yet large enough to institutionalize changes, so that they became more than the highly perishable projects of individual leaders. (p. 37)

Several researchers suggest that the way to reduce problems of communication and coordination, and yet retain the added expertise and resources of the larger system, is to localize to smaller units within the larger structure (Warren, 1976; Bredo & Bredo, 1975; Fullan, 1972; Pressman & Wildavsky, 1973). Davis (1975) describes an example of a large, complex system which effectively accomplished this through the establishment of a "pyramid structure", in which the schools were grouped into smaller, autonomous units.

Access to Outside Resources

Districts having greater access to outside resources appear to favor innovation more than isolated districts (Baldridge, 1974, 1975; Ford Foundation, 1972; Goodlad, 1975). The schools in the League of Schools which were most responsive to change were in lower-middle economic areas with access to cultural resources. Those with less change capacity were in semi-rural areas, removed from other resources. The Ford (1972) study found the most enduring changes also to take place in the suburbs. Rural areas were sometimes quick to

change, but less able to sustain the change. The National Institute of Education points out that "geographical isolation, lack of sophistication, lack of ties to existing sources of information and to others involved in attacking similar problems, and worst of all, lack of resources to overcome these handicaps make the difficulties faced by problem solving groups in rural areas especially acute" (Program Plan, p. 21).

Prior Experience with Innovation

Prior successful experience with innovation is cited by several researchers as a facilitator of change (Kester & Howard, 1975; Wolf & Fiorino, 1973; Sarason, 1971; Widmer, 1972; Baldridge, 1974; Hearn, 1970; Greenwood, Mann & McLaughlin, 1975). The Rand (Berman & McLaughlin, 1975) study revealed that districts with prior innovation experience were less likely to have implementation problems, but that the existence of several innovative projects in a single district often detracted from the attention paid a given project and thus from chances of success. Extensive fieldwork in elementary schools by Mahan (1972) also suggests that the numbers of innovations should be limited. Researchers at The University of Texas have found that too many programs in existence at the same time can place unrealistic and counterproductive demands on the teachers (Rutherford, 1975a; Hall, 1975).

Interpersonal Skills

Successful organizational change requires skills on the part of members of the organization in working effectively with others within the organizational

context (Zaltman, 1973; Schmuck & Miles, 1971; Carlson, 1975; Miles, 1964). Effective sharing of decisions, communication and feedback mechanisms, and problem solving require competence in skills of communication, as well as in planning and problem solving. Fullan (1972) identifies the development of interpersonal and group process skills and the study and understanding of social relationships and institutions as an essential requirement for school reform. Schmuck and Miles (1971), in their work on organizational development, advocate specific methods for training school personnel in communication and problem solving skills.

Elementary versus Secondary

Research has clearly indicated that elementary school organizations are far more successful with innovation than secondary schools (Berman & McLaughlin, 1975; Hawkins, 1968; Goodlad, 1975; Wirt, 1976; Carleton, 1972). Studies suggest that school programs tend to rigidify moving upward in the system (Goodlad, 1975) and that many structural constraints are associated with departmentalization typical of secondary schools (Carleton, 1972). No project examined in the Rand study was able to have an impact on a high school. Change agent programs that included higher grade levels experienced severe management and administrative problems as well as teacher resistance. The study (Berman & McLaughlin, 1975) concluded that

> This tendency toward professionalism among secondary teachers (along with the compartmentalization of the curriculum and classroom scheduling) may not have provided the organizational conditions necessary for significant change efforts. (p. 21)

Innovation Characteristics and Implementation Strategies

A receptive institutional setting is not enough for successful change. Characteristics of the innovation itself and strategies used to implement the innovation also influence the outcome of change projects. The Rand study (Berman & McLaughlin, 1975) revealed that implementation strategies had a vital influence on a project's outcome and played as important a role as organizational variables. Characteristics of the innovation, including the motivation behind initiation; clarity and consonance of goals; scope; complexity; and number of schools and students to be served, are discussed in this section, followed by a review of implementation strategies affecting innovation. These factors include: staff training, user concerns, ongoing planning, local material development, visits to successful programs, a critical mass of participants, incentives, voluntary participation, allowance of time, continuing leadership, anticipation of obstacles and adaptation.

Motivation

The motivation behind initiation of an innovative project affects its outcome. The Rand study revealed that projects that were initiated in response to locally identified needs, in a problem solving manner, were characterized by strong commitment and staff involvement and a high level of implementation. In contrast, projects which were initiated solely in response to the availability of funding were characterized by a lack of interest and commitment on the part of local participants and resulted in little change. Berman and McLaughlin (1975)

conclude that a problem solving initiation may be a necessary condition for successful implementation.

Realistic Goals

Literature frequently cites abstract, unrealistic goals and plans for implementation as a major reason for failure of innovation (Warren, 1976; Bredo & Bredo, 1975; Ford Foundation, 1972; Smith & Keith, 1971; Gross, Giaquinta & Bernstein, 1971; Wacaster, 1975; Jones, 1975; Miles, 1974; Reynolds, 1973; Carlton, 1972; Mahan, 1972). Many innovations of the '60's and early '70's involved complex changes in attitudes and values, and goals were typically vague and abstract. As Smith and Keith (1971) comment,

> The language of the school organization, teaching and goals for pupils remained metaphorical and literary, but neither practical nor scientific. (p. 53)

They observed that "internal, unintended negative consequences occurred in the aggrandizement effect, the false estimation of capabilities and accomplishments" (p. 378). Reynolds (1973) found that the abstractness of a particular proposal for change allowed for multiple interpretations and an eventual "assimilation to the familiar". Miles (1974) comments that such excessively noble, grandiose goals practically guarantee disenchantment and failure. The Ford (1972) study concluded that innovations took best hold when objectives were clearly defined and understood. Sikorski (1975) points out, however, that when setting goals the change planner needs to consider how much fidelity is necessary to determine whether or not the innovation is in fact being used (p. 103). If, as research

suggests, implementation involves adaptation, then precise behavioral goals and plans for action are probably unrealistic. On the other hand, it appears that realistic overall goals that are understood by all participants are an important ingredient for success. Davis (1975) stresses the importance of clear understanding of the nature of the innovation by as many participants as possible. As Miller (1974) says, "in simplicity and clarity lie the keys to communication and effective action" (p. 111).

Congruence of Goals

Congruence of project and institutional goals is necessary for effective implementation of change (Berman & McLaughlin, 1975; Kester & Howard, 1975; Bredo & Bredo, 1975; Skinner, 1971; Miles, 1964; Charters & Pellegrin, 1972; Carlson, 1975; Wacaster, 1975). Support and commitment of participants, administrators and district is necessary for successful innovation and it is unlikely that a project which is incompatible with the institutional goals will be supported, much less implemented. Program aims must fit local interests and priorities.

Scope

The Rand (Berman & McLaughlin, 1975) study found the scope of the proposed change to have a major influence on actual implementation: the best projects were those that set out to make a difference. Narrow treatments did not lead to enduring change. Mann (1976b) explains this finding as follows:

> Big change aspirations seemed to be functional because they provided their participants with early motivation and commitment and because when the inevitable compromises came, ambitious projects could still salvage a significant portion of their purpose. (p. 326)

Complexity

Complexity is often thought of as a deterrent to innovation (Miller, 1974). Undoubtedly, as Rutherford (1975a) observes, "complex programs require more time and effort for effective implementation" (p. 6). The Rand study found, however, that many successfully implemented programs were by no means simple. Mann (1976b) noted, when reviewing the Rand studies, that "the most successful projects relied on various inputs, the availability of different sorts of actor attitudes, long chains of changes and events, and so on" (p. 327). Projects involving major changes in classroom organization, as "open" classrooms, are examples of complex, difficult projects. As Mann explains, however, these projects, given the inherent difficulties, are rarely initiated without the active support of the district administrators, officials and participants. Consequently, institutional support and commitment critical for successful implementation is present from the start. The actual outcomes of these projects can largely be attributed to the implementation strategy. Mann suggests then, that "the message may be that no lesser sort of effort will suffice and the risks of complexity are a necessary condition for success" (p. 327).

Although complexity may characterize many successfully implemented innovations, projects which are structurally complex--requiring coordination

across school grade levels--have been found to be less likely to succeed. The Rand (Berman & McLaughlin, 1975) study concluded that "such projects often broke down because they attempted too much too soon" (p. 17). Bredo and Bredo (1975) also describe a project attempting system wide change which failed to be implemented in part due to its unrealistic scope.

Number of Schools and Students Served

The number of schools and students served in an innovative project may also affect the degree of implementation. Research suggests that the most successful change projects are those in which the number of schools and students are limited (Wirt, 1976; Berman & Pauly, 1975; Ford Foundation, 1972; Bensen & Guthrie, 1968). Open communication and assistance necessary for implementation of change, is unwieldly and difficult to maintain in innovations involving large and scattered populations.

Inservice Training

Fullan and Eastabrook (1973) maintain that the variable critical to effective implementation is user capability. Fullan (1972) outlines three necessary conditions for significant educational change: (1) organizational structures and attitudes among higher authorities that create the opportunity and expectation to innovate; (2) attitudinal receptivity to change on the part of users; (3) skills and competencies of users to perform new roles. He contends that a lack of attention and sensitivity to the latter variable is probably the most important reason for lack of effective change. Hall (1975) also argues that attention should first be

on individuals who must make the changes, rather than on the system. "We do not deny", he states, "the importance of system-level changes; however, we think that change at this level will not be accomplished unless the individual members are attended to" (p. 2). Gross cites in his case study of attempted change in an elementary school, the lack of capability, in skill and knowledge, of participants to perform new roles, as a major obstacle to implementation of change. Brickell (1961) concluded in his examination of innovation in New York schools that "the real source of rigidity in an educational program is not the written guide or textbook, but is the teacher who knows no more about the subject than is contained in that guide or book" (p. 32). Change implies new roles and role relationships and yet, as Fullan (1972) points out, this fact is generally neglected in plans for change. Instead,

> The tendency is to view teachers as resistant, incapable or unwilling to change and to ignore the possibility that teachers' inadequacies in knowledge, understanding and skills are partly a result of their not having had the opportunity and support to develop these competencies in their past and present social situations. The question, then, may not be whether teachers are currently capable of innovation and change, but whether they can come to be capable if the situation is altered to support this development. (p. 13)

Staff training is essential for effective implementation of change. Fullan (1972) warns of the results of change efforts not paying attention to the new demands of the users' role:

> If these changes in individual skills, roles, and role relationships are not part of the change process, users will experience frustration and an inability to change, with the result that the innovation will be respected or used in name only. (pp. 2-3)

Wirt's (1976) account of the difficulty teachers had with a role change required of a particular reading innovation illustrates this point. Teachers were to change their role from classroom teacher or remedial reading teacher, to resource person, working with teachers rather than children. No project provided any training in how to function in this role and, as Wirt said, "It was a matter of sink or swim concerning this aspect of their responsibilities" (p. 358). In one project only six of thirteen teachers were able to make the transition with any degree of success.

Effective implementation requires the development and use of implementation strategies that develop the necessary skills and knowledge to perform the new roles required by the innovation. The need for inservice training is widely recognized in literature as a necessary ingredient for effective implementation (Greenwood, Mann & McLaughlin, 1975; Brickell, 1961; Scanlon, 1973; Ford Foundation, 1972; Rutherford, 1975; Goodlad, 1975; Heathers, 1972; Mahan, 1972; Charters & Pellegrin, 1972; Temkin, 1974). Brickell (1961) found in his study of innovation in New York schools that the most successful innovations were those accompanied by elaborate help and concluded that "the key to successful innovation is assistance to the teachers" (p. 31).

Inservice training must be continuous, in response to emerging needs. One shot deals were reported in the Rand study to be totally ineffective. McLaughlin (1976b) points out that

> Although such training designs have the virtues of efficiency and lower cost, they ignore the critical fact that project implementors cannot know what it is they need to know

> until project operations are well underway. . . . Training programs that attempt to be comprehensive and cover all contingencies at the outset are bound to miss their mark and also to be less than meaningful to project participants. (p. 345)

The Ford (1972) evaluation found that when staff training was not continuous the usages of materials became superficial, sporadic and ephemeral. Rutherford (1975b), when researching the implementation of team teaching, reported that teachers needed long term assistance to make teaming work. He suggests that inservice must be more intense and spread out over a longer time.

Inservice training, to be effective in facilitating change, must also provide follow-up in the classroom. The Rand study (Berman & McLaughlin, 1975) concluded that a strong training component with follow-up classroom assistance was an implementation strategy strongly facilitating innovation. Mahan (1972), when outlining guidelines for collaborative curriculum installation, also stresses the need for inservice training with continuous support and assistance in the classroom after the innovation has been introduced. According to Barker's (1975) study of innovation in an elementary school, teachers repeatedly identified follow-up assistance as an important ingredient for success.

Administrators as well as teachers need retraining for new roles (Scanlon, 1973; Schmuck & Miles, 1971; Mahan, 1972; Ousiew, et al, 1975). If administrators are to support teachers in efforts at change, they must be knowledgeable about new attitudes and skills to be learned by the teachers. Training also puts administrators in a better position to provide assistance to teachers when needed.

Insiders versus Outsiders

Some researchers maintain that inservice training by "insiders" is more effective than training by outside consultants (Lawrence, Baker, Elzie & Hansen, 1974; Berman & McLaughlin, 1975; Wirt, 1976; McLaughlin, 1976b). In a comprehensive review of literature on inservice education, Lawrence, et al (1974) concluded that "School based inservice programs that emphasize self-instruction by teachers have a strong record of effectiveness" (p. 12). The Rand (Berman & McLaughlin, 1975) study reported that teachers complained that most of the outside consultants could not relate to daily classroom problems or that their advice was too abstract to be useful. Assistance that was most helpful was concrete and involved working closely with project teachers in the classroom or in hands-on workshops. Most outside consultants did not do this. Mann (1976b) writes that

> All of the projects which employed outside consultants as trainers dropped them after the first year. They were simply not credible enough, responsive enough, or available enough to succeed. (p. 331)

Universities have generally been found to provide little effective assistance to implementors of change (Brickell, 1961; Ford Foundation, 1972; Berman & McLaughlin, 1975). They are more often than not unaware of operational and political realities within school systems (Ford Foundation, 1972).

Sikorski (1975) points out, however, two conditions upon which effective training by insiders rests: (1) that the trainers have the necessary skills, and (2) that trainees are not in a competitive or threatened stance with the trainers. Studies

indicate that teachers may not have the necessary expertise to train others (Wirt, 1976; Havelock, 1973; Greenwood, et al, 1975). Mann (1976b) points out that teacher trainers are often more acceptable when working in neighboring schools, as opposed to their own: someone working in the same environment who does a demonstrably better job may be viewed as a threat or a show off. When traveling elsewhere it is not necessary to acknowledge the superiority of someone with whom you are in competition. Both the Rand and Ford studies observed such a phenomenon. Schmuck and Miles (1971) suggest that one of the advantages of being an outsider is that trainees are more willing to open up and respond than they would otherwise be. The Rand study found the most successful trainers to be those persons who had paid their dues in the system but were at some emotional, professional and tactical distance from it.

Havelock (1973) outlines advantages and disadvantages of inside versus outside change agents:

The Inside Change Agent has these advantages

-He knows the system
-He speaks the language
-He understands the norms
-He identifies with the system's needs and aspirations
-He is a familiar figure

The Inside Change Agent has these disadvantages

-He may lack perspective
-He may not have the special knowledge or skills relevant to the innovation
-He may not have an adequate power base
-He may have to live down his past failures or the hostility generated in some by his past successes
-He may not have the independence of movement so often required to be an effective change agent

-The inside change agent usually faces the difficult task of redefining his ongoing relationships with the other members of the system

The Outside Change Agent has these advantages

-He starts fresh
-He is in a position to have perspective
-He is independent
-He is in a position to bring in something genuinely new

The Outside Change Agent has these disadvantages

-He is a stranger
-The outsider may lack the knowledge of the insider
-He may not "care enough". He may not be able to identify adequately with the needs of the client. (pp. 50-52)

Outside agents to be effective, must act with great care. Goodlad (1975) cautions that

> The change agent who comes knocking on the door, if he bothers to knock at all, must not be carrying baggage which suggests to his protective host that he plans to move in. It is better if he instead plans to move into the condominiums next door and is merely paying a friendly call to discuss how to be a good neighbor. (p. 159)

Havelock (1973) suggests that a team in which both insiders and outsiders work together may be the best way to capitalize on the advantages of both. Undoubtedly, some outsiders can provide valuable training experiences. If they are to be helpful, however, they must deal with the reality of the classroom teacher and provide follow-up assistance. Since most outside agents are unable to meet these needs in full, an inside-outside team, as Havelock suggests, might be the best way to provide the most effective inservice training. One important finding of the Lawrence study was that "School-based programs in which teachers participate

as helpers to each other and planners of inservice activities tend to have greater success in accomplishing their objectives than do programs which are conducted by college or other outside personnel without the assistance of teachers" (p. 11).

User Concerns

User concerns as well as capabilities must be attended to when choosing implementation strategies. Researchers at the University of Texas have found through extensive experience with teachers in the process of change that the implementation process is characterized by distinct patterns of concerns, in terms of feelings, frustrations and motivations. Their work revealed "that as individuals move from unawareness and non-use of the innovation to ultimate, highly sophisticated use of the innovation, their 'concerns' move through identifiable stages as well" (Hall, 1975, p. 5). Initially users focus on how the innovation will affect them personally. As they start to use the innovation, concern is on managing tasks and when these issues are resolved, the users are able to focus more on the impact of the innovation on students. Hall maintains that the concerns of the implementor and the relationship of these concerns to use play a major role in the innovation process. A very capable teacher may exhibit low level concerns, for example, if moved to a new school. Although capable these concerns will most likely inhibit effective implementation of the innovation. Implementation strategies, particularly those chosen and used by trainers of inservice activities, must be responsive to the level of user concern.

On-going Planning

On-going planning through regular staff meetings was identified in the Rand study as an implementation strategy which promoted teacher change. On-going communication and teacher involvement in day-to-day implementation decisions through regular meetings was critical to the success of projects examined (Berman & Pauly, 1975). Staff meetings provided opportunities for reassessing and clarifying project goals and activities; monitoring project achievements and problems; and modifying practices. Issues could be identified and solutions determined before the problem became a crisis. The study revealed that morale was lower and friction higher in those projects where meetings were infrequent or irregular. Carswell's (1967) study also attested to the value of regular staff meetings for planning and feedback. She identified regular, long (2 to 4 hours) staff meetings as a major contributing factor to the success of the project. Other researchers have also revealed the importance of teacher involvement in decision making and planning (Mahan, 1972; Barker, 1975; Lawrence, et al, 1974; Scanlon, 1973, Davis, 1975). Involvement often leads to commitment necessary for effective implementation of change.

Local Materials Development

Data collected in the Rand study (Berman & McLaughlin, 1975) suggests that local materials development-- as opposed to commercially prepared packages-- promotes implementation of change projects. Local development provided an opportunity to work through and understand project concepts, including roles and

goals, leading to a sense of ownership in project methods and goals. Adaptation of materials to ones own needs was found in the Rand study to be essential in fostering commitment. The study (Berman & McLaughlin, 1975) concluded that "without this 'learning by doing', it is doubtful that projects attempting to achieve significant teacher change would be effectively implemented" (p. 20). Sikorski (1975), however, points out several problems when relying on local development. Teachers may lack the necessary skills and knowledge, or teachers and LEA's may not want to carry out development activities, even if they do acquire appropriate skills:

> Our discussions with mathematics teachers at the 1975 NCTM Conference led us to conclude that while they want to have a determining influence, they do not necessarily want the increased burden of preparing a total curriculum themselves. (p. 51)

Materials development requires certain skills as well as time. The Ford (1972) study commented that "new materials can provide greater variety, but, without strong scholarly grounding, they do not necessarily foster new learning" (p. 21). They concluded, in contrast to the Rand study, that "in terms of cost and teacher learning, the adoption of professionally developed curricula produced far more substantive change than in-house curriculum development" (p. 21). They add, however, that effective use of the packaged curricula was contingent upon systematic teacher training. The key may be continuous training and feedback in a supportive organization which allows release time for such activities. Given such an environment, the advantages of local development seem to lie in the added involvement and commitment which it can foster. Sikorski suggests that

an alternative to local development might be involving users in the developmental process so that significant user input is possible at the time of use.

Visiting Successful Programs

Visiting successful programs has been identified as a particularly useful strategy in helping teachers implement a similar project. Brickell (1961) concluded that "the most persuasive experience a school person can have is to visit a successful program and to observe it in action" (p. 27). McLaughlin (1976b) commented that "The teachers felt that seeing a similar program in operation for just a few hours was worth more than several days of consultants delivering talks on philosophy" (p. 345). It serves as visible proof that the new materials or process can actually work under similar conditions. Marsh (1964) found that teachers, in order to implement the PSSC science program, needed to have credible classrooms at hand. Visiting successful programs can serve to establish the credibility of a program as well as to help clarify its goals, roles and methods.

Critical Mass of Participants

The Rand study found that a critical mass of participants was necessary to build the support and morale of the project staff (Greenwood, Mann & McLaughlin, 1975). Mann (1976b) commented that

> It was important to succeed with enough of a school building's staff to provide a potentially self-contained unit. Allowing for defections, backsliding, and partial implementation; that usually meant not fewer than 20-25 percent of the school's staff had to be thoroughly indoctrinated in project techniques. (p. 237)

Goodlad (1975) and Leiberman and Shiman (1973) also identify a teacher group of early adopters as a necessary condition for reform. Mahan (1972) suggests having a minimum of two teachers per grade level in a building implementing a particular innovation, in order to provide mutual support and assistance. O'Toole (1974) attributes the failure of science programs in part to a lack of a "critical mass" of individuals per building. It is important that implementation strategies work to build such a core.

Incentives

Material rewards are not necessarily related to successful implementation of change. Intangible rewards appear to be of greater significance. According to the Rand (Berman & McLaughlin, 1975) study,

> Our field work suggests that money and other tangible rewards as extra pay or credit, were not effective in inducing teachers to acquire new skills in their own professional interests or concerns did not lead them to see such new learnings as important. (p. 19)

Kimball (1976) concluded in a study on reward and incentive systems used in schools that "A sense of personal achievement and self-confidence appear to be the best incentives to improved teaching" (p. 12).

Voluntary Participation

Literature suggests that voluntary participation facilitates implementation of change. Mahan (1972) found the most successfully installed curricular projects were those in which teachers volunteered and Mann (1976b) reported that projects in the Rand study had the greatest impact on volunteers.

Time

Sarason (1971) contends that time perspective is not seriously viewed as a problem in educational innovations. Numerous case studies serve as evidence, however, that it is, indeed, a problem: lack of time is repeatedly cited as a major reason for failure of change (Packard, 1975; Smith & Keith, 1971; Pressman & Wildavsky, 1973; Bredo & Bredo, 1975; Wacaster, 1975; Reynolds, 1973; Jones, 1973). Charters and Pellegrin (1972) have identified it as a chronic problem concerning implementation of organizational change. Goodlad (1975) cites longevity as one of eight postulates essential for change. Effective change takes time. Hall (1975) comments that "implementing any innovation and achieving a high level of use of that innovation requires more than a one or two-day workshop and a cheerful 'God Bless You'. With complex, highly catalytic innovations and innovation bundles implementation can take 3 to 5 years" (p. 31). The Title III program, assuming that change does take time, funds projects in three year grants, subject to yearly evaluations. Developers must recognize that change is a time consuming process and choose implementation strategies that allow for this.

Continuing Leadership

Continuing leadership of the project director and staff has been cited by some researchers to be critical to successful implementation (Ford Foundation, 1973; Heathers, 1972). Heathers (1972) maintains that "For an innovation to be successfully implemented continuing leadership involving a major time commit-

ment is essential" (p. 63). The Ford (1972) study found the most effective projects to be those in which the directors were present through the planning, implementation and evaluation phases and suggests that "the continuing presence of capable, aware, and fully committed leadership should occupy as high a priority as structure, concept, and organizational commitment in the consideration of agencies when contemplating project assistance" (p. 43).

Anticipation of Obstacles

Implementation is beset with problems (Zaltman, 1973; Goodlad, 1975; Nisbet, 1975). Some educators maintain that anticipating obstacles in advance can help alleviate problems which may arise (Sarason, 1971; O'Toole, 1974; Kean, 1975; Pressman & Wildavsky, 1973; Gross, Giaquinta & Bernstein, 1971). Kean (1975) advocates "creative pessimism" as a specific strategy for implementation:

> Creative pessimism is the process of deliberately establishing a series of potential obstacles of sufficient magnitude, so that if not removed they would prevent anticipated events from occurring. More simply stated, creative pessimism is the act of purposely throwing the proverbial monkey wrench into the machinery, but "on paper", not once the system is already functioning. (p. 3)

Pressman and Wildavsky (1973) comment that "an appreciation of the length and unpredictability of necessary sequences in implementation should lead designers of policy to consider more direct means for accomplishing their desired ends" (p. 143).

Adaptation

Research indicates that adaptation is an inevitable part of the change

process (Hall, 1975; Hall & Loucks, 1976; Sikorski, 1975; Miles, 1964; Jester & Howard, 1975; Archer & Karstellar, 1967; Rocky Road, 1970; Berman & McLaughlin, 1975; MacKenzie, 1964; Havelock, 1973):

> The process of implementation in the instance of educational innovation is essentially a two-way process of adaptation, in which the innovative strategy is modified to suit the innovation. Therefore, the implementation of educational innovation can be thought of as an organizational process whose end product, in the case of a successful innovation, would be an altered institutional arrangement and an innovative strategy modified to suit that arrangement. (Berman & McLaughlin, 1974, p. 10)

Havelock (1973) maintains that "if the client is able to reshape the innovation to meet his changing needs he will be more likely to continue using it effectively" (p. 136). Title III identifies adaptation as the last stage in the innovation process, stating that "The adaptation stage promotes the widespread acceptance and appeal of an innovation and encourages its adjustments to the unique requirements of particular situations" (Manual of Guidelines, 1967, pp. 1-2). Pressman & Wildavsky (1973) conclude that adaptation of a program to the environment is necessary for survival (p. 116). The findings of the Rand study bear this out:

> Where implementation was successful, and where significant change in participant attitudes, skills and behavior occurred, implementation was characterized by a process of mutual adaptation in which project goals and methods were modified to suit the needs and interests of participants and in which participants changed to meet the requirements of the project. This finding was true even for highly technological and initially well specified projects; unless adaptations were made in the original plans or technologies, implementation tended to be superficial or symbolic and significant change in participants did not occur. (McLaughlin, 1976b, p. 341)

In contrast, Scanlon (1973) contends that the importance of maintaining the

integrity of an innovation should not be underestimated. "If millions of dollars are spent in developing a product", he states, "responsibility for quality control should be undertaken" (p. 12). He contributes the poor record of implementation of innovations when outside the original setting to "absence of detailed, systematic specification for the control of the operation" (p. 12). Research indicates, however, that such specificity simply will not work. Too many variables specific to a particular educational setting must be taken into consideration. The Rand (Berman & McLaughlin, 1975) study concluded that an implementation strategy that promotes mutual adaptation is critical to successful implementation. Sikorski (1975) maintains that there should be more mechanisms that help users adapt innovations to suit their needs and wishes and suggests two possible ways this could take place:

> (I) the developmental process could include attention to an innovation's susceptibility to adaptive modification, and (2) implementation assistance could help users make systematic adaptations of innovations. (p. 117)

Field testing to find out how users might need to modify an innovation or focus-group interviewing to identify elements of the innovation which are considered essential and those which could be modified, are two possible strategies which might be used to facilitate the process. She also suggests that developers might work for systematic adaptation rather than replication of a model. Technical assistance could offer methods of gathering and analyzing information in order to make continuous improvements in the innovation (p. 117).

Characteristics of Users

Factors of personal demography, such as age, sex and training, have been found to have no bearing on the success of a project (Baldridge, 1975; Bentzen, 1974; Mann, 1976a; Berman & McLaughlin, 1975).

Summary

In summary, research clearly indicates that organizational variables have a profound influence on the implementation of change. The organizational climate and structure set the stage for innovation, facilitating or inhibiting change. Variables such as administrative support, shared decision making and participation, open communication and feedback mechanisms, and a problem solving orientation to change in response to local needs have a significantly positive effect on implementation. Such variables promote commitment and involvement necessary for implementing change. Demographic variables as size, complexity, location, and prior experience with innovation also influence the degree of change. Organizational capability in communication and problem-solving skills is necessary for successful change. Elementary schools have greater success implementing change than secondary because the organizational conditions within these schools are more conducive to change.

Implementation strategies also play a critical role in facilitating effective implementation of change. Those strategies promoting mutual adaptation are most likely to lead to successful change. Ongoing, long-term inservice training

for project participants is a crucial strategy for implementation. Characteristics of successful inservice include local materials development; involvement of participants in continuous planning; voluntary participation; involvement of administrators as well as teachers; follow-up assistance in the classroom; concrete, "hands-on" workshops; and visits to similar successful projects. Continuous planning and evaluating through regular meetings is necessary for successful change. A critical mass of staff must be involved in a project. Change is facilitated through anticipation of potential obstacles to change and an appreciation of the time required. Continuity of leadership is important during implementation.

Innovation characteristics which facilitate implementation include realistic goals and plans for implementation; compatibility of project and institution goals; and limited target population. Complex projects, given effective implementation strategies, are often the most successful.

Factors of personal demography, as age, sex and training, have no bearing on the success of a project.

INNOVATIONS FUNDED BY OUTSIDE SOURCES

Implementation Problems

Many educational innovations are funded by sources other than the local district. The federal government has spent billions of dollars through programs such as Title III, in efforts to promote reform and improvement in the schools. The Ford Foundation has also been a leading outside agency supporting school reform through additional funding. Temporary funding by outside sources, however, presents additional implementation problems. Miller, in 1967, warned of such difficulties and problems:

> If boards of education use federal monies as a crutch and diminish local efforts, or if school officials take the easiest way out, infusion of federal monies into public schools will offer no assurance of better education. The effective use of sizeable outside monies is not easy, and experience and wisdom in fully utilizing this resource is needed. The times are interesting and challenging--what we make of them depends upon how intelligently and courageously we act. (p. 119)

The Ford Foundation (1972) wryly noted at the closure of their study that change takes more than money, and yet the major, if not sole incentive behind many programs is simply the availability of the dollar (Rutherford, 1975a; Sikorski, 1975; McLaughlin, 1976a; Worthen, 1967; Berman & McLaughlin, 1975). Research clearly indicates that such an opportunistic approach does not lead to change. The Rand (Berman & McLaughlin, 1975) study observed that

> Projects generated essentially by opportunism seemed to be a response to available funds and were characterized by a lack of interest and commitment on the part of local participants--

> from district administrator to classroom teachers. As a result, participants were often indifferent to project activities and outcomes, and little in the way of serious change was ever attempted--or occurred. (p. 9)

The money itself does not stimulate support, commitment or interest in change. Bessent and Moore (1967) comment that commitment to temporary funds is difficult because of the knowledge that the money will be terminated. According to Pincus (1974), federal aid is viewed as unreliable, "soft" money that will disappear. Districts therefore characteristically refuse to use it as a basis for substantial long run changes. Because most federal programs provide seed money to be replaced at the end of a designated time period, problems of continuation of funding inevitably arise. As Jacobs (1967) says, many districts simply can't absorb costs, resulting in short run projects. Pincus also identifies the short time span for many educational experiments as an attribute of federal aid that discourages incorporation of innovations into school systems. Not enough time is allowed, says Pincus, to separate the effects of innovations from the effects of frictions arising from efforts to implement. Funding may also affect setting of goals. Mann (1976a) points out that initial goals may be extremely ambitious, in efforts to secure funds, and then later goals narrow, allowing for easier demonstration of success. Unrealistic goal setting can, however, strongly inhibit effective implementation.

Criticisms of Federal Policy

Some critics strongly attack federal policy regarding aid to school systems (Murphy, 1971; Pincus, 1974; McLaughlin, 1976a; Baily & Moscher, 1968).

McLaughlin maintains that "the financial incentive embodied in Title I is not effective because the receipt of federal money is not in fact contingent upon compliant behavior" (p. 408). He reviews four factors essential in promoting compliance with policy directives: (1) common goals, (2) an incentive system, (3) information feedback and reliable knowledge about effective strategies, (4) effective authority. Few of these conditions are met, he contends, in most federal programs:

> Goals and guidelines are unclear, treatments are inadequate or underdeveloped, incentives to design or implement innovative strategies are few; categorical requirements conflict in important ways with local self-interest, and established authority in non-operational or powerless. (p. 413)

Other critics present similar complaints. Murphy (1971) suggests that the lack of implementation of federal programs is largely political:

> The federal system--with its dispersion of power and control--not only permits but encourages the evasion and dilution of federal reform. (p. 60)

Pincus (1974) maintains that lack of enforcement breeds skepticism toward serious efforts at reform:

> School districts don't perceive the federal government as demonstrating clear or consistent policies toward implementation. There is no clear long term benefit or penalty to a district if it adopts or fails to adopt one set of innovations in preference to another. This tends to reduce the school's respect for federal policies toward innovation, and to breed a certain cynicism as to the merits of serious efforts at innovation. Furthermore, since federal aid fails to systematically support hard alternatives and to scamp easy ones, it in effect encourages a strategy of "grantsmanship". (p. 127)

Many educators question whether or not outside money can in practice facilitate enduring reforms in the schools. McLaughlin (1976a) concludes on a

rather pessimistic note, stating that "the history of Title I demonstrates the limited ability (and interest) of federal or state officials to use the sanctions they already possess and, rooted as these attitudes are in national traditions of federalism and pluralism, it seems unlikely that they will change" (p. 413). Goodlad (1975) contends that greater proportions of non-regular funding used to support innovation will result only in short-run, expensive change. He maintains that outside funding is not likely to promote enduring changes in response to school needs. "If externally encouraged innovative efforts are to avoid a great deal of waste motion", states Pincus (1974), "they must be based on a far more detailed appraisal of the reality of the schools as institutions than is now the case" (p. 135).

Changes in Federal Policy

Changes in federal policy are necessary if temporary federal funding is to lead to successful implementation of reform in schools. McLaughlin (1976a) feels that the most immediate task for federal educational policy makers is the formulation of incentives encouraging districts to seek and use money available in the designated manner. Pressman and Wildavsky (1973) contend that federal policy must not be divorced from problems of implementation:

> The great problem as we understand it, is to make the difficulties of implementation a part of the initial formulation of policy. Implementation must not be conceived of as a process that takes place after, and independent of, the design of policy. Means and ends can be brought into somewhat closer correspondence only by making each partially dependent on the other. (p. 143)

The Rand (Berman & McLaughlin, 1975) study makes some specific suggestions regarding changes in policy considered necessary if outside funds are to result in effective change within schools. The policy implications are as follows:

1. Policy should be concerned with more than mere adoption of projects. Federal change agent policy stimulated initiation of special projects but had little effect on the quality or seriousness of implementation efforts.

2. The critical significance of the institutional setting should come as no surprise to policy makers. If educational technologies are not altered and adapted to local conditions, they are ineffective; information about practices elsewhere seldom goes beyond a level of simple awareness; federal money is used for intended purposes only if the federal purpose is congruent with local plans.

3. If, given a receptive institutional setting, a project's outcome depends on local decisions about how a project will be implemented, federal policy makers might consider ways of encouraging mutual adaptation strategies, which we believe are the key to effective implementation. Guidelines could articulate the value of those elements found essential to mutual adaptation.

4. Federal change agent programs generally are awarded for fixed term grants regardless of the school districts' ability to introduce and sustain the particular innovation represented in their proposals. Federal change agent policies might instead be keyed to stages of innovation and promote the development of the school district's capacity to deal with each stage. (p. xi)

Outside Funding To Facilitate Change

Examples of effective use of outside funding to promote change in school systems do exist. Kurland, in 1967, predicted that our major educational problems would be solved only by incorporating all the sound elements of the old and the new, and using new money to find and implement better ways of more

effectively using old money. He maintained that to effectively use Title III funds,

> educators should take the opportunity provided to assess real needs, plan programs that promise realistic solutions to those needs, and ask for the funds necessary to give the proposed solution a meaningful test. (p. 153)

Recent research by the Rand study supports this view. The study (Berman & McLaughlin, 1975) revealed that successfully implemented projects were those which were initiated in response to locally identified needs, in which federal funds were viewed as a way to support the local solution. In such problem solving projects the funding served to speed up or expand implementation of innovative practices to which the districts were already committed.

Research suggests that outside funding appropriated for the promotion of school reform, although often misdirected and misused, can play an important role in change efforts. Bensen and Guthrie (1968) in an examination of Title III projects, argue that "the likelihood of such significant changes coming about in the absence of outside funding is not great" (p. 36). The National Institute of Education (Program Plan, 1975), drawing heavily on the findings of the Rand study, maintains that characteristics of successfully implemented change are functions of the organization and management of local districts and schools, not of federal programs. They contend, however, that Federal assistance is needed in building problem solving capacities within school districts and identify rural areas as particularly needy of outside assistance in building and sustaining such capabilities. Much of their research is devoted to ways that schools and

districts can be helped to develop a problem solving orientation and the organizational and managerial capacity to make it work. According to Sikorski (1975), the government can play an important role in local change efforts. She suggests that responsibilities can be divided between the federal and local levels at various stages of the innovation process. Options are available, she says, which preserve local choice but do not isolate local educators from resources and colleagues. (See Figure 1)

> The diagram illustrates the fact that government agencies have options corresponding to many stages of educational innovation--need definition, invention, implementation mechanisms, and implementation outcomes--and careful intervention at any of these stages need not threaten local autonomy. (p. 3)

TITLE III

Intent of Title III and Implementation Problems

ESEA Title III was designed specifically to promote innovation within school systems. The belief behind Title III was that "significant educational changes would not come about unless the federal government exercised leadership in encouraging and disseminating innovative ideas in the nation's classrooms" (Miller, 1974, p. 99). Furthermore, Title III was the vanguard of what research now clearly indicates--that efforts at change in schools, to be successful, must be locally generated and managed in response to locally identified needs:

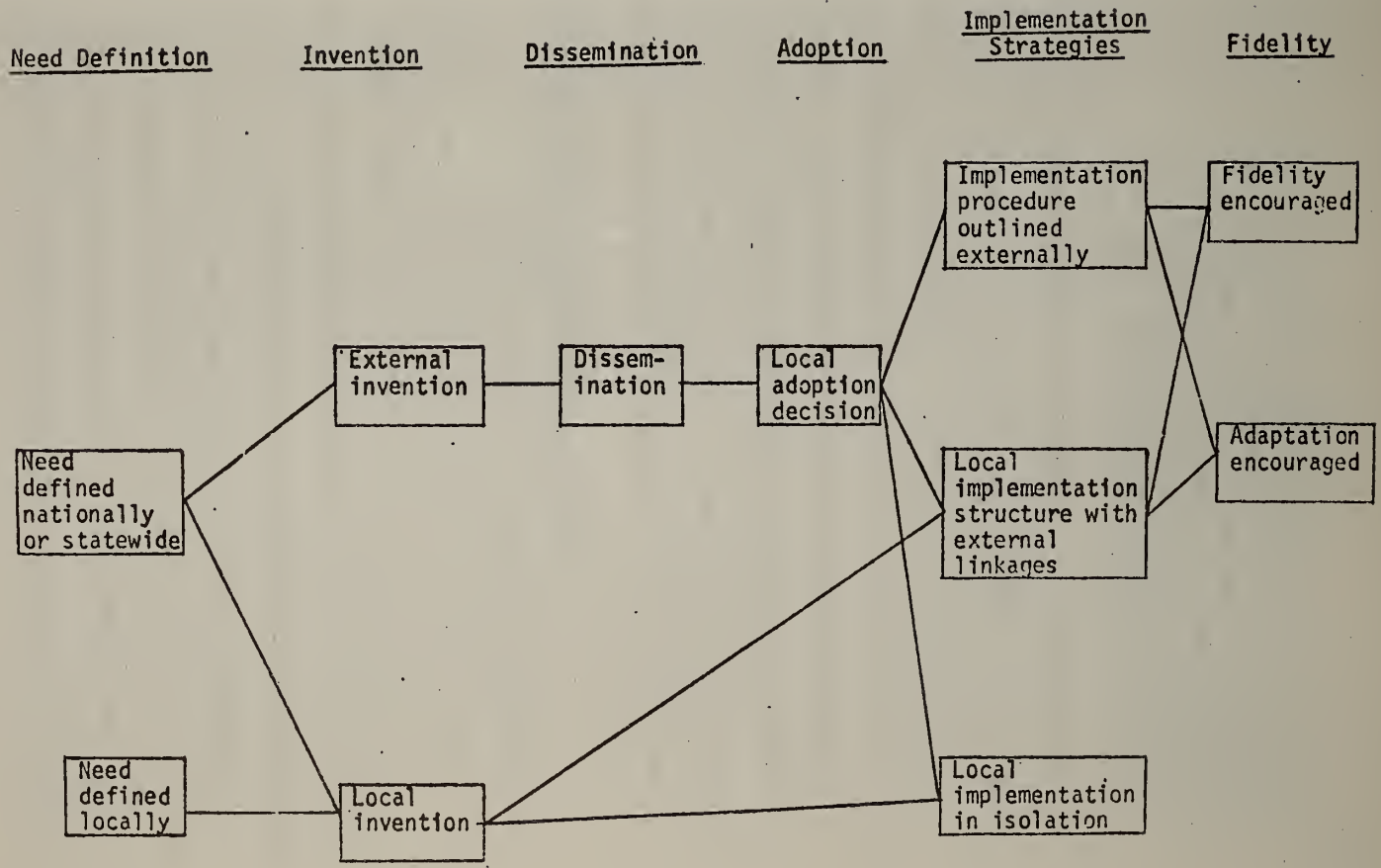

Figure 1: Alternative Paths toward Innovation

> Title III projects are locally initiated, locally administered, and respond to locally identified needs. This conforms to the American commitment to local control of education and also fulfills one of the conditions for educational change: that it must rise out of local concern and be sustained by local conviction. (Annual Report ESEA Title III, Fifth Annual Report, p. 4)

The Rand Corporation (Berman & McLaughlin, 1975) in its recent study on federally supported programs, found that the competitive nature of Title III did, in fact, sometimes promote a problem solving approach to change, permitting district staff to start up projects that responded to local needs and interests. However, Title III projects were plagued with problems of implementation. Miller cited inadequate implementation as a weakness of Title III in 1967, as well as in 1974. Continued implementation of Title III projects following withdrawal of federal funds was also a major concern.

Lack of Literature on Implementation of Title III

Over 1-1/2 billion dollars has been spent over the past ten years promoting innovation through Title III projects. For all the money spent, however, literature says remarkably little about what really has, or is presently going on in Title III projects, before or after withdrawal of federal funds. Giaquinta (1973) notes that serious follow-ups to determine the extent to which innovations, once implemented, become part of the established and accepted routine, are unavailable. Annual Title III reports, state evaluations, studies on impact and continuation, and numerous articles were reviewed in this study. Nearly all of these reports, however, stop short at the structural level

of implementation (Charters & Pellegrin, 1972) and report only products or the results of the innovation. Eight of ten impact or continuation studies that were examined collected data through a questionnaire to the superintendent or project director. The other two studies relied heavily on information from the Director or school administrators. Little attention, if any, was paid to the implementors' perceptions or their behavior. Data collected in this manner tell us little about what changes in behavior actually resulted from the project.

One indication of the effectiveness of a project is the extent of its continuation following withdrawal of federal funds. Studies on the continuation of Title III projects have been made, but they are limited due to methodological weaknesses. They are usually large in scope, report the products of innovation rather than the process, and rely on superintendent or project director reports. Research (Goodlad, 1975; Gross, 1973; Hall & Loucks, 1976; Deal, Meyer & Scott, 1975; Berman & Pauly, 1975; Greenwood, Mann & McLaughlin, 1975) indicates, however, that the perceptions of persons so removed from the scene of the innovation are open to question:

> Our fieldwork suggests that research that has queried only superintendents or project directors about project continuation may have underestimated the effects of federal seed money. It is difficult for a district administrator to know about incorporation at the classroom level; indeed, in larger districts, a superintendent may not even be aware that a federally sponsored project has been continued under a different funding umbrella, under a different name. (Greenwood, Mann & McLaughlin, 1975, p. 48)

These studies also assess continuation of a project in terms of whether or not the local district provides financial support for the project following withdrawal of

federal funds. Practices of an innovation, however, might continue despite termination of funds. The Rand (Berman & McLaughlin, 1975) study found that at the classroom level, teachers or principals often planned to assimilate parts of a project into the regular routine, with or without formal project affiliation, or district sanctions. Some projects might be reported as continuing even if products or processes were not actually still in use. Brightman (1971) recognizes that projects often continue to use fixed cost items (such as AV equipment) as indicators of continuation despite actual project discontinuance. In this study, however, as in Kirkpatrick's (1973), only one question to the issue of actual continued use of materials and/or concepts is addressed.

The Second Annual Report of Title III (The Rocky Road, 1970) recommended that "a major study should be undertaken to determine what we have learned about innovation and the process of educational change from PACE" (p. 16). Such an evaluation is yet to be made. The Seventh, and most recent (Educational Innovation & Development, 1975), Annual Report of Title III commented that "Presently there is a need for a national review of the Title III experience. Approximately $1.5 billion in federal funds have been spent on educational innovation and improvement since the program was introduced by the Congress in 1965; yet a comprehensive evaluation has yet to be made" (p. 14). They recommend that money be allocated to fund a study documenting the 10 year history of ESEA Title III.

Stanford Research Institute is in the process of conducting an evaluation of the National Diffusion Network, a linkage network supported by Title III to

promote the exchange of successful ideas, materials, and programs within and across state lines. One of the goals of this study is to:

> Identify the major influences or determinants of adoption and implementation of educational innovations. (Emrick, 1976, p. 2)

Data from this study however, are not yet available.

The Rand study proved to be the most relevant piece of research on implementation and continuation of change--in Title III projects as well as other federally funded programs--through its attention to the perceptions and behavior of the implementors of change. Findings of the Rand study have been reported extensively through this study. The past year of the Rand study has been devoted to examining effects of projects following termination of funds. Although data on this year of study is not yet available, significant predictions based on previously collected data have been made.

Factors Facilitating Continued Implementation of Title III Projects

The Rand study revealed clear and consistent patterns of continuation. Decisions about project continuation were found to closely parallel decisions or motivations to initiate a project. Projects which were initiated with strong district support and which were also seen as a solution to a particular problem were incorporated almost without exception. Those that represented an opportunistic response to available dollars and received little or no support from district administrators withered away, even where project objectives were met. When the problem was defined at the federal level and solutions

imposed, as with Career Education and Right to Read programs, federal intent was likely to be subverted. The study found that projects which replaced existing practices, rather than adding on new activities or materials, were more likely to continue:

> Our observations suggest that the ancillary materials employed by these projects were likely to fall into disuse without active encouragement of special project staff. In the case of add-on projects, it seems likely that when special project status and staff go away with the last federal check, these additional materials and supplementary activities will be discontinued. (Berman & McLaughlin, 1975, p. 12)

Innovations including teacher training or staff development were found to have been incorporated or continued almost without exception. Staff development projects expected little backsliding in teacher behavior. Although most of these projects are formally terminated with withdrawal of funds, fieldwork from the study suggests that the new behaviors of the teachers will be continued. Projects perceived as central and successful, that had the support of the staff and were not too expensive, were likely to be continued. Evaluation evidence did not appear to play a major role in continuation decisions. Discontinued projects were characterized by a high level of staff or administrative turnover.

In summary, the Rand study found the following factors to be related to the incorporation or continuation of federal programs:

Characteristics of the Innovation

-Congruence with formal and informal district goals and priorities
-A dominant staff training component
-A focus on project activities that were intended to replace (rather than add to) current practice
-Locally initiated project design and material development

Characteristics of the Institutional Setting

-A high level of commitment and support from the district administrator
-Active consumer demand

External Factors

-SEA or federal priorities consistent with project goals and treatment (Greenwood, Mann & McLaughlin, 1975, p. 52)

In addition to lack of the above conditions, the study concluded that cost, special staffing requirements, and a high level of staff or administrator turnover were likely to inhibit incorporation.

Widmer (1972) and Drury (1971) also concluded in studies on the continuation of Title III projects that continuity of leadership is an important ingredient to the continuation of projects.

Skinner (1971) concluded that Title III programs that fulfilled a need legitimately considered a school function, had the least difficulty and were most likely to continue to be implemented.

Information from state reports was culled and reported in The Rocky Road Called Innovation (1970). Much of this information parallels findings of the Rand study. Reasons for project continuation included the following:

-Projects were developed by the group or school district that would be operating them, if continued.

-Projects in, or close to, urban areas tended to be continued, for three reasons: (1) availability of personnel, (2) pressures brought upon local authorities, and (3) the increasing recognition of the critical nature of the central city problem.

- Those projects that had as their objective the improvement of elements of the existing school program were most likely to be continued.

-In rural areas, projects that utilized electronic media, principally data processing for educational use, for the purpose of offering expert instruction to those for whom it would not normally be available were generally adopted.

-Projects that had full-time directors appeared to have a better chance of continuation than those which had only part-time personnel as leaders.

-Projects that worked closely with regional laboratories seemed to have better developed and better implemented programs. The combination of research and demonstration made for more effective projects. (p. 10)

Major reasons for project discontinuance were as follows:

-In rural states it was difficult to obtain competent personnel. Long distances, climatic problems, and lack of available recreational and cultural activities appear to discourage people from working on these projects.

-Projects that were supplementary in the sense that they were added on to, but never became an integral part of, the school structure tended to be discontinued. They were looked upon as a frill or extra.

-High cost projects were not adopted because of the tightness of educational budgets. When cost effectiveness was not taken into consideration, the probability of adoption was minimized.

-Projects that showed evidence of poor planning, such as fuzzy objectives, nebulous procedures, inappropriate evaluation procedures, were almost always discontinued.

Project cost is frequently cited as a major reason for formal project discontinuation (Skinner, 1971; Brightman, 1971; Kirkpatrick, 1973; Polemeni, 1969). Greenwood, Mann and McLaughlin, (1975) suggest, however, that cost

constraints "may sometimes be a red herring, drawing attention away from the fact that a particular project--despite its relative merits or successes--was not continued or incorporated simply because it did not represent a high priority for the district" (p. 53). Continued implementation requires commitment and support, from teachers and administrators. Lack of support is often identified as a major contributing factor to discontinuation (Skinner, 1971; Kester & Howard, 1975; Widmer, 1972). A Project director of a non-continued project made the following comment:

> There's no honest commitment and concern by decision makers (central administrators). They found the program acceptable as long as it didn't cost them money. They have a superficial participation but not a real gut level involvement. . . more of a kind of disinterested and reluctant approval. . . an act of omission rather than commission. (Widmer, 1972, p. 64)

Such disinterested approval characterizes opportunistic projects. They are not likely to be implemented or continued. Widmer found that in projects that continued, in contrast to those that did not, "their school systems seemed to be much more supportive, they seemed to bend, to accommodate, indeed to change for the projects" (p. 65).

Research (Hearn, 1970; Polemeni, 1969; Johnson, 1964; Brightman, 1971; Widmer, 1972; The Rocky Road, 1970) suggests that local commitment through funding enhances the prospects of formal continuation of the project after federal withdrawal of funds:

> It appears that when local funds are included in the initial funded project, the tendency is for the project to continue after the withdrawal of Title III funds. (Polemeni, 1969, p. 115)

Widmer (1972) noted that all of the non-continued projects--those with no continuing financial support--in her study received absolutely no local cash over the three year period of funding. Brightman (1971) recommended that increased financial support by local school districts should be secured by the project during the period of federal funding. Money serves as tangible evidence of a district's commitment to a particular innovation. Johnson (1964) maintains that "granting of money to a district to improve its educational program must be contingent upon tangible evidence of its desire for change". Local funding is one indication. Some districts, however, may simply not be able to provide funds. Skinner (1971) found that in economically impoverished areas, it was difficult to continue even with strong district support. This would, of course, depend on the nature of the project. Projects aimed at developing problem-solving capacities within a system would most likely require less funding than a science marine laboratory, for example. If continuation is set as a project goal, then realistic long term solutions to local problems might be arrived at and implemented. Brightman (1971) found that 85.2% of continued projects had continuation as a specific project goal. He suggests that states encourage project continuation to be set as a specific goal.

Other factors contributing to the discontinuation of Title III projects have included red tape (Skinner, 1971; The Rocky Road, 1970); logistical and technological obstacles (Kansas Title III ESEA Impact Study, 1972; Skinner, 1971); lack of qualified personnel (Kansas, 1972; The Rocky Road, 1970; Jacobs,

1967); overambitious and ambiguous goals (Skinner, 1971; Miller, 1967, The Rocky Road, 1970); and inexperience with public relations (Miller, 1974; Jacobs, 1967).

To summarize, research suggests that continued implementation of projects following termination of federal funds is contingent largely upon the motivations and commitment of the district and principal actors. Projects which are initiated in response to a locally identified problem, with strong district support and commitment are likely to continue. Strong evidence of district commitment may be shown through local appropriation of funds, along with federal funds, throughout and following the designated time period of the project. Projects that add on new materials and activities, rather than replacing and improving existing practices, will most likely not continue to be implemented. A strong staff training component is an important ingredient to continued implementation. Continuity of competent leadership and access to resources facilitate continuation of project concepts and activities. Project continuation--of activities and materials, if not funding--should be set as a goal of the project.

Continued Implementation of Title III Projects in Maine

Literature on the degree of continued implementation of Title III projects in Maine is almost non-existent. Some information on project implementation is revealed through yearly evaluations by project directors as well as those conducted by an outside team of Title III educators. The evaluation by the outside team

usually involved direct contact with various persons participating in the project, including administrators and teachers, as well as the project director. However, only a small percentage of the total number of persons involved were observed and/or interviewed, thus limiting the data to the perceptions of a few. One statewide study on the continuation of Title III projects in Maine (Kirkpatrick) was conducted in 1972, but it ignored perceptions or behaviors of persons responsible for implementing the change and thus revealed little about the actual degree of continued implementation of the projects. An evaluation of the Title III "minigrant" program was made in 1974 but it yields data of limited value to this study because the funding through the program was awarded in small amounts to individuals, rather than to the institution as a whole. A review of dissertation abstracts reveals only one dissertation on Title III in Maine. This was done by Jane Anderson Skinner (1971), entitled, "A Study of Factors for Continuance or Discontinuance of Selected Innovative Educational Programs", and examined six Title III Projects in Maine. It yielded some relevant data, but was limited due to the fact that an average of only eight persons per project were interviewed, with only one of these being a teacher. No study assessing the degree and quality of use of <u>each</u> individual responsible for implementing the innovation has been conducted.

This study will attempt to identify and analyze two successfully implemented Title III projects in Maine which continue to be in use following withdrawal of federal funds. Each individual responsible for implementing the innovation will be

interviewed, using the LoU Instrument, in order to assess his/her actual level of implementation. Factors facilitating implementation will be identified and documented through subsequent analysis of the projects.

CHAPTER III

METHODOLOGY

Introduction

The procedures used in this investigation and the rationale for their use are described in this chapter. Included in the chapter is a description of the process of selection of Title III projects to be analyzed; methods of collecting data; instrumentation; and administration of the instruments.

Selection of Title III Projects Which Continue to Be Implemented Following Withdrawal of Federal Funds

Documentation on Title III projects served as the primary source of information in the identification of two projects which continue to be successfully implemented following withdrawal of federal funds. Records in the Title III office of the Maine State Department of Education were made available for review and examination by the Title III Coordinator. The documents made available included initial project proposals, yearly evaluations by the project director and yearly evaluations by an outside evaluation team. The outside evaluation team was composed of Maine educators who were not involved directly in the project,

thus providing an objective perspective of the project. Evaluations by the outside teams involved on-site visitations, observations and interviews with project personnel. The head of the evaluating teams was also consulted for further information on the degree of project implementation throughout the three years of federal funding.

Factors facilitating continued implementation, as identified through the literature and summarized in Chapter II (page 79), were used as criteria for selection of two projects which were likely to continue to be in operation following withdrawal of federal funds. These factors are summarized below:

-Initiation in response to a locally identified problem.

-Strong administrative and district support and commitment.

-Project to replace and/or improve existing practices rather than add on additional activities or procedures.

-Dominant staff training component.

-Continuity of leadership.

-Access to resources.

-Continuation set as a project goal.

Available documents were examined with these criteria in mind. Projects satisfying most of the criteria were sought. In addition, only projects which were completed in 1975 or 1976, in which teachers and/or administrators were directly responsible for implementation, were considered for analysis.

Eight three year Title III projects completed use of federal funds in 1975 and six completed use of outside funding in 1976. A brief review of each project, considering factors facilitating continued implementation, is presented in Appendix B.

Only one project completed in 1975, the Coordinating Supervisory Teacher Project, clearly met the criteria for successful, continued implementation. The head of the evaluating teams remarked that the Cooperative Teacher Education Program also continues to be in operation today, however, this project was not selected for analysis due to the fact that it is geared primarily for the training of student teachers and does not include a dominant staff training component.

The ANISA project was the only Title III project terminating use of federal funds in 1976 which was aimed primarily at training teachers. All but one criterion for continuation were met by the project and documentation suggests that it continues to be implemented today. The ANISA project and the Supervisory Coordinating Teacher project were thus identified as projects which were likely to continue to be in operation and were selected for further analysis.

The LoU Instrument

The actual degree of implementation of the two projects selected for analysis was assessed through application of the LoU (Level of Use) instrument, developed and tested by researchers at the Research and Development Center for Teacher Education at the University of Texas in Austin. This researcher

chose the LoU instrument because it was designed by the developers specifically to measure the level of implementation of an innovation, as assessed by the users' behavior. The instrument collects data through a focused interview with the persons actually using an innovation and describes what an individual is doing in relation to the innovation. Eight discrete levels of use of an innovation that an individual may demonstrate are proposed (see Appendix C). These levels range from non-use (Level 0), "in which the user has little or no knowledge of the innovation, no involvement with the innovation", to mechanical use (Level III), when "the user focuses most effort on the short-term day-to-day use of the innovation with little time for reflection", to a highly sophisticated, active use (Level VI) in which "the user evaluates the quality of use of the innovation, seeks major modifications of or alternatives to present innovation to achieve increased impact on clients. . . explores new goals for self and the system" (Hall, Loucks, Rutherford & Newlove, 1975, p. 54). Each level of use is characterized by specific behaviors. The researchers have found that initial use of innovation is typically disjointed, with management problems quite common. With continued use, management becomes routine and the user directs more efforts towards increased impact on the learners and integrates his/her activities with those of other users.

A framework of indices and decision points was developed to organize the behaviors characteristic of each level of use. This framework, the "LoU Chart", is presented in Appendix C. Each level of use is further defined in terms of seven categories: knowledge, acquiring information, sharing, assessing, planning, status reporting, and performing. These categories

represent the major functions users carry out when they are using an innovation. The category descriptions represent typical behaviors at each level. In addition, key decision points are defined to distinguish each level of use. An over-all level of use may be quickly assigned by checking out these points. Further probing in each category yields more specific information on exactly what the user is doing.

Rationale for Design of the LoU Interview

A focused interview is used to measure an individual's LoU. (See Appendix D.) Such an interview "employs an interview guide with a list of objectives and questions but gives the interviewer latitude within the framework of the interview guide" (Loucks, Newlove & Hall, 1975, p. 2). In the LoU interview, a number of specific questions are required, in order to elicit necessary information about the level and category of use. The sequence of the questions, however, as well as the follow-up to insufficient responses is determined by the interviewer and requires latitude within the framework of the interview guide.

According to Loucks, Newlove and Hall (1975), the selection of a focused interview rather than a highly structured interview was based on several considerations:

> The LoU concept is too complex to expect that probes and follow-up questions can be completely standardized and still be appropriate for every situation. (p. 2)

In addition,

> less rigidity also encourages more true-to-life responses since the respondent can follow a natural train of thought. (p. 2)

The researchers note that observation is a recognized alternative to interviewing. They comment, however, that "In the case of measuring LoU, all of the important user behaviors could not be observed without shadowing the user for long periods of time and delving into correspondence, conversations, planning sessions, contemplation, all of which might change if an outside observer were to be present" (Loucks, Newlove & Hall, 1975, p. 3). They point out several advantages of the interview over direct observation:

> (1) Interviews can get at past events, at events when the interviewer is alone, and at situations where outsiders would alter behavior;
>
> (2) Interviews can reveal behavior not occurring during times when observations are made;
>
> (3) Interviews can reveal realationships that cannot be observed;
>
> (4) Interviews are quick and efficient.
> (Loucks, Newlove & Hall, 1975, p. 3)

The potential weakness of reliance on self-report, inherent in interviewing, is recognized by the researchers. This is compensated, however, by the fact that the LoU interview has been developed in such detail that questions can be asked about various independent yet related behaviors that contribute to establishing an individual's overall Level of Use. It has been found in Level of Use research that an individual's responses to the interview questions are highly correlated. The developers conclude that it can be assumed with

a high degree of certainty that the instrument measures what it purports to measure, the Level of Use of the innovation.

Training Program for LoU Interviewers/Raters

A strength of the LoU instrument is that the developers require potential interviewers and raters to go through a training program in order to assure interviewer/rater proficiency and reliability. The procedures and sequence of training activities follow.

(1) Have each person read the Level of Use article included in the manual. Study and discuss the LoU Chart. Focus on decision points, behaviors that describe by their wording.

(2) Study the definition of each LoU and check for consistency with the preceding decision points.

(3) Study the definition of each category and read down the Chart under that category. This should give insight regarding behaviors described under that category at different Levels of Use.

(4) Select one LoU and read across that LoU. Check to see if what is said under each category at that Level is consistent with the LoU as described by both (1) the decision point above and (2) the LoU description in the left hand column. For each category, reread the definition at the top in order to separate the descriptions at this selected LoU into the separate categories.

(5) Read Appendices C and D. These have been printed on colored pages to make referring to them easier.

(6) Using the coding exercises in Appendix A, code each statement according to (1) LoU and (2) category. There is often, but not always, only one correct assignment for each. Discussion of why certain Lou's and categories are more appropriate than others is a useful way to develop knowledge and understanding of the Chart. Suggested "answers" to the exercises are given at the end of Appendix A.

(7) Study the examples of LoU interviews and the rating interpretations given in Appendix B. Use Interview II for a rating exercise.

(8) Listen to an interview tape and form an overall picture of the LoU. Focus on LoU according to categories in so far as it seems profitable at the time of the first rating. Discuss.

(9) Listen to tapes for which an LoU can easily be assigned. Assign overall LoU and LoU for each category. Discuss with trainer, and review tape scripts if they are available. Do this for all levels.

(10) Listen to tapes with some ambiguities which make rating more difficult. Assign overall LoU and LoU for each category. Discuss. (Loucks, Newlove & Hall, 1975, pp. 41-42).

In addition, interviewers/raters are given several tapes to rate independently to determine interrater reliability. A Level of Use Rating Sheet (see Appendix E) is used to record ratings. Individual raters are evaluated for reliability through examination of their percent of agreement with other raters. The system as a whole is evaluated through recourse to standard reliability coefficients. Enough tapes are rated independently and compared with other raters, until minimum reliability is established.

Once reliability is established, the interviewer/rater conducts, records and rates several interviews with innovation users. These are then critiqued by a trainer, followed by a discussion on interviewing style and procedures. This is continued until the interviewer is comfortable and proficient using the LoU interview.

This researcher successfully completed the training program in the format described and was rated as a reliable and proficient interviewer and

rater by the developers. The users of the Title III projects selected for analysis were interviewed and rated for level of use by the researcher using the LoU instrument.

Type of Study

This study is exploratory in that it purports to gain as much information as possible about characteristics of the Title III projects and the sponsoring school systems, in order to identify factors facilitating implementations:

> In exploratory or descriptive research, the investigator usually attempts to collect as much information on as many aspects of the situation as is possible. (Scott, 1965, p. 267)

The study, while exploratory, is focused, however, toward gaining information to answer the research objectives guiding the study. As Katz (1953) points out:

> Even an exploratory study should be so designed as to provide as definite information as possible for a set of research objectives. (p. 75)

The collection of data was guided by the following factors to be analyzed:

1. Characteristics of the innovation itself.
2. Characteristics of the users of the innovation.
3. Characteristics of the school systems sponsoring the innovation.
4. Interactions between the innovation, the users, and the setting and changes that each undergo in the process of implementation.

Demographic characteristics of users of innovations have been clearly shown through literature (see Chapter II, page 60) to have little, if any, effect

on implementation of change. The field work of this study was thus directed toward gaining relevant information on organizational variables and characteristics of the innovations, including adaptations that were made in the process of implementation.

Data Collection

The following sources were used to collect data on characteristics of the innovations and the school organizations, documentation of Title III projects and personal interviews, designed by this researcher, with project and school personnel. Additional information on characteristics of the projects were also revealed through the LoU interview.

Documentation

Documentation of Title III projects in the Title III office at the Maine State Department of Education was made available to the researcher by the Title III Coordinator. Available documents included initial project proposals, yearly evaluations by the project director, and yearly evaluations by an outside team. Records on both the ANISA and the Coordinating Supervisory Teacher projects also included several additional reports and evaluations by other interested persons. The initial proposal provided important background information on the proposed intent and purposes of the project, as well as characteristics of the project and demographic information about the sponsoring LEA. The evaluations proved to be particularly useful in revealing adaptations that were made from year to year, strengths of the projects and problems that were encountered.

The Arbuckle Interview (See Appendix F.)

A personal interview format was selected as the most appropriate means of collecting data on the attitudes, perceptions, and behaviors of persons involved in the projects. It also was viewed as the most direct way of obtaining information on organizational structures:

> In short, if the focal data for a research project are the attitudes and perceptions of individuals, the most direct and often the most fruitful approach is to ask the individuals themselves. . . .The criteria of directness and economy, and the ability to collect data about beliefs, feelings, past experiences, and future intentions have widened the range of application of the interview". (Cannell & Kahn, 1953, p. 330)

The interview was chosen over direct observation for several reasons noted earlier by Loucks, Newlove and Hall (1975):

(1) Interviews can get at past events;

(2) Interviews can reveal behavior not occurring during times when observations are made;

(3) Interviews can reveal relationships that cannot be observed;

(4) Interviews are quick and efficient.

Most of the questions in the interview were open ended, allowing the respondents to reply in her/his own words, structuring the response as (s)he saw fit. As Cannell and Kahn (1953) point out:

> The open question has many advantages stemming from the fact that the respondent is encouraged to structure his answers as he wishes. The technique provides a means of obtaining information which cannot be obtained adequately by use of a closed question. (p. 352)

In addition,

> The relatively free interchange between interviewer and respondent which is characteristics of the open question permits the interviewer to discover whether the respondent clearly understands the question which is being asked of him. (p. 352)

Data Obtained

A list of factors affecting implementation of change, as revealed through literature, summarized in Chapter II, was used as a guideline in the determination of information to obtain and in the design of the interview questions. Relevant information about organizational variables, innovation characteristics, and implementation strategies is listed below:

Characteristics of the Organization:

- -Administrative and district support
- -Decision making structures
- -Channels of communication
- -Inservice education
- -Motivation for change
- -Demographic information
  - size and complexity
  - access to outside resources
  - district wealth
  - prior experience with innovation

Implementation Strategies:

- -Staff training (who, when, where, how, what)
- -Decision making and communication

-Materials development

-Incentives

-Continuity of leadership

-Mutual adaptation

Innovation Characteristics:

-Motivation

-Goals (Realistic? Congruence with district goals?)

-Scope

-Complexity

-Number of schools and students served

-Funding level

Persons Interviewed

Most studies on change projects ignore the point of view of those persons required to implement the changes. All of the studies reviewed in this project that assessed the impact of Title III projects relied heavily on information collected from the project director or school superintendent. Recent research has revealed, however, the fallacies of obtaining data on teacher's behaviors or attitudes from persons removed from the scene of innovation. With this research in mind, the author selected teachers as the primary source of information on project implementation and characteristics of the school organization.

The project directors, school principals and the person acting as the Coordinating Supervising Teacher in the CST project, were also interviewed in

order to compare perspective and to gather additional information on school and project characteristics. The teachers' perceptions, however, were central in gaining an overall picture of project characteristics and the school climate. A profile of sources of data and information obtained for each project is included in figure 2.

Pretesting

The interview questions were pretested on several teachers and principals in order to (1) test the wording of questions so that they were suited to the understanding of the audience; and (2) determine the amount of time necessary to effectively administer the interview. For purposes of efficiency of time and clarity of responses, several questions were rewritten in a closed format to include possible responses in the question. Allowances were made with such closed questions, however, for additional comments if necessary. Only minor changes were made in the bulk of the questions. Thirty minutes was found to be an adequate amount of time for each interview.

A schedule of the Arbuckle interview is presented in Appendix F.

Procedures for Interviewing

Following selection of the ANISA and Coordinating Supervisory Teacher projects for analysis, the Project Directors were contacted and interviews scheduled. The Directors served as the entry point to the projects and the contact with the teachers. Interviews with participating teachers were scheduled through the project directors. The director of the ANISA project

Profile of Sources of Data and Information Obtained in the Coordinating Supervisory Teacher Project

Data	SOURCES					
	Documentation	Arbuckle Interview				LoU Interview
		Project Teachers	Principal	Director	Coordinating Supervisory Teacher	
Innovation Characteristics						
motivation	x			x	x	
goals	x					
scope	x					
complexity	x					
#schools and students			x	x		
funding level	x					
Implementation Strategies						
staff training		x			x	
decision making and communication		x			x	
materials development		x			x	
incentives		x			x	
continuity of leadership	x	x			x	
adaptation	x	x			x	x
Characteristics of the Organization						
administrative and district support		x				
decision making structures		x				
channels of communication		x				
inservice education		x				
motivation for change		x				
demographic information						
-size and complexity				x		
-access to outside resources		x		x		
-district wealth				x		
-prior experience with innovation		x				
Level of Implementation	x	x	x		x	

Profile of Sources of Data and Information Obtained in the ANISA Project

Data	SOURCES			
	Documentation	Arbuckle Interview		LoU Intervie
		Project Teachers	Director Principal	
Innovation Characteristics				
motivation	x		x	
goals	x			
scope	x			
complexity	x			
#schools and students	x		x	
funding level	x			
Implementation Strategies				
staff training		x	x	
decision making and communication		x	x	
materials development		x	x	
incentives		x	x	
continuity of leadership		x	x	
adaptation	x	x	x	x
Characteristics of the Organization				
administrative and district support		x	x	
decision making structures		x	x	
channels of communication		x	x	
inservice education		x	x	
motivation for change		x	x	
demographic information -size and complexity -access to outside resources -district wealth -prior experience with innovation		x x	x x	
Level of Implementation		x		x

served a dual role as principal of the school and the Director of the CST project was the Elementary Supervisor of the district. Interviews with the principal and the Coordinating Supervising Teacher were also scheduled through the project director.

Great care was taken to put the respondents at ease before the interview through reassurances of a nonjudgemental perspective on the part of the researcher, anonymity of responses, and great concern for teachers' perspectives and perceptions of their own behavior as well as characteristics of the school organization. Initial responses of teachers involved in the ANISA project ranged from curiosity to hostility. Parent conferences had been held the previous week and teachers were tired and less than eager to give up time to talk with a stranger. They had also received a fair amount of publicity in the past as an ANISA site and some teachers were tired of the attention paid the project. However, by the second day of interviewing teachers were cooperative and responsive to questions asked. Teachers involved in the CST project were cooperative and responsive although the interviews were closely scheduled, and a time restraint inhibited more extensive probing of questions in some cases.

CHAPTER IV

DESCRIPTION AND ANALYSIS OF DATA

Introduction

This study was designed to identify factors facilitating continued implementation of Title III projects following termination of federal funding. An overview of each Title III project and a summary of data collected through documentation, the LoU interview and the Arbuckle interview, is presented in this chapter, followed by an analysis of the level of implementation and factors facilitating continued implementation of each project.

THE ANISA PROJECT

Overview

Anisa is a comprehensive early education model developed under the leadership of Dr. Dan Jordan at the Center for the Study of Human Potential at the University of Massachusetts, Amherst. Research underlying the model began in 1971 with the assistance of a $242,000 grant from the New England Program in Teacher Education (NEPTE). The model includes a fully articulated theory of child development with derivative theories of curriculum and pedagogy. Anisa defines education as the process of developing human potential and translating potential into action. Five major areas of human potential are

identified and defined operationally in the Anisa model. A more detailed description is included in Appendix G. The Anisa theory of child development and education is essentially a developmental approach to individualizing instruction:

> The ultimate purpose of the Anisa theory of development is to enable every teacher to make every experience opportune for each child. (Jordan, p. 61)

The Anisa Project in Hampden, Maine, was one of four implementation sites in the United States and involved intensive inservice training of the entire staff of the McGraw Elementary School over a three year time period. The training had three major objectives:

(1) Acquiring knowledge and understanding of the Anisa model and the coherent body of theory underlying it.

(2) Developing the ability to apply the theory appropriately in terms of the teacher's own learning and in any educational setting with children at any level of development

(3) Acquiring knowledge (content) of the various disciplines.

The project attempted to link educational theory with practice. Application of theory was largely the teachers' task.

Projected plans called for the training of grades K and 1 teachers during year I, grade 2 teachers during year II and grade 3 teachers during year III. It was anticipated that additional teachers (grades 4-12) could be trained by Hampden teachers and administrators who themselves had been trained during the initial three project years.

Level of Implementation

The LoU instrument was applied to determine the overall level of use of the Anisa Project by the McGraw School staff following withdrawal of federal funds. Fourteen of sixteen teachers in the McGraw School were interviewed. One of these was a physical education teacher and one a reading specialist. Eleven teachers had been with the project throughout the three year period of federal funding. Three teachers joined the staff the third year of the project.

Data collected through the LoU instrument revealed that the Anisa Project continues to be implemented following withdrawal of federal funds. All of the teachers interviewed reported continued use of certain aspects of the model. Behaviors and attitudes most frequently cited pertained to the physical and human environments, as specified by the Anisa model. These included enforcement and modeling of school-wide ground rules; collaboration with other teachers in a team effort, including the sharing of space, materials and responsibility for all children; small group instruction; individualizing of learning experiences; adoption of process versus product orientation; and organization of the physical environment to promote individual learning. Such behaviors were clearly visible to this researcher throughout the period of time spent in the school when interviewing project teachers. All of the teachers were rated at an overall routine level of use (Level IVa) or a refinement level of use (Level IVb), according to the LoU instrument (see Appendix C). Behaviors typical of these levels of use were clearly revealed through LoU questioning. At Level IVa the use of the innovation is stabilized with few if any subsequent

changes being made with ongoing use. At this level, little preparation or thought is given to improving the innovation use or its consequences. Level IVb is characterized by change, with the user varying use of the innovation to increase the impact on students. A profile of the level of use of each teacher is shown in Appendix H. Most of the teachers at Level IVa indicated that they had made many changes in their use of the model in the past, although stabilizing use of it at present. This suggests prior implementation at Level IVb. Several teachers had collaborated with other teachers in the past, indicating previous Level V of use. None of the teachers reported plans for any major modifications or changes in their use of Anisa practices. Most of them appeared to have integrated Anisa beliefs and practices into their own behavior. As one teacher said, "Things are now a part of me."

Characteristics of the Anisa Project

Characteristics of the Anisa Project, as revealed through documentation, the LoU interview with project teachers and the Arbuckle interview with the project Director and project teachers (see Appendix I) are described below. The following factors are discussed: motivation for changes, funding, target population, setting, congruence of goals, incentives for involvement, staff training, materials, adaptation, decision-making, and communication (see Chapter III, pages 93-94).

Motivation and Funding. The project did not arise from a stated need of the district. The Anisa model was developed by Dan Jordan and associates at the Center for the Study of Human Potential, University of Massachusetts.

The superintendent of SAD #22, became interested in the model when informed that sites for implementation were being sought. The general educational goals of the project fit those of the district and the superintendent, joined by the principal of the McGraw School, proceeded to learn more about it. This eventually resulted in a proposal for Title III funds written jointly by representatives of Anisa, SAD 22, the Maine State Department of Education, and NEPTE. The proposal was presented to and accepted by the school board. A three year Title III grant totalling $110,841 was awarded to SAD 22 in July, 1973. The total grant was later increased to $175,841 due to withdrawal of NEPTE funds.

Target Population. The Anisa Project was a comprehensive project requiring the involvement and commitment of a total staff. The site for implementation was the McGraw School in Hampden, Maine. The target population was the school's sixteen K-3 teachers and 451 students. The principal served as project director.

Setting. The McGraw School is a modern, one-story brick building which opened in 1970. The building contains 17 classrooms, a library, cafetorium, clinic, teachers lounge and offices (see Figure 3). The rooms are spacious, well-lighted and carpeted. They open onto one another, fostering a greater sense of community and sharing than in traditionally self-contained rooms. One teacher felt that the physical attributes of the school was a major reason for its selection as an Anisa site. The school itself served as an incentive for teacher participation with the project.

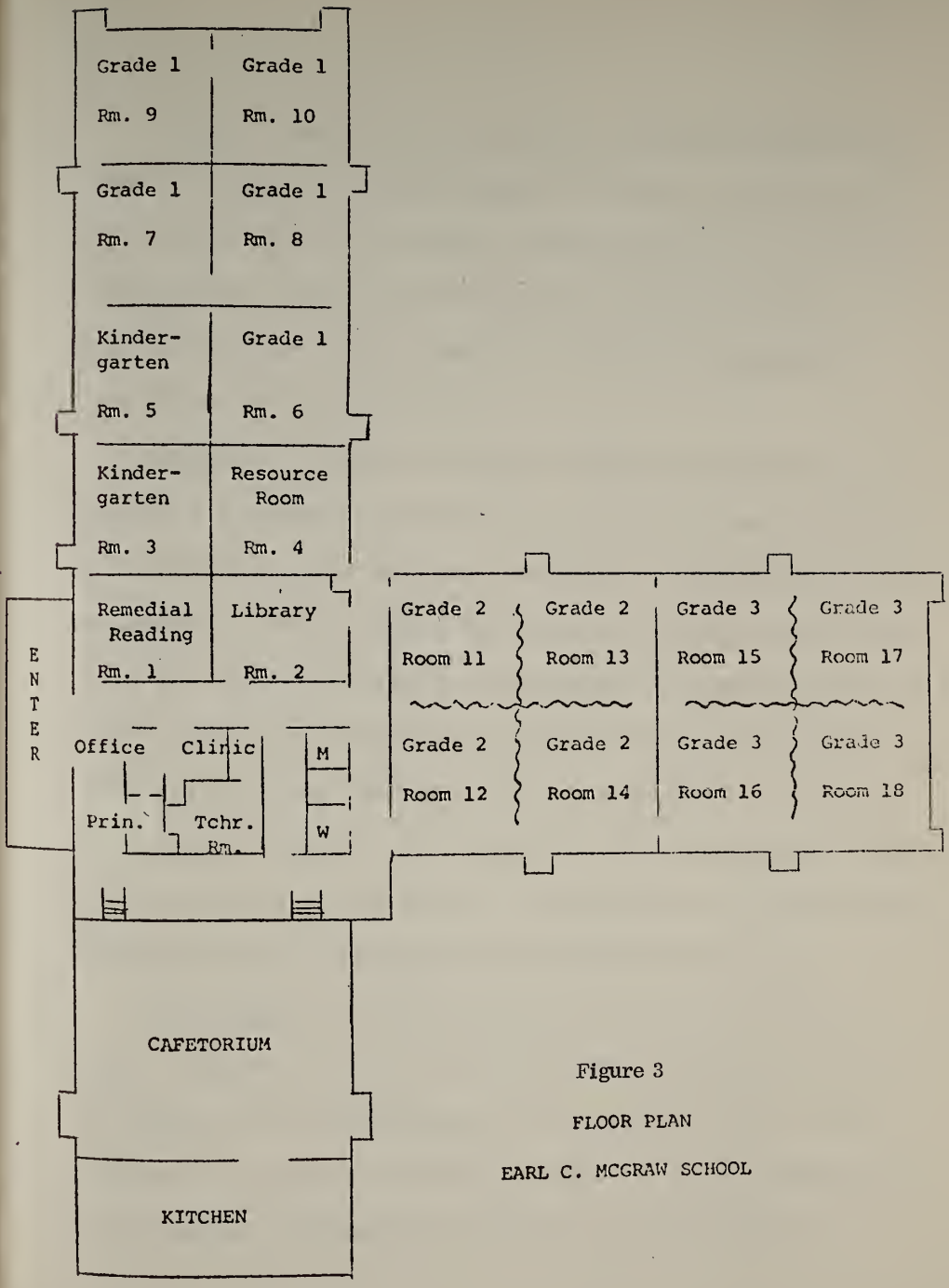

Figure 3

FLOOR PLAN

EARL C. MCGRAW SCHOOL

Goals. The goals and practices of the project closely paralleled those of the district and of the individual teachers. One teacher remarked that they had a good start before the inception of the model and had been moving towards individualization anyway. Eight other teachers made similar comments. The project reinforced, as well as expanded and modified, many beliefs and practices the teachers already held.

Incentives. Teachers at the McGraw School were essentially handed the Anisa Project. Those that did not want to become involved were given the option of transferring to another school within the district. All of the teachers, however, participated. Desire to remain in the same school and need for improvement were cited by teachers as incentives for participation. A majority of the teachers stated that they were impressed with and excited about the project when first informed of it and were "always interested in better education for the kids". Several teachers, however, felt coerced into the project and expressed residual resentment at the means of involvement. As one teacher said, "We couldn't have not gotten involved. It was long in the fire before it was given to us."

Staff Training. The primary thrust of the Anisa Project was inservice training. Intensive, continuous training of the McGraw School staff, including the principal, was provided throughout the duration of the project. Training started in the summer of 1973, when seven teachers, a school board member and the principal participated in an intensive three week workshop at the

University of Massachusetts. This workshop was designed to familiarize them with Anisa theory and practices. The training was theoretically planned for K teachers only but due to the fact that the McGraw School contained only 2 kindergartens, first and second grade teachers also participated. Teachers volunteered to attend and were paid a stipend for their participation. Training consisted primarily of lecture in the morning and work with children in the afternoon. A tremendous amount of reading material was digested by the teachers. The workshop at the University of Massachusetts was followed by two weeks of training at the McGraw School involving the total staff. Participation was voluntary. Summer training was followed up by visits from the Anisa staff three days a week, twice a month, throughout the following school year.

Three week workshops involving the total staff were conducted at the McGraw School during the summers of 1974 and 1975. Participation was voluntary with a paid stipend and was opened to other teachers in the district. Two fourth grade teachers attended the summer of 1974 and fourteen teachers from three other district schools attended the summer of 1975. Teachers from other district schools were not paid a stipend. Followup assistance in the classroom by Anisa staff was provided three days per month for all participants.

Followup assistance by the Anisa staff consisted of individual conferences, videotaping, classroom assistance and demonstrations. Such assistance was available to any teacher if requested. All but two of the teachers took advantage of some means of followup. Staff training and followup assistance was conducted by Anisa staff members, including doctoral students at the University of

Massachusetts. The team changed after the first year but remained stable the second and third years of the project. Although methods of training included a combination of practical, concrete workshops along with lecture, half of the teachers reported the dominant method of instruction to be lecture. Several commented that training initially balanced theory with practice but got progressively more theoretical as the project continued. Eleven of fourteen teachers interviewed cited lack of practical application as a weakness of the project. Although all of the teachers felt that the project was very beneficial, many of them expressed relief that the training was completed, commenting that it was time for it to finish since it required an enormous amount of time and energy on the part of the teachers.

Two of the three teachers who joined the McGraw staff later in the project commented on feeling somewhat overwhelmed with Anisa concepts and terminology, having missed most of the training. They familiarized themselves with the material, with varying degrees of frustration, through extensive discussion with the principal and other staff members.

Materials. The Anisa Project utilized a wealth of extra materials, including teacher-made materials. Title III funding paid for any additional purchases.

Adaptation. The Anisa project was characterized by adaptation. The project was dominantly theoretical to start with, depending on teachers to apply concepts to their own classroom situations and adapt as necessary. All of the teachers indicated that they were presently making changes or had made changes in the past in order to implement Anisa concepts most effectively. One teacher

remarked that "Anisa gives you freedom to adapt. It espouses flexibility." A Title III evaluating team noted that teachers adapted and adopted what they wanted from the model. Some aspects of the project were also modified in response to teacher feedback. The project was thus characterized by mutual adaptation. The teachers adapted practices in response to the project and modifications were made in the project in response to the teachers.

Decision Making. Most of the design and planning of the project was done by the Anisa staff. According to teacher reports there was no teacher input to start with, but as the project progressed teacher input expanded and modifications were made in response to teacher views and requests. The teachers in general felt that the Anisa staff was responsive to their feedback whenever possible.

Communication. The Anisa Project called for total staff involvement and close collaboration. Several teachers remarked that the project would not have worked without the teaming of the whole staff. Staff members were in daily contact with one another. Frequent meetings, informal and formal, were held. All staff members were easily visible, in part due to the physical lay-out of the building. As one teacher said, "You can't hide!" The staff met regularly with the Anisa team and Anisa staff members spent three to six days a month in the school for followup assistance, depending on the year of the project. Teachers were in daily contact with the principal, who spent most of his time with teachers in the classrooms.

Eight of fourteen teachers interviewed made references to tensions and pressures that developed as a result of the project. The Anisa Project received a fair amount of publicity--articles were written about Anisa, lectures were given and numerous visitors frequented the building--which many teachers perceived as creating a pressure to perform. Several teachers commented on how this pressure led to competition between teachers. According to one staff member "The pressure and competition was fierce, in contrast to a previously closely knit group." One teacher commented that teachers were trying to outdo each other. Another remarked that by the end of the third year the morale of the group was very low, with some persons giving up entirely.

Characteristics of the School Organization

Characteristics of the school organization as revealed through documentation and the Arbuckle interview, are described in this section. These variables include communication and decision-making channels; district and administrative support; parent involvement; inservice education; prior experience with innovation; demographic information (see Chapter III, page 93).

Communication Networks. Teachers in the McGraw School are in frequent contact with one another and with the principal through frequent informal and formal meetings and gatherings. The physical lay-out of the building, with rooms opening onto one another, also puts teachers in close contact with each other, fostering a strong sense of community and sharing. Staff meetings and grade level meetings are held weekly. Specialists meet regularly with teachers and numerous committees composed of teachers group as needs arise. Wednesday afternoons are reserved for inservice activities, usually starting with a staff meeting. Released time is provided and attendance is required. Mornings are also often used for meetings. The principal plays a visible role in the school, spending most of his time with teachers and in the classrooms. All of the teachers interviewed felt that communication between teachers and the principal is very good, with both social and professional issues discussed freely and openly. The majority of teachers also felt that communication among teachers was very good although several commented that it is limited to discussion of social issues with professional issues not discussed as freely as they might be. One of these teachers remarked that communication is more open and relaxed now, having always been tied up with Anisa meetings in the past.

Decision Making. Data collected from the teachers and the principal indicate that teachers in the McGraw School have a large input into school decisions

and are actively involved in school affairs through indirect and direct channels. The principal is continually informally assessing teacher needs and feelings and is responsive to teacher feedback. Although staff meetings are usually initiated and led by the principal, the agenda is determined by staff needs and teachers are able to call and lead meetings at any time as needs arise. Many teacher committees are formed in response to emerging district and school needs and concerns. They are initiated by the principal and/or teachers depending on the needs and interests. Participation is voluntary although it is assumed that teachers will involve themselves in school affairs. Although the school board ultimately determines the curriculum in the school, all the teachers reported that they have tremendous latitude in determining the approaches and materials that they use in their classrooms. All but one teacher perceive their views to be actively solicited and acted on by the administration. This teacher voiced the opinion that teacher input is inconsistent, limited in some areas and yet actively acted upon in others. Decision making in the McGraw School is shared wherever possible and the principal is responsive to school needs.

District and Administrative Support. All of the teachers reported active support from the principal. His responsiveness to teacher needs was frequently mentioned. Other means of support include visibility, availability, constructive feedback and defense of teachers.

Although teachers are rarely in contact with the superintendent, half of the staff feel that he is receptive and available if needed. The remaining teachers

were unable to rate the extent of his support or reported passive support due to the infrequency of contact.

Teachers perceptions of the support from the school board varied. Some teachers view the board as being supportive of teacher efforts and concerns. A committee of five board members, called the Education Committee, meets each spring to discuss problems and concerns and was cited by several teachers as evidence of board involvement and support. The provision of a half day release time and the differentiation of the staff in the McGraw School, including six full or part time specialists, are also indicators of strong district support. Other teachers perceived the board as being too remote to be able to judge the degree of their involvement or support.

Parent Involvement. According to all teachers parents play an active role in McGraw School activities. Involvement includes parent volunteers as room parents, conducting enrichment activities and serving on a Title I evaluation team. Parents frequently visit the building.

Inservice Education. Wednesday afternoons are reserved for inservice activities through released time. Attendance of all teachers is required from 1:30 to 4:30. Activities conducted during this time include staff meetings, grade level meetings, inservice workshops or presentations. Teachers also often use this time to work in their own classrooms. Inservice activities are usually initiated by the principal or school specialists in consideration of and in response to teacher views and needs.

In addition to Wednesday afternoons, each teacher is allowed two days per year for professional growth activities plus additional visits to other schools or organizations may be made with administrative approval. Teachers are reimbursed for professional courses.

Prior Experience with Innovation. Most of the McGraw School staff reported no prior experience with innovation. All teachers, however, and the principal, considered themselves open to new approaches and ideas.

Demographic Information. Hampden is a small, middle-upper income, rural community located approximately 10 miles from Bangor, Maine. Many Hampden residents work in Bangor and its proximity to the city as well as to the University of Maine campus in Orono make it a desirable residential community.

Hampden is part of a consolidated school district, SAD 22, with two adjoining towns, Newburgh and Winterport. In addition to the McGraw School in Hampden, the SAD supports four other schools: the Weatherbee School, grades 4-8, in Hampden; the Hampden Academy, High School, in Hampden; the LeRoy Smith School, grades K-8, in Winterport; and the Newbery Elementary, grades K-6, in Newburgh.

The McGraw School staff consists of sixteen full time teachers, including three specialists (reading, LD and guidance, and physical education) as well as a part time staff of a music teacher, an art teacher and a speech therapist. Title I funds support three teacher aids and one assistant teacher.

CONCLUSIONS:

Data collected through the LoU instrument indicate that the Anisa Project continues to be implemented following withdrawal of federal funds. As several teachers commented, parts of the project are now integrated into their behavior. Factors which appear to have facilitated implementation of the project are outlined below. A discussion follows.

(1) strong administrative support

(2) a target population limited to one school

(3) involvement of a total staff

(4) physical lay-out of the school

(5) collaboration and frequency of staff contact

(6) congruence of project goals with teacher goals

(7) project replacing and/or improving practices rather than adding onto existing practices

(8) mutual adaptation

(9) organizational climate conducive to change
- -open communication
- -frequent contact
- -active teacher involvement in school affairs
- -strong supportive leadership
- -district support
- -release time for inservice activities

(10) intensity and duration of inservice training, including followup classroom assistance

(11) availability of published and/or teacher-made materials

(12) adequate funding

The involvement and commitment of the users of an innovation is central to successful implementation of change. Certain characteristics of the Anisa Project were significant in promoting involvement and subsequent implementation. Research has documented the importance of administrative support when attempting changes (See Chapter II, pp. 26-28). The Anisa Project necessitated strong administrative support in order to introduce it to the McGraw School staff and with this support required the involvement of the total staff. The total staff involvement led to teaming and collaboration which appeared to enhance teacher involvement and implementation. Teachers were able to get support, reinforcement and help from other teachers or from the principal. The physical lay-out of the building, with rooms opening onto one another, added to a sense of community and sharing. Teachers could not help but become involved. Rather than adding onto existing practices, the project replaced or improved practices. Many teachers felt they were heading in the direction of the project anyway and were thus more willing and able to involve themselves. Data collected in this study also suggest that involvement and subsequent implementation was enhanced by the adaptation the model demanded, due to its theoretical nature. The project required the teachers to apply Anisa concepts to the realities of their classrooms and to adapt them to their own needs. Such involvement and modification of practices suiting the teachers' particular situations appeared to have led to the incorporation of such practices into the teachers' behaviors. Although most Anisa teachers complained of lack of practical application, all teachers were actively involved in the project and implemented certain parts of the model.

Further research on which components were implemented and which were not, and the extent of practical application provided by the project, needs to be conducted. While the teachers were modifying their behaviors, project modifications were made as well, in response to teacher feedback. It is doubtful that the teachers would have continued to be involved if they had felt the project unresponsive to their concerns and perspectives.

The organizational climate of the McGraw School is conducive to change and appeared to have facilitated implementation of the project. The school environment supports teacher involvement and growth through strong, supportive leadership, a staff of committed, involved teachers, open and frequent communication among staff, strong district support and provision of released time for inservice growth activities. The setting was ideal for a pilot site of the Anisa Project.

Successful implementation of change takes more than involvement. Training is necessary to build new knowledge and skills. Inservice training was the dominant thrust of the Anisa Project and the project could not have been implemented without it. Two of the three teachers joining the project in its third year of operation had greater difficulty in understanding and applying Anisa concepts, having missed the bulk of the training. The intensity and duration of the training, of all staff members including the principal, with regular followup assistance, appeared to be an important factor leading to the success of the project. Although teachers were relieved when the inservice

activities were completed, due to the time and energy required of them, data suggest that the intensity and duration of the training promoted the total immersion of the staff in Anisa. Anisa concepts and practices were continually being reinforced and strengthened and assistance provided when needed. Money was available to pay for the training and followup, including stipends to teachers. Title III funding also paid for materials necessary to implement activities.

According to reports from a majority of the Anisa teachers, the special attention paid the project and its participants led to tensions and pressures. Data collected in this study are insufficient to draw conclusions about the effect of such pressure on the level of implementation, however, it seems likely that it affected the level of implementation in some way, whether positive or negative. Further research on pressure that participants of change may perceive while in the process of change, and the effects of such pressure on their level of implementation needs to be conducted.

Prior successful experience with innovation is cited by several researchers as a facilitator of change (see Chapter II, page 38). Data collected in this study, however, suggests that such experience is not a necessary ingredient of change. All of the teachers interviewed reported no prior experience with innovation, although they all said that they were receptive to change--and were all implementing Anisa practices.

THE COORDINATING SUPERVISING TEACHER PROJECT

Overview

The purpose of the Coordinating Supervising Teacher Project was to train a core of classroom teachers to teach learning disabled pupils. These teachers were then to act as learning disability (LD) resource teachers and helpers to other teachers in the system. This objective was to be accomplished through intensive inservice training and the aid of a full-time LD specialist to coordinate the program and assist teachers putting theory into practice. Projected plans called for the training of teachers during year one and continued followup assistance and application of theory through years two and three. The project was designed to be self-perpetuating after federal funding terminated through continued implementation by the core of participating teachers.

Level of Implementation

The LoU instrument was applied to determine the overall level of use of the CST project following termination of federal funds. Eleven of the twelve elementary teachers remaining in the school system who had been involved with the project during the three years of federal funding were interviewed. One of these was a learning disability teacher.

It was difficult to assess the level of use by users of the project according to the LoU instrument. Many of the teachers were unable to remember specifics about the project, as the major training component had been completed four years earlier, in 1972. Some teachers had difficulty separating the effects of the project from effects of other courses they had taken. More information was needed to accurately assess levels of use in each category according to the LoU instrument. In some cases lack of time prohibited further probing. All but one teacher, however, reported that they were putting into practice things that they had learned during the project and that it had been worthwhile. A profile of the level of use of each teacher is shown in Appendix J. Increased awareness and understanding of children with learning disabilities was cited by all teachers as the major effect of the project. As one teacher stated, "It was like a new beginning--the beginning of being concerned. It has been a continual process since."

Although information revealed through the LoU instrument was limited regarding the Level of Use of the CST Project, additional data collected through the Arbuckle interview suggest that project practices have been and continue to be implemented. Three persons working closely with project teachers--the CST, the principal, and an LD teacher--cited the following as demonstrable evidence of increased awareness and understanding of children with learning disabilities: improved diagnostic skills; responsiveness to suggestions; use of a great variety of materials; adaptation of testing material; increased

confidence and additional referrals to LD teachers.

Project evaluations also suggest that the project was implemented. According to the third year project evaluation 95% of the teachers were able to identify specific symptoms related to learning disabled pupils; 74% were able to administer and 53% interpret group and individual tests related to specific learning disabilities; 74% were able to prescribe and implement an individualized program for pupils' specific disabilities; 32% were able to act as a core of professionally competent LD resource personnel in assisting nonparticipating teachers. Once learned such behaviors are likely to continue. This evaluation was made by the CST through extensive work with individual teachers.

An independent evaluation conducted in 1973, collecting data through an examination of classroom materials and interviews with the CST and school personnel, also concluded that inservice training had led to changes in teachers' behaviors and in services for children with special learning needs. The following specific changes were identified: additional materials for follow-up teaching after referrals; 50% increase in referrals to specialists for learning problems; and the position of the CST. According to an LD teacher who participated in the project and is presently working in the system, additional materials continue to be used and referrals continue to increase. The position of CST has since been replaced by the addition of four LD specialists who conduct similar services.

Data collected through the LoU instrument in combination with information revealed through the Arbuckle interview and project evaluations, lead this researcher to conclude that CST project beliefs and practices continue to be implemented following withdrawal of federal funds.

Project Characteristics

Characteristics of the CST project, as revealed through documentation, the LoU interview with project teachers and the Arbuckle interview with the Project Director, the CST and project teachers (see Appendix K) are described in the following section. Variables discussed include motivation for change, funding, target population, complexity, congruence of goals, incentives for involvement, staff training, materials, adaptation, decision making and communication (see Chapter III, pages 93-94).

Motivation and Funding. Many teachers are frustrated by their inability to deal with learning disabled pupils. The CST project stemmed from teachers in SAD 51 requesting help. It was designed and written by the elementary school supervisor, and the learning disabilities teacher. The school committee had a strong interest in the project. According to the CST, every member of the board had a person close to them involved in special education in some way. A three year Title III grant totalling $29,300 was awarded to SAD 51 in 1972. Approximately $1,400 was spent by the district to support the project. The LD teacher served as the Coordinating Supervising Teacher (CST) throughout

the duration of the project, acting as coordinator as well as assisting teachers in the classroom. The elementary supervisor served as project director.

Complexity. The CST project was a relatively simple project involving nineteen classroom teachers. The project provided instruction of one course on learning disabilities and ongoing followup assistance to teachers in classrooms by the CST.

Incentives. Need for improvement and provision of recertification credits were cited by participating teachers as incentives for involvement in the CST project. All but two teachers interviewed stated that additional knowledge of learning disabilities was a strong area of need. Many teachers had children who fit into this category. Two teachers took the course for credit only but commented that it reinforced what they already knew.

Staff Training. Direct staff training consisted of a course on learning disabilities offered during the school year of 1972-1973. The course was designed by the elementary supervisor and the LD teacher specifically to meet the needs of teachers in SAD 51. Nineteen classroom teachers, including three Junior High School teachers, participated in the course as well as the elementary and Junior High School principals. Course meetings were held in Cumberland, after school, and were conducted by a team of professors from the University of Maine. Teachers reported that the primary method of instruction was lecture although considerable discussion and questioning took place. Followup assistance by University personnel was planned but never occurred. The CST, provided

followup assistance in the classroom to teachers upon request throughout the duration of the project. His assistance was considered by all teachers to be very valuable and useful. Only two teachers reported having not used his services, but they both viewed his work as a strength of the project. Several teachers commented that additional followup would have been useful.

Materials. The CST project required few additional materials. Those that were needed were available through resources of the district.

Decision Making and Communication. Project decisions were made by the Project Director and the CST with some informal input from the staff. Course meetings the first year of the project served as a time for feedback and discussion by participating teachers as a group. Discussion with the CST, by individual teachers, continued throughout the three years of the project. He was considered by all teachers to be accessible and receptive to their concerns and needs.

Adaptation. The CST project was implemented in close accordance to the original plans. Some adaptations were made, however. According to the CST, the special education model used was highly idealistic and did not fit the teachers' needs. Adaptations were made by teachers to fit the realities of their classrooms. Many teachers also commented in the LoU interview on the theoretical nature of the course and the need to adapt concepts to fit their own needs. The CST also made many changes in order to bridge the gap between theory and practice and best meet children's and teachers' needs in the classroom.

Organizational Characteristics

Characteristics of the school organization as revealed through documentation and the Arbuckle interview are described below. The following factors are discussed: communication; decision making; administrative and district support; parent involvement; inservice education; prior experience with innovation; and demographic information (see Chapter III, p. 93).

Communication. Elementary School teachers in SAD 51 are presently dispersed among five locations due to the destruction of a school by fire. The Wilson School, in Cumberland, houses grades four through six and the Cumberland Elementary School grades kindergarten through three. One third grade classroom is temporarily located in the North Yarmouth Fire Station and two K-3 classrooms are next door, in the Wescustago Grange. Two first grade classes are held in the Baptist Church. Such a dispersal makes district communication difficult and district staff meetings are infrequent. According to teachers, staff meetings at the individual schools are also irregular, averaging one a month, in response to emerging needs. Although meetings are irregular, all but one teacher reported that communication among school staffs and with the elementary school principal is good. The principal is in contact with teachers as frequently as is possible, considering the varied locations of the schools, and is considered to be accessible and responsive to teacher concerns and needs. Several teachers commented that he understands the realities of the classroom.

The elementary school supervisor, although not as visible as the principal, is also accessible and floats among the buildings, often stopping in at lunch. Most teachers feel that communication with him is good.

Decision Making. All but two teachers interviewed feel that they have considerable input into school decisions and that their views are actively solicited by the administration. Although meetings are usually initiated and chaired by the elementary supervisor or the principal, teachers can call meetings at any time if they desire and most teachers perceive the administration as being responsive to input from teachers. A list of priorities of school needs are generated by teachers at the end of the year. These then form the basis for committees the following year. The elementary supervisor or teachers chair these committees. Participation is voluntary although it is expected that teachers will become involved. A committee of teachers and the elementary supervisor also determines use of inservice days. All teachers report that they have wide freedom in determining curriculum they use in their classrooms.

Inservice Education. A committee composed of five teachers and the elementary supervisor meets at the end of the year to generate ideas for inservice activities the following year. Released time is provided on Wednesday afternoons for such activities and school attendance until three o'clock is required. This time is also used for staff and committee meetings and individual work in classrooms.

In addition to Wednesday afternoons, each teacher is allowed one professional day per year plus additional visits to other schools or organizations may be made

with administrative approval. Teachers are reimbursed for courses.

Administrative and District Support. All teachers reported active support from both the elementary supervisor and the principal. They both actively supported the CST project, as evidenced by their involvement. The superintendent is viewed as a remote figure and most teachers are unable to judge the degree of his support. The majority of teachers perceive the school board as being actively involved in school affairs, offering firm direction to the school district and supportive of teacher concerns and needs. Provision of released time on Wednesday afternoons for inservice activities and the differentiation of the elementary school staff are indicators of strong district support. The hiring of four additional LD teachers following the CST project demonstrated their strong support of the project and concern for meeting needs of students with learning disabilities.

Parent Involvement. An open door policy, enabling parents to visit classrooms at any time, is in effect in SAD 51. All but two teachers reported active parent involvement in the schools. Parent volunteers frequent many classrooms, leading field trips, tutoring, and teaching mini-courses. The degree of involvement seems to be largely determined by the teacher. Some teachers utilize parent services whereas others do not.

Prior Experience with Innovation. Five of eleven of the Cumberland teachers reported having had no prior experience with innovation. Others reported having tried team teaching and some are individualizing instruction.

Two teachers are teaming in an open classroom. All teachers and administrators consider themselves and the staff to be generally open to new approaches and ideas.

Demographic Information. Cumberland is part of a consolidated school district, SAD 51, with the adjoining town of North Yarmouth. The district supports two elementary schools in Cumberland, the Wilson School (grades 4-6) and the Cumberland Elementary (K-3). Five additional classrooms are temporarily housed in the Baptist Church, the Wescustago Grange, and the North Yarmouth Fire Station. Projected plans call for the completion of a new school in early 1977.

The elementary school staff consists of 38 full time teachers, including two physical education teachers, a music teacher, four LD specialists, and two speech and language specialists. The district also supports a part time physical therapist, an occupational therapist and a school psychologist. Title I funds five teacher assistants, one social aid and twenty teacher aids.

Cumberland and North Yarmouth are small, middle-upper income, rural communities located approximately fifteen miles outside of Portland, Maine. Many of the areas' residents are professional persons working in or close to Portland. The high quality of the school system and the proximity to Portland make the area a desirable residential community.

CONCLUSIONS:

Although data collected through the LoU interview were inconclusive regarding the level of use of the CST project, these data, in combination with information revealed through the Arbuckle interview and project evaluations, indicate that the CST project continues to be implemented following termination of federal funds. Several factors appear to have facilitated implementation of the project. These are outlined and discussed below:

(1) Initiation in response to a local need.

(2) Provision of followup classroom assistance and support to inservice training.

(3) Limited target population.

(4) Congruence of district, teacher and project goals, with

(5) Strong administrative and district support.

(6) Adaptation.

An important factor leading to involvement--and subsequent implementation--of teachers in the CST project was the project's relevancy. The project was created in response to teachers' need for help when working with children with learning disabilities and teachers became involved because the project professed to help them deal with real classroom problems. Through training and followup assistance by the CST new knowledge and skills were learned and reinforced. Data suggest that the role of the CST and the assistance he provided was central to implementation of the project. All of the teachers interviewed commented on the value of h

assistance and several cited his work as the greatest strength of the project. Continued followup assistance helped teachers apply concepts learned through the training and gave them reinforcement, support and knowledge necessary for implementing new practices. Support and help was particularly important considering the dispersal of teachers and their isolation from each other. Continued communication between teachers and the CST was feasible due to the limited number of participating teachers.

Although followup assistance was provided by the CST, reports by some project personnel suggest that more intensive and extensive followup training, assistance and support might have promoted greater application of project concepts as well as wider dissemination of project beliefs and practices. The CST commented that provision of substitutes to release teachers for discussion with him would have facilitated assistance and subsequent implementation of project practices. Several persons suggested that sustained followup to the course through a repeat offering of the course each year or additional followup workshops might have facilitated further implementation and dissemination. One teacher commented that followup assistance by university personnel would have been useful.

Administrative and district support, demonstrated at its conclusion by the hiring of four LD teachers, undoubtedly aided implementation of the project. Meeting the needs of LD children was recognized by the district and project alike as an important educational goal and teachers were encouraged and supported in their efforts to deal with such needs.

Teachers had to adapt a highly theoretical model to meet the realities of their classrooms. Only through such modification could the project be implemented to any degree. The CST also modified his behavior in order to assist teachers and children more effectively.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to identify factors facilitating continued implementation of educational innovations based on an analysis of two Title III projects which continue to be successfully implemented following termination of federal funds. The following factors were considered:

(1) characteristics of the innovation

(2) characteristics of the school systems sponsoring the innovation

(3) interactions between the innovation, the users and the setting and changes that each undergo in the process of implementation

A summary of the findings of the study and conclusions drawn, are made in this chapter. Implications for future research appear at the end of the chapter.

Summary of the Findings of this Study

The Anisa and CST projects were identified as two Title III projects which continue to be implemented following withdrawal of federal funds. Factors facilitating implementation of each project are summarized below:

The Anisa Project

(1) strong administrative support

(2) a target population limited to one school

(3) involvement of a total staff

(4) physical lay-out of the school

(5) collaboration and frequency of staff contact

(6) congruence of project goals with teacher goals

(7) project replacing and/or improving practice rather than adding onto existing practices

(8) mutual adaptation

(9) organizational climate supportive of change
-open communication
-frequent contact
-active teacher involvement in school affairs
-strong, supportive leadership
-district support
-release time for inservice activities

(10) intensity and duration of inservice training, including followup classroom assistance

(11) availability of published and teacher-made materials

(12) adequate funding

The Coordinating Supervising Teacher Project

(1) initiation in response to a local need

(2) provision of followup classroom assistance to inservice training

(3) limited target population

(4) congruence of district, teacher and project goals

(5) strong administrative and district support

(6) adaptation

Data suggest that more extensive training and followup assistance and support along with additional provision of released time for teachers might have aided implementation of the project.

Conclusions

Although the two projects examined were dissimilar in a variety of ways (see Figure 4) both continue to be in operation today following withdrawal of federal funding. Data from this investigation indicate several common ingredients for implementation of change. Certain factors stood out as contributing ingredients of successful, continued innovation. These are discussed below.

Involvement and commitment of users of an innovation is central to successful implementation of change. Congruence of project and user goals is necessary for commitment. In order to implement change, the underlying educational beliefs and goals of a project must parallel those of the users. Persons are unlikely to involve themselves in, or be committed to, projects they do not believe in. The prime incentive for involvement in the CST project was its relevancy. The CST project was designed by local educators specifically in response to teachers' requests for help. The Anisa project, although imported from outside the district, also complemented teachers' needs and goals.

Strategies promoting involvement may differ according to the nature of

Figure 4

Comparisons of Projects--Dissimilarities

ANISA PROJECT	CST PROJECT
-imported from outside the district	-designed by local educators in response to local needs
-desire to remain the same building a major incentive for involvement	-desire for help with classroom problems a major incentive for involvement
-complex	-simple
-expensive	-relatively inexpensive
-involved a total staff of one school	-involved teachers from many schools

a project. Voluntary participation--as opposed to coerced or mandated participation--is ideal as it indicates a desire for change and commitment of some sort to the project. Involvement of the total school staff facilitated implementation of the Anisa project and yet it is unlikely that all teachers would have gotten involved without some means of coercion. A major incentive for involvement was the desire to remain in the same school, all teachers who chose to stay were expected to participate in the project. The congruence of teacher and project goals and values appeared to mitigate most negative aspects of a coerced involvement, although residual resentment remained with several teachers. Another characteristic of the Anisa project which promoted involvement and commitment was the frequency of contact and collaboration of all staff members. This was in contrast to the CST project, in which little collaboration occurred, in part due to the dispersal of teachers.

An underlying condition necessary for teacher involvement in innovation is administrative support. Since administrators are in a position to determine what practices are allowed in a school, administrators are key in promoting or inhibiting teacher involvement in change. Both the CST and Anisa projects were characterized by strong administrative support.

Implementation of change takes more than involvement and commitment. Learning of new knowledge and skills takes training and followup assistance while in the process of implementation. New practices must continue to be reinforced following initial training in order to be incorporated into a person's behavior. Training and ongoing followup assistance was central to implementation of both

the Anisa and CST projects. Concepts and practices in the Anisa project were learned and reinforced through ongoing training and assistance by the Anisa staff which continued throughout the duration of the project. The principal also provided aid to teachers. Training in the CST project was limited to the first year of the project but ongoing assistance was provided throughout the three year period of funding by the CST. More extensive training would probably have furthered implementation and dissemination of project practices. In both projects, however, training and/or followup assistance to teachers was extensive enough so that project practices were integrated into teacher behaviors and continued following termination of the projects. Followup assistance was feasible in both projects in part due to the limited numbers of teachers involved. Larger populations would make such communication and help unwieldy and difficult to attain.

Training and assistance take time. Released time for such activities facilitates involvement and subsequent implementation. Wednesday afternoons and summers served as the primary times for training in the Anisa project. No special provision of time was made for training teachers in the CST project but the CST remarked that released time during the school day for teachers for assistance would have aided implementation of project practices.

People need to be encouraged and supported in efforts at change if they are to lead to implementation and continuation of new practices. Both the Anisa and CST projects were characterized by strong administrative support,

evidenced through the participation of the principals in the training; continuing encouragement; visibility and open communication; and constructive feedback. The CST served an important supportive role in the CST project through his ongoing encouragement and communication with teachers, along with his assistance and advice. Released time for inservice activities served as demonstration of district support of the Anisa project and the hiring of four additional LD specialists was a strong indicator of district support of the CST project.

Teachers have a myriad of responsibilities during the school day and innovations which replace or improve existing practices, rather than adding on another thing to do, are more likely to be implemented. Although the Anisa and CST projects differed in complexity, Anisa being a comprehensive, complex project and the CST project being relatively simple, both improved or replaced existing practices, rather than imposing additional activities.

Extra materials may be required in the process of innovation. Such materials must be available if the innovation is to be implemented. Both the Anisa and CST projects provided those that were necessary.

Adaptation of project concepts and practices can promote implementation. Modifications in response to teacher and project needs enhance personal involvement and commitment necessary for change. Both Title III projects were characterized by adaptation. Teachers in the Anisa and CST projects had to adapt theoretical models to meet the realities of their classrooms. Project personnel in turn, were responsive to teacher concerns and input and made changes as necessary.

An organizational environment conducive to educational improvement and growth facilitates implementation of change. Both the Anisa and CST projects were sponsored by school organizations which supported teacher involvement and growth through conditions such as provision of release time for inservice activities; a highly differentiated staff; open communication; active teacher involvement in school affairs; strong administrative support and leadership; and district support. It is questionable whether change can be implemented in a school organization which is not supportive of educational improvement. Strategies to implement needed changes in districts which are not supportive of educational growth need to be examined.

Conditions facilitating continued implementation of educational change, as revealed in this study, are summarized below:

(1) congruence of project and teacher values and goals

(2) strong administrative support

(3) training and ongoing followup assistance

(4) limited target population

(5) provision of released time for training and assistance

(6) projects which replace and/or improve existing practices

(7) district support

(8) availability of necessary materials

(9) adaptation of teacher and project practices

(10) organizational climate supportive of educational improvement and growth

Both Title III projects were sponsored by fairly wealthy, rural communities located outside major cities in Maine. The scope of the study, however, was too limited to draw any conclusions about the relationship between district wealth and location and innovation.

IMPLICATIONS FOR FUTURE RESEARCH

The Anisa Model

A great deal of money has been invested in the Anisa model with the intent of replicating the model in various sites. Research needs to be conducted to determine whether or not this is possible or desirable, and what modifications, if any, are necessary. Areas of needed research include:

(a) Followup examination of all Anisa sites, comparing levels of implementation and factors which may have facilitated or inhibited implementation.

(b) A more in-depth assessment of the level of use of each component of the Anisa model, to determine which components continue to be implemented and which ones do not.

(c) An investigation of the relationship between the extent of practical application as provided by the project and the

level of implementation by the users, for each component of the model.

(d) An examination of means of adapting Anisa to a lower cost model.

(e) An investigation of the extent of dissemination of the Anisa project within the school district and the effects of the project on non-participating members of the school system.

LoU Instrument

Most of the field work with the LoU instrument has been conducted with users of relatively simple innovations. More extensive research on the use and refinement of the instrument with complex projects (as the Anisa project) needs to be conducted in order to increase the applicability of the instrument and the information which may be obtained.

The LoU instrument revealed limited information about the level of implementation of the CST project, due to the fact that teachers were unable to remember specifics about the project as the training component had been completed four years earlier. Further research on the design of instruments which measure the extent of continued implementation of projects following formal completion is needed.

Additional information on the kinds of data the LoU instrument reveals, as contrasted with other instruments or sources, would be gained through

application of the LoU instrument to projects which have not been implemented, according to project documentation or other sources.

Title III

Documentation suggests that most of the Title III projects in Maine do not continue to be implemented following withdrawal of federal funds. More extensive research on the extent of continuation of projects (including projects without a dominant staff training component) and factors affecting continuation would provide valuable information for the state department, for use in the design, selection and implementation of projects to be funded.

Data pertinent to the operation of a project would also be revealed through ongoing, 3-4 year studies of Title III projects, assessing the degree of implementation by the users.

Dissemination

The intent of both the CST and the Anisa projects was that project teachers would serve as resources to other teachers in the district and that project beliefs and practices would be disseminated in this fashion. Data from this study indicate however, that both projects ran into barriers to project dissemination within the local school district. Research on strategies to disseminate new ideas and practices within a school district needs to be conducted and would provide valuable information for future project writers and implementors.

Adaptation

Many innovations--as the Anisa and CST projects--are characterized by adaptation. An examination of the exact nature of the adaptations and the reasons for them would yield valuable information about the process of change.

Followup Assistance

Data collected in this study suggest that followup assistance is an important ingredient of change. An investigation of the nature and extent of followup and its effect on the level of implementation would provide additional information on specific factors facilitating or inhibiting change.

Pressure and Change

According to a majority of Anisa teachers interviewed, the attention paid the project and its participants created pressures and tensions among the teachers. Such pressure may have affected the level of implementation. Further research is needed on the effects of pressure on change participants and on their level of implementation.

A related area of research would be an investigation of the interactions among participants of change projects, throughout the duration of the projects, in order to identify characteristics of group dynamics that facilitate or inhibit change.

Strategies of Change

Both the Anisa and CST projects were sponsored by school districts which were receptive to educational change. In order for wider dissemination of educational innovation and improvement, strategies to implement change in districts not supportive of educational growth need to be identified.

Elementary versus Secondary

Research has revealed that innovations in secondary schools are less likely to be implemented than innovations in elementary schools. Further exploration into problems of innovation at the secondary level and characteristics of secondary schools which inhibit change is needed.

In addition, evidence supporting or refuting the conclusions of this study could be gathered through a study which measured the level of implementation of projects which met the conditions identified in this study as facilitators of change.

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APPENDICES

APPENDIX A

Communication with Research Centers

January 31, 1976

Gene E. Hall
The Research and
Development Center
for Teacher Education
The University of Texas
Austin, Texas

Dear Mr. Hall:

I am very much interested in your work on Levels of Use of an Innovation, introduced to me through the Spring 1975 issue of the Journal of Teacher Education. I am about to begin a dissertation, working out of the Maine State Department of Educational and Cultural Services, that will involve examining the effectiveness of Title 111 "innovative" projects in Maine.My major concern is the actual level of involvement of the users of the innovation, primarily teachers. I am finding that attention is generally paid only to the final products of the innovation rather than to the process of adoption by the users. I am interested in modifying your instrument delineating levels of use, to apply to a system as a whole, as well as to individuals. I am particularly interested in your method of determining the level on which an innovation user is placed, as well as background research leading up to the development of the instrument. Any additional information, possible resources, comments or suggestions would be most useful and much appreciated.

Thank you. I hope to hear from you.

Sincerely,

Margaret Arbuckle

Margaret Arbuckle

Box 64
Kingfield, Maine
04947

The Research and Development Center for Teacher Education
University of Texas Austin 78712

February 11, 1976

Ms. Margaret Arbuckle
Box 64
Kingfield, Maine 04947

Dear Ms. Arbuckle:

Thank you for your letter of January 31st and your interest in our research. Let me include several publications that will help you in developing a perspective of our work and attempt to answer some of the questions that you have raised.

Enclosed is the original Concept paper in which is outlined the basic dimensions of the Concerns Based Adoption Model on which our research is based. Also enclosed is a recent paper about the concerns of users of innovations. It is hypothesized that users move through developmental stages of concern about an innovation. Then of course, there is the Levels of Use dimension you referred to. After reading these, if you would like to have more information, please feel free to let me know.

If you do get interested in doing research with Levels of Use, you will be interested in learning more about the measurement system. Measuring Levels of Use is accomplished by use of a specially developed "focused interview". The interview procedure entails conducting what appears to be a casual interview with each user/nonuser of the innovation. This interview is normally tape-recorded and the resultant interview is then rated. The rating reliabilities, etc. are highly satisfactory following training in the interviewing and rating procedures.

We have been conducting a set of cross-sectional and longitudinal studies of the implementations of various innovations, including teaming in elementary schools, the use of ISCS curriculum in junior high schools, and the implementation of modules in teacher education programs in colleges and universities. At this point, we're confident that the phenomena of Levels of Use exist and that we can measure it reliably.

If you become interested in using the Levels of Use interview procedure we have recently developed a training manual for interviewers and raters. We are limiting distribution of this to a limited number of researchers who are willing to work closely with us in field testing the process. We want to work closely with several researchers in the next year who are interested in applying the technique to make sure that we are developing a training package that is exportable and will at the same time maintain validity in the measurement system. If you are interested in pursuing this idea further please be sure to let me know. Again, thank you for your interest in our work.

Sincerely,

Gene E. Hall, Project Director
Procedures for Adopting Educational
Innovations/ CBAM Project

GEH:lm

Enclosures: Change Brochure
CBAM Paper
Hall, Rutherford Paper

Gene E. Hall
The Research and Development Center
for Teacher Education
University of Texas
Austin, Texas 78712

Dear Mr. Hall:

I thank you for your prompt response to my letter of inquiry regarding your work on adoption of innovations. I read the enclosed papers with great interest. It excites me to read of research that has been and continues to be conducted that is so closely aligned with my own concerns. Based on the assumption that teachers are the key to educational reform and improvement, the intent of my research is to assess the actual level of involvement (concerns and behavior) of the users (primarily teachers) of Title III innovative projects in Maine. I feel that this type of research is badly needed and sorely missing in this state.

A few questions come to mind:

Does your work focus on the issue of who initiates an innovation within a system and the degree of involvement of the users in developing the innovation?

Do you see your measures as being appropriate for application to a variety of Title III projects over a limited amount of time (one year or less)?

Are they applicable in situations where there is not continued, frequent contact?

What kind of training would be required in order to use the Levels of Use interview procedure?

I would like to discuss this further with you and am very interested in knowing more of your interview procedure, if you feel collaboration might be possible.

Oh, Dick Konicek says hello!

Sincerely,

Margaret Arbuckle

Margaret Arbuckle
Box 64
Kingfield, Maine 04947

The Research and Development Center for Teacher Education
University of Texas Austin 78712

March 1, 1976

Ms. Margaret Arbuckle
Post Office Box 64
Kingfield, Maine 04947

Dear Ms. Arbuckle:

Thank you for your letter of February 19 and your continued excitement about our research. To answer your questions:

1. Concerns and use do not specifically focus on who initiates the implementation of an innovation within a system nor do they focus on the degree of evolvement of the users in developing the innovation. Rather, we're assuming that the phenomena of concerns and use occur regardless of how the adoption decision is made and regardless of the source of the innovation. However, we do think that the intensity of various concerns and the rate of development in Levels of Use will vary depending upon how much system ownership and collaborative action are involved in the implementation effort.

2. We have developed the measures to be "generic." They are not innovation-specific and would be appropriate for use with various educational innovations, whether they be products or processes. My only concern would be that within one year of a Title III Project we doubt that you would see the full range of development in concerns and use. It is our observation to date that an innovation has to be used through several cycles before upper levels of concern and use will be exhibited by a high proportion of the user population.

3. There is no problem with the frequency of contact. The measures would obviously break down if you were to conduct Levels of Use Interviews or to administer Stage of Concerns Checklists every week. There should be some separation between them, but the assessment of concerns and use has nothing to do with the frequency or duration of contact. What may happen is that the facilitation of the use of the innovation may be altered due to the frequency of the interventions. This will not change the measurement of concerns and use, but it may change the rate of movement.

4. Training to use the Levels of Use Interview procedure is one that we still have a question about. As I said, we have just developed the Levels of Use Interview Manual. In theory, researchers could train themselves in using the procedure just by reading the Manual. It is our impression, however, that it would take some talk, at least by telephone, and the listening to various kinds of sample tapes of interviews and probably having sample interviews listened to by some of our staff here. What we want to do is to have a couple of researchers, like yourself, who wish to do some research using

the Levels of Use Interview with the Manual as the basic training tool and then to work collaboratively with us via telephone or correspondence and exchange of tapes. This way we can learn better what is really necessary to export the system validly and in the long run not have researchers in the future dependent on us for learning to use the procedure. If you decide that you wish to use the Levels of Use Interview as the next step, call station-to-station collect at (512) 471-3844 and we can talk further about how we could approach sharing ideas and research if it sounds feasible that our Levels of Use Interview would work.

Thanks for your further interest in our research, and please say hello to Dick Konicek for me.

Sincerely,

Gene Hall

Gene E. Hall, Project Director
Procedures for Adopting Educational Innovations/CBAM Project

GEH/sh

The Research and Development Center for Teacher Education
University of Texas Austin 78712

April 2, 1976

Dr. Richard Konasek
School of Education
The University of Massachusetts
Amherst, Massachusetts

Ms. Margaret Arbuckle
P. O. Box 64
Kingfield, Maine 04947

Dear Margaret and Dick:

In follow-up to our telephone conversation, let me summarize our requirements and expectations for Margaret's use of the LoU Interview in her dissertation study. First, let me say that we are complimented that you are so interested in a part of our research and see it as having potential use in your work. This will provide us with an opportunity to learn more by being involved with your research, and it will also give us an opportunity to collaborate with one of the first persons to use the LoU Interview outside of our project.

Our requirements and concerns about the LoU Interview at this point have to do mainly with insuring that, as other researchers begin using the procedure, they have the same conceptual understandings that we have. Otherwise, we will not have valid generalizations coming out of the research. It would be possible to have good reliabilities among some others, but there is the risk that what is being rated is not what we have defined (i.e., LoU validity). Thus, we need to work closely with the first persons outside of the project who will be using the procedure.

In overview, we would like to see the following steps included:

1. During the time that Margaret is learning the interview procedure, she will be relying mainly on the newly-developed LoU I Manual. Please mark freely in it and make notes of your questions. Then, when need be, please call myself or Mrs. Beulah Newlove on the staff here to converse about your questions. If you do not have funds, call us collect at (512) 471-3844. Please call station to station.

2. We would like to receive tapes of some of the pre-study interviews that Margaret does so that we may share formative feedback and make clarifications where they may be needed.

3. We will also want to check her reliability on rating tapes against ours. This can be done by our rating some of her tapes during the study and she can rate some of our tapes during the training period. Regardless of the procedure, it is important that her ratings agree with ours.

4. During the study, we would like to have some spot-check sampling of her interviews and ratings just to see what kinds of problems arise and also to insure that reliabilities stay high.

5. The last point has to do with access of others to the Manual. We recognize that absolute control is impossible; yet, we are concerned that the Manual be restricted in its dissemination until we are able to review it and our training procedures based on the assistance of Margaret and a few other researchers around the country.

I believe that this summarizes our requirements and hope that they meet with your conditions. Thank you for the opportunity to share ideas, and I hope that the study is highly successful.

Sincerely yours,

Gene Hall

Gene E. Hall, Project Director
Procedures for Adopting Educational
Innovations/CBAM Project

GEH:lm

Enclosures (Ms. Margaret Arbuckle): UTR&D Brochure
"The LoU Chart"
"The Effects of 'Change' ..."
"Team Teaching ..."
"The Madness of Educational Change"
"A Developmental Model..."
LoU Manual
CBAM Paper

FAR WEST LABORATORY
FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

May 25, 1976

Ms. Margaret Arbuckle
Box 64
Kingfield, Maine 04947

Dear Ms. Arbuckle,

Linda Sikorski asked me to send you a copy of her most recent report on curricula implementation. It is more up to date and comprehensive than her 1975 paper, and we happen to be out of copies of the paper at the present time.

Sincerely,

Doris Smith

Doris Smith
Project Secretary

P.S. Linda also asked me to request that you let her know when your research findings become available!

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTE OF EDUCATION
WASHINGTON, D.C. 20208

May 27, 1976

Ms. Margaret Arbuckle
Box 64
Kingfield, Maine 04947

Dear Ms. Arbuckle:

I regret very much that your copy of the Program Plan was incomplete. I have enclosed a complete one.

The RAND study is, as you have indicated, addressed precisely to the topic of your own study--"those conditions facilitating or inhibiting successful implementation and continuation of innovation within school systems, particularly those funded by temporary, outside monies." Any other studies relevant to the topic are likely to be cited in the RAND study. For these reasons, I recommend that you obtain the full study by writing to

The RAND Corporation
Publications Department
Santa Monica, California 90406

The study is in five volumes. The reference numbers are R-1589/1-HEW through R-1589/5-HEW. The full title is "Federal Programs Supporting Educational Change", by Paul Berman, Milbrey McLaughlin, et al. We cannot supply the study directly. And I'm afraid there will be a charge to cover RAND's publication and distribution costs.

There is no charge for our Program Plan.

I hope the plan and study prove helpful to you. If there is anything else I can do, please write. Or call me at (202)254-6090.

Sincerely,

Charles L. Thompson

Charles L. Thompson
School Capacity for Problem Solving

May 21, 1976

Center for Advanced Study
of Educational Change
University of Oregon
Eugene, Oregon

Dear Sir:

I am starting some research on the degree and quality of implementation of educational innovations and am interested in obtaining copies of Change Processes in the Public Schools (1965) and Adoption of Educational Innovations (1967), published through the Center. I am concerned about the lack of implementation of many innovations, despite the rhetoric espousing widespread educational reform. The focus of my study is on those conditions facilitating or inhibiting successful implementation and continuation of innovations within school systems, particularly those funded by outside, temporary monies. I am looking specifically at Title III projects in Maine and will be working out of the Maine State Department of Educational and Cultural Services. Any information you could send me on studies which might be relevant, including the sources cited above, would be most appreciated. Please bill me as necessary.

Thank you.

Sincerely,

Margaret Arbuckle

Margaret Arbuckle

Box 64
Kingfield, Maine 04947

May 21, 1976

Dear Susan,

Charlie Parham (a fellow doctoral student at the University of Massachusetts) recently informed me that you were involved in a study on Title III at the Stanford Research Institute. This is of particular interest to me as I am starting some research on the degree and quality of implementation of innovations and am looking specifically at Title III projects in Maine. I am eager to know more about the work that you are doing and would greatly appreciate any relevant information on related studies.

Thank you! I hope to hear from you.

Sincerely,

Margaret Arbuckle

Margaret Arbuckle
Box 64
Kingfield, Maine 04947

May 21, 1976

Public Information Office
Group on School Capacity for
Problem Solving
National Institute for Education
Washington, D.C. 20208

Dear Sir:

I was given an incomplete copy of "The Program Plan (June 1975)", describing research conducted by the Rand Corporation, and am eager to read the full account. I am starting some research on the degree and quality of implementation of educational innovations and am concerned about the lack of implementation, despite the rhetoric espousing widespread educational reform. The focus of my study is on those conditions facilitating or inhibiting successful implementation and continuation of innovations within school systems, particularly those funded by temporary, outside monies. I am specifically looking at Title III projects in Maine. Any information you could send me on studies which might be relevant would be most appreciated. Could you also send me a full copy of "The Program Plan" and bill me as necessary.

Thank you.

Sincerely,

Margaret Arbuckle

Margaret Arbuckle
Box 64
Kingfield, Maine 04947

May 21, 1976

Research for Better Schools
1700 Marker Street
Philadelphia, Penn. 19103

Dear Sir:

I am starting some research on the degree and quality of implementation of educational innovations and am interested in obtaining a copy of Tempkin and Brown's What Do Research Findings Say About Getting Innovations Into Schools: A Symposium (1974). I am concerned about the lack of actual implementation of many innovations, despite the rhetoric espousing widespread educational reform. The focus of my study is on those conditions facilitating or inhibiting successful implementation of innovations within school systems, particularly those funded by outside, temporary monies. I am looking specifically at Title III projects in Maine and will be working out of the Maine State Department of Educational and Cultural Services. Any information you could send me on studies which might be relevant, including the source cited above, would be most appreciated. Please bill me as necessary.

Thank you.

Sincerely,
Margaret Arbuckle

Margaret Arbuckle

Box 64
Kingfield, Maine 04947

May 21, 1976

Linda Sikorsky
Far West Laboratory for
Educational Research and
Development
1855 Folsom Street
San Francisco,
California 94103

Dear Ms. Sikorsky:

I am starting some research on the degree and quality of implementation of innovations and am interested in obtaining a copy of your paper, An Analytical Summary of Knowledge About Curricula Implementation in the U.S. (1975). Gene Hall, at the Research and Development Center at the University of Texas, suggested that I contact you. I am concerned about the lack of actual implementation of many innovations, despite the rhetoric espousing widespread educational reform. The focus of my study is on those conditions facilitating or inhibiting successful implementation and continuation of innovations within school systems, particularly those funded by temporary outside monies. I am looking specifically at Title III projects in Maine and will be working out of the Maine State Department of Educational and Cultural Services. Any information you could send me on studies which might be relevant - including the article cited above - would be most appreciated. Please bill me as necessary.

Thank you.

Sincerely,
Margaret Arbuckle

Margaret Arbuckle

Box 64
Kingfield, Maine 04947

September 22, 1976

Rand Corporation
Publications Department
1700 Main Street
Santa Monica
California 90406

Dear Sir:

I am conducting some research under the sponsorship of The Maine State Department of Educational and Cultural Services, examining conditions that facilitate implementation of innovations, specifically Title III projects in Maine. I am particularly concerned about factors which impede or facilitate continued implementation of projects once federal funding is withdrawn. The most recent phase of your study, looking at outcomes of projects after the funding period, is thus of central interest to me. I have drawn extensively on your research in my work so far and have been able to find no research comparable to yours, in its assessment of behavioral changes as well as perceptions of those persons responsible for implementation. Any information relevant to data collected and conclusions drawn in the most recent phase of your study would be most appreciated. I would like to conclude my review of relevant literature as soon as possible and thus time is a limiting factor. I am limiting my study to case studies of two completed Title III projects and am about to start the process of designing or adapting instruments to use in the collection of data. Any additional comments, suggestions, or references on collection procedures would be helpful. I am aware of the shortcomings of evaluation methods used in many research projects (particularly those involving only one person) and hope to avoid similar errors.

Thank you.

Sincerely,

Margaret Arbuckle

Margaret Arbuckle
Box 64
Kingfield, Maine 04947

Rand
SANTA MONICA, CA. 90406

October 6, 1976

Ms. Margaret Arbuckle
Box 64
Kingfield, Maine 04947

Dear Ms. Arbuckle:

Thank you for your inquiry about the last phase of our research on federal programs supporting educational change. We have only recently completed the data analysis for this part of the study and do not expect that the final report will be available much before the end of January. Since our reports must be reviewed and approved by our study sponsor, USOE, before the results can be made public, I am unable to share our instruments or conclusions before that time. However, I will add your name to our distribution list for the final Change Agent study reports; I hope you'll find them useful, even though your work will be well underway by then.

If it is possible, I would be very interested in seeing the results of your Title III project case studies.

With best wishes.

Sincerely yours,

Milbrey McLaughlin
Social Science Department

MM:rmv

APPENDIX B

Review of Projects Completing Use of Title III Funds in 1975 and 1976

PROFILE OF TITLE III PROJECTS FUNDED FROM 1972-1975

Criteria for Continuation	Project Code							
	1	2	3	4	5	6	7	8
Target population teachers and/or administrators	No	No	No	Yes	Yes	Yes	No	Yes
Initiation in response to a locally identified problem	No	No	No	No	Yes	No	No	Yes
Strong administrative and district support	No	Yes	No	No	NI	Ltd	No	Yes
Project to replace and/or improve existing practices	No	No	No	Yes	Yes	No	No	Yes
Dominant staff training component	No	No	No	Yes	No	Yes	No	Yes
Continuity of leadership	Yes	NI	Yes	Yes	No	Yes	Yes	Yes
Access to resources	No	Yes	Yes	Yes	Yes	No	Yes	Yes
Continuation set as a project goal	No	Yes	No	No	No	No	Ltd	Yes

Project code information:

1. Maine Street Museum, Bath, Maine; $26,547; To bring artifactual resources to students, teacher and local historical societies and museums, utilizing resources in the community.
2. Cooperative Teacher Education Program, Kennebunk, Maine; $55,000; To prepare student teachers through one full year of internship in public classrooms.
3. Cable TV, Augusta, Gardiner-Hallowell; to make educational potential of cable TV available to school children of Augusta, SAD 11 and SAD 16 area.
4. Educational Reform Toward Individuation, Auburn; Maine; $39,303; To train teachers to design and implement individualized programs.
5. Interact, Portland, Maine; $111,266; To train student teachers for special education and to train regular classroom teachers to be more cognizant of special needs of children.
6. LEAP--Leadership, Education and Administration Practice, Bath, Maine; $138,002; To provide inservice programs for administrators throughout the state.
7. Community Involvement in Educational Change, Topsham, Maine; $66,459; To increase community involvement in educational change.
8. Coordinating Supervisory Teacher, Cumberland, Maine; $29,300; To train a core of classroom teachers to perform functions

PROFILE OF TITLE III PROJECTS FUNDED FROM
1973 to 1976

Criteria for Continuation	Project Code					
	1	2	3	4	5	6
Target population teachers and/or administrators	No	No	No	Yes	No	No
Initiation in response to a locally identified problem	Yes	Yes	No	No	Yes	Yes
Strong administrative and district support	No	Yes	No	Yes	Yes	NI
Project to replace and/or improve existing practices	No	No	No	Yes	No	No
Dominant staff training component	No	No	No	Yes	No	No
Continuity of leadership	Yes	Yes	Yes	Yes	Yes	Yes
Access to resources	Yes	Yes	Yes	Yes	No	No
Continuation set as a project goal	Yes	Yes	No	Yes	Yes	No

Project Code information:

1. BEFORE (Beginning Exposure for Ongoing Rehabilitation and Education, Falmouth, Maine; $119,782, $36,000 local; To provide a preschool program to multiphysically handicapped children ages 2-1/2 - 5.
2. SEEK (Supportive Education for Exceptional Children), Auburn, Maine; $51,275 - $67,823 local; To provide an effective program for handicapped children.
3. Student Operated Regional Meteorological Center, Topsham, Maine, $21,673; To establish a relationship between area schools and Brunswick Weather Office and stimulate and facilitate effective teaching of meteorology.
4. ANISA, Hampden, Maine, $175,844; To implement a comprehensive early education model involving total school staff.
5. Hancock County Educational Cooperative, Ellsworth, Maine; $122,170; To create a centralized administrative unit to synchronize efforts in meeting needs of handicapped children on county-wide basis.
6. Traveling Community Pre-School, Harrington, Maine; $91,000; To provide a pre-school program for children.

APPENDIX C

The Level of Use (LoU) Instrument

FIGURE I — LoU CHART

LEVELS OF USE SCALE POINT DEFINITIONS OF THE LEVELS OF USE OF THE INNOVATION	CATEGORIES KNOWLEDGE	ACQUIRING INFORMATION	SHARING
	That which the user knows about characteristics of the innovation, how to use it, and consequences of its use. This is cognitive knowledge related to using the innovation, not feelings or attitudes.	**Solicits information about the innovation in a variety of ways, including questioning resource persons, corresponding with resource agencies, reviewing printed materials, and making visits.**	**Discusses the innovation with others, shares plans, ideas, resources, outcomes, and problems related to use of the innovation.**
Levels of Use are distinct states that represent observably different types of behavior and patterns of innovation use exhibited by individuals and groups. These levels characterize a process of development in acquiring new knowledge and varying use of the innovation. Each level encompasses a range of behaviors, but is limited by a set of identifiable Decision Points. For descriptive purposes, each level is described by seven categories.			
LEVEL 0 **NON-USE:** State in which the user has little or no knowledge of the innovation, no involvement with the innovation, and is doing nothing toward becoming involved.	Knows nothing about this or similar innovations or has only very limited general knowledge of efforts to develop innovations in the area.	Takes little or no action to solicit information beyond reviewing descriptive information about this or similar innovations when it happens to come to personal attention.	Is not communicating with others about the innovation beyond possibly acknowledging that the innovation exists.
DECISION POINT A	*Takes action to learn more detailed information about the innovation.*		
LEVEL I **ORIENTATION** State in which the user has acquired or is acquiring information about the innovation and/or has explored or is exploring its value orientation and its demands upon user and user system.	Knows general information about the innovation such as origin, characteristics, and implementation requirements.	Seeks descriptive material about the innovation. Seeks opinions and knowledge of others through discussions, visits, or workshops.	Discusses the innovation in general terms and/or exchanges descriptive information, materials, or ideas about the innovation and possible implications of its use.
DECISION POINT B	*Makes a decision to use the innovation by establishing a time to begin.*		
LEVEL II **PREPARATION** State in which the user is preparing for first use of the innovation.	Knows logistical requirements, necessary resources and timing for initial use of the innovation, and details of initial experiences for clients.	Seeks information and resources specifically related to preparation for use of the innovation in own setting.	Discusses resources needed for initial use of the innovation, seeks others in pre-use training, and in planning for resources, logistics, schedules, etc., in preparation for first use.
DECISION POINT C	*Begins first use of the innovation.*		
LEVEL III **MECHANICAL USE** State in which the user focuses most effort on the short-term day-to-day use of the innovation with little time for reflection. Changes are made more to meet user or client needs. The user is primarily engaged in a stepwise attempt to master the tasks required to use the innovation, often resulting in disjointed and superficial use.	Knows on a day-to-day basis the requirements for using the innovation. Is more knowledgeable on short-term activities and effects than long-range activities and effects of use of the innovation.	Solicits management information about such things as logistics, scheduling techniques, and ideas for reducing amount of time and work required of user.	Discusses management and logistical issues related to use of the innovation. Resources and materials are shared for purposes of reducing management, flow and logistical problems related to use of the innovation.
DECISION POINT D-1	*A routine pattern of use is established.*		
LEVEL IV A **ROUTINE** Use of the innovation is stable. Few if any changes are being made in ongoing use. Little preparation is being given to improving innovation use or its consequences.	Knows both short- and long-term requirements for use and how to use the innovation with minimum effort or stress.	Makes no special efforts to seek information as a part of ongoing use of the innovation.	Describes current use of the innovation with little or no reference to ways of changing use.
DECISION POINT D-2	*Changes use of the innovation based on formal or informal evaluation in order to increase client outcomes.*		
LEVEL IV B **REFINEMENT** State in which the user varies the use of the innovation to increase the impact on clients within immediate sphere of influence. Variations are based on knowledge of both short- and long-term consequences for clients.	Knows cognitive and affective effects of the innovation on clients and ways for increasing impact on clients.	Solicits information and materials that focus specifically on changing use of the innovation to affect client outcomes.	Discusses own methods of modifying use of the innovation to change client outcomes.
DECISION POINT E	*Initiates changes in use of innovation based on input of and in coordination with what colleagues are doing.*		
LEVEL V **INTEGRATION** State in which the user coordinates own efforts to use the innovation with related activities of colleagues to achieve a collective impact on clients within their common sphere of influence.	Knows how to coordinate own use of the innovation with colleagues to provide a collective impact on clients.	Solicits information and opinions for the purpose of collaborating with others in use of the innovation.	Discusses efforts to increase client impact through collaboration with others on personal use of the innovation.
DECISION POINT F	*Begins exploring alternatives to or major modifications of the innovation presently in use.*		
LEVEL VI **RENEWAL** State in which the user reevaluates the quality of use of the innovation, considers major modifications of or alternatives to present innovation to increase impact on clients, examines developments in the field, and pursues new goals for self and the	Knows of alternatives that could be used to change or replace the present innovation that would improve the quality of outcomes of its use.	Seeks information and materials about other innovations as alternatives to the present innovation or for making major adaptations in the innovation.	Focuses discussions on identification of major alternatives or replacements for the current innovation.

Concerns for Adopting Educational Innovations Project. Research and Development Center for Teacher Education, University of Texas at Austin, 1975, N.I.E. Contract NE-C74-0067.

FIGURE 1 — LoU CHART

CATEGORIES

ASSESSING	PLANNING	STATUS REPORTING	PERFORMING
Examines the potential or actual use of the innovation or some aspect of it. This can be a mental assessment or can involve actual collection and analysis of data.	Designs and outlines short- and/or long-range steps to be taken during process of innovation adoption, i.e., aligns resources, schedules activities, meets with others to organize and/or coordinate use of the innovation.	Describes personal stand at the present time in relation to use of the innovation.	Carries out the actions and activities entailed in operationalizing the innovation.
Takes no action to analyze the innovation, its characteristics, possible use, or consequences of use.	Schedules no time and specifies no steps for the study or use of the innovation.	Reports little or no personal involvement with the innovation.	Takes no discernible action toward learning about or using the innovation. The innovation and/or its accouterments are not present or in use
Analyzes and compares materials, content, requirements for use, evaluation reports, potential outcomes, strengths and weaknesses for purpose of making a decision about use of the innovation.	Plans to gather necessary information and resources as needed to make a decision for or against use of the innovation.	Reports presently orienting self to what the innovation is and is not.	Explores the innovation and requirements for its use by talking to others about it, reviewing descriptive information and sample materials, attending orientation sessions, and observing others using it
Analyzes detailed requirements and available resources for initial use of the innovation	Identifies steps and procedures entailed in obtaining resources and organizing activities and events for initial use of the innovation.	Reports preparing self for initial use of the innovation.	Studies reference materials in depth, organizes resources and logistics, schedules and receives skill training in preparation for initial use.
Examines own use of the innovation with respect to problems of logistics, management, time, schedules, resources, and general reactions of clients.	Plans for organizing and managing resources, activities, and events related primarily to immediate ongoing use of the innovation. Planned-for changes address managerial or logistical issues with a short-term perspective.	Reports that logistics, time, management, resource organization, etc., are the focus of most personal efforts to use the innovation.	Manages innovation with varying degrees of efficiency. Often lack anticipation of immediate consequences. The flow of actions in the user and clients is often disjointed, uneven and uncertain. When changes are made, they are primarily in response to logistical and organizational problems
Limits evaluation activities to those administratively required with little attention paid to findings for the purpose of changing use.	Plans intermediate and long-range actions with little projected variation in how the innovation will be used. Planning focuses on routine use of resources, personnel, etc.	Reports that personal use of the innovation is going along satisfactorily with few if any problems.	Uses the innovation smoothly with minimal management problems; over time, there is little variation in pattern of use.
Assesses use of the innovation for the purpose of changing current practices to improve client outcomes	Develops intermediate and long-range plans that anticipate possible and needed steps, resources, and events designed to enhance client outcomes.	Reports varying use of the innovation in order to change client outcomes.	Explores and experiments with alternative combinations of the innovation with existing practices to maximize client involvement and to optimize client outcomes.
Appraises collaborative use of the innovation in terms of client outcomes and strengths and weaknesses of the integrated effort.	Plans specific actions to coordinate own use of the innovation with others to achieve increased impact on clients.	Reports spending time and energy collaborating with others about integrating own use of the innovation.	Collaborates with others in use of the innovation as a means for expanding the innovation's impact on clients. Changes in use are made in coordination with others.
Analyzes advantages and disadvantages of major modifications or alternatives to the present innovation.	Plans activities that involve pursuit of alternatives to enhance or replace the innovation.	Reports considering major modifications of or alternatives to present use of the innovation.	Explores other innovations that could be used in combination with or in place of the present innovation in an attempt to develop more effective means of achieving client outcomes.

APPENDIX D

LoU Interview Guide

LoU Interview Guide

Assessing/ Knowledge	What do you see as the strengths and weaknesses of the innovation in your situation? Have you made any attempt to do anything about the weakness? (Probe those they mention specifically.)
Acquiring Information	Are you currently looking for any information about the innovation? What kind? For what purpose?
Sharing	Do you ever talk with others about the innovation? What do you tell them?
Assessing	What do you see as being the effects of the innovation? In what way have you determined this? Are you doing any evaluating, either formally or informally, of your use of the innovation? Have you received any feedback from students? What have you done with the information you get?
III/IVA/ IVB	Have you made any changes recently in how you use the innovation? What? Why? How recently? Are you considering making any changes?
Planning/ Status Reporting	As you look ahead to later this year, what plans do you have in relation to your use of the innovation?
III-IVB/V	Are you working with others in your use of the innovation? Have you made any changes in your use of the innovation based on this coordination?
III-V/VI	Are you considering or planning to make major modifications or replace the innovation at this time?

LoU V Probes

How do you work together? How frequently?
What do you see as the strengths and the weaknesses of this collaboration?
Are you looking for any particular kind of information in relation to this collaboration?

When you talk to others about your collaboration, what do you share with them?
Have you done any formal or informal evaluation of how your collaboration is working?
What plans do you have for this collaborative effort in the future?

O-II/III-VI	Are you currently using the innovation?
	NO

Have you ever used it in the past? If so, when? Why did you stop? (If yes, go to * then return.)

O/I-II	Have you made a decision to use the innovation in the future?
I/II	If so, when will you begin use?
Knowledge	Can you describe the innovation for me as you see it?
Acquiring Information	Are you currently looking for any information about the innovation? What kinds? For what purposes?
Knowledge	What do you see as the strengths and weaknesses of the innovation for you in your situation?
Assessing	At this point in time, what kinds of questions are you asking about the innovation? Give examples if necessary.
Sharing	Do you ever talk with others and share information about the innovation? What do you share?
Planning	What are you planning with respect to the innovation? Can you tell me about any preparation or plans you have been making for the use of the innovation?
Final Question (optional)	Can you summarize for me where you see yourself right now in relation to the use of the innovation?

PAST USERS*

Knowledge	Can you describe for me how you organized your use of the innovation, what problems you found, what its effects appeared to be on students?
Assessing	When you assess the innovation at this point in time, what do you see as the strengths and weaknesses for you?
	(Return to other non-use questions.)

APPENDIX E

The Level of Use Rating Sheet

LEVEL OF USE RATING SHEET (CBAM, 1975)

pe #: Site: Interviewer:
Date: / / 75 I.D. #: Rater:

evel	Knowledge	Acquiring Information	Sharing	Assessing	Planning	Status Reporting	Performing	Overall LoU
on-Use	0	0	0	0	0	0	0	0
D.P. A rientation	I	I	I	I	I	I	I	I
D.P. B reparation	II	II	II	II	II	II	II	II
D.P. C echanical Use	III	III	III	III	III	III	III	III
D.P. D-1 outine	IVA	IVA	IVA	IVA	IVA	IVA	IVA	IVA
D.P. D-2 efinement	IVB	IVB	IVB	IVB	IVB	IVB	IVB	IVB
D.P. E ntegration	V	V	V	V	V	V	V	V
D.P. F enewal	VI	VI	VI	VI	VI	VI	VI	VI
User is not doing:	ND	ND	ND	ND	ND	ND	ND	
o information in interview:	NI	NI	NI	NI	NI	NI	NI	

s the individual a past user? Yes No

ow much difficulty did you have in assigning this person to a specific LoU? None 1 2 3 4 5 6 7 Very much

omments about interviewer --

eneral Comments --

APPENDIX F

The Arbuckle Interview

The Arbuckle Interview

Principal

Organizational Characteristics: Communication and Decision Making

1. Do you have staff meetings?
   If yes, Who initiates these meetings?
   How frequently are they held?
   When are they held? (during school time, after school)
   What are the primary purposes for the staff meetings?
   Who determines the agenda?
   Who leads them?

2. Do you have teacher commitees in the school?
   If so, For what purposes?
   Who determines the members of the committees?
   Who initiates the committees--who determines the purposes or needs?
   Who leads these commitees?
   How frequently do they meet?
   When do they meet? (during school time, after school)

3. Who determines the goals and philosophy of the school?

4. Who determines the curriculum?

5. How would you describe the degree of input the teachers have in making decisions about school affairs?

have no input	have limited input	teachers views are actively solicited and acted upon	teachers share final decision making with principal

6. How would you describe communication among staff in your school?

little communication	some communication on certain topics	professional issues discussed freely, but not social	social issues discussed but not professional	issues (professional & social discussed openly

7. How would you describe communication between teachers and the principal?

little communication	some, though limited communication on certain topics	professional issues discussed freely	social issues discussed freely	any issue discussed openly and freely

8. How would you rate the openness of teachers to new approaches in education?

very closed in theory and practice--maintain status quo	responsive to new approaches in theory only--practices do not change	hesitant--open to implementation some new ideas but not many	responsive to initiating and implementation needed changes	Always trying the newest thing

9. How would you rate yourself regarding openness to new approaches?

10. Was this school involved with other schools in the district in any way?
    If so, how?

11. Was this school involved with other school districts in any way?
    If so, in what manner?

12. Was this school involved with any outside organizations, pertaining to school activities, in any way? If so, how?

13. Do parents play an active or passive role in school affairs? If active, in what manner?

14. Have you had prior experiences with any innovative projects within your school?
    If so, what and when?
    Did any of these require outside funding?
        Which ones?
    Are these projects still in existence?
    How long were they in operation?
        If not, what were the major reasons for discontinuation?

Organizational Characteristics: Inservice

15. Are provisions made for the inservice education of the school staff?
    If yes, in what manner?
    Do you have inservice days?
    How often?
    Who initiates them?
    When are they held? (school time, after school, summer)
    Is participation required?
    Who selects the participants?
    Who determines the content?
    Who plans the inservice days?
    Who conducts the inservice?
    Is release time allowed for teachers?
        If yes, for what purposes? What kinds of activities?
        How much release time is allowed per teacher?
    Are teachers reimbursed for courses taken?

Organizational Characteristics: Leadership

16. How and where do you spend the bulk of your time?

17. How would you rate the support the superintendent gives you?

actively negates	passive support doesn't interfere	actively supports

If he actively negates, how does he show this negation?
If he actively supports, how does he show his support?

18. How would you describe the school committees role in school affairs?

Passive--goes along with administration	offers from direction but does not control administration	actively directs and controls school affairs--including the administration

How would you rate their support?

Innovation Characteristics

19. What is your overall reaction to the _____ project?

20. Are project activities or goals continuing to be implemented in any form now? If so, in what way?

21. Were any provisions made for continued implementation of the project following termination of federal funds? If so, what?

22. Do you or did you have any serious reservations about the project? If yes, what?

23. If it were to be done over again, do you have any suggestions of changes to be made?

24. Who initiated the project? Whose idea was it?

25. Who determined the need for the project?

26. Who was directly involved in the planning?

27. How were the participants selected?

28. What were incentives for involvement?

The Arbuckle Interview

Project Director (Questions 1-18 from Principal Interview also used.)

. Project Characteristics

1. Are project activities or goals continuing to be implemented in any form?
   If so, in what manner?

2. Is the district presently providing any financial support?

3. Were provisions made for continuation of project goals following termination of federal funds?
   If so, in what manner?

4. Do you presently have any project staff meetings?
   If so, how often?
   For what purposes?
   Who initiates them?
   Who determines the agenda?
   Who leads them?

5. Has any inservice training related to the project been conducted since withdrawal of federal funds?
   If yes; For what purposes?
   Who initiated the inservice?
   Who determined the content?
   Who planned the inservice?
   Who conducted it?

6. How would you describe the support of the principal toward the project when it was in full operation?

actively negates	passive supports--doesn't interfere	actively supports

If active negates--how does he show negation?
If active support--how does he show support?

How about now?

7. How would you describe the support of the superintendent toward the project when it was in full operation?

actively negates	passive support doesn't interfere	actively supports

If actively negates, how does he show negation?
If actively supports, how does he show support?

How about now?

8. How would you describe the support of the school committee toward the project?

actively negates	passive support-- doesn't interfere	actively supports	was uninformed of its existence

9. During the period of federal funding how frequently did you have contact with the teachers?

How about now?

10. During the three years of federal funding, did you have project staff meetings?
If yes; How often?
For what purposes?
Who initiated them?
Who determined the agenda?
Who led them?

11. The project centered around extensive inservice training of teachers;
Who designed the inservice?
Who conducted the inservice? (university personnel / district personnel / other)
How would you describe the primary method of training?
Lecture-- / combination / hands on workshops / other

Did teachers have any contact with persons who conducted the training following the training? If so, in what form?
Was there any other kind of followup to the training sessions?

12. Did the project involve any additional materials?
    If so, where did you get them--who provided them?

13. Who made project decisions?

14. Were teachers involved in project decisions in any way?
    If so, in what manner?

15. Do you expect project practices to continue?
    If yes, in what manner?

16. If the project were to be done over again, would you make any changes?
    If so, what?

Initiation

17. Who initiated the project? Whose idea was it?

18. Who determined the need for the project?

19. Who was directly involved in the planning?

20. How were the participants chosen?

21. What were the incentives for involvement?

The Arbuckle Interview

Project Teachers

Project Characteristics

1. Who initiated the project--whose idea was it?

2. Who determined the need for the project?

3. Who was directly involved in the planning?

4. Were you involved in the planning in any way? If so, how?

5. How were you informed about the project?

6. Why did you get involved?

7. Who made project decisions? Were teachers involved in project decisions in any way?

8. Did you have project staff meetings?
   If yes; How often?
   For what purposes?
   Who initiated them?
   Who determined the agenda?
   Who led them?

9. Do you presently have any staff meetings?
   If so, How often?
   For what purposes?
   Who initiates them?
   Who determines the agenda?
   Who leads them?

10. The project centered around extensive training of teachers-- Who determined the content of the inservice?
    Who designed the inservice?
    Who conducted the inservice?
    How would you describe the primary method of training?
    lecture | combination | active workshops | other

Did you have any personal contact with the persons who conducted the inservice, following the training? (Was there any followup to the training?)
If so, in what manner?

11. Did this project involve any additional materials?
If so, from whom and how did you get them?

12. How frequently did you have contact with the Director?

Organizational Characteristics: Communication and Decision Making

13. Do you have staff meetings?
If yes, Who initiates these meetings?
How frequently are they held?
When are they held? (during school time, after school)
What are the primary purposes for the staff meetings?
Who determines the agenda?
Who leads them?

14. Do you have teacher committees in the school?
If so, For what purposes?
Who determines the members of the committees?
Who initiates the committees--who determines the purposes or needs?
Who leads these committees?
How frequently do they meet?
When do they meet? (during school time, after school)

15. Who determines the goals and philosophy of the school?

16. Who determines the curriculum?

17. How would you describe the degree of input the teachers have in making decisions about school affairs?

have no input	have limited input	teachers views are actively solicited and acted upon	teachers share final decision making with principal

18. How would you describe communication among staff in your school?

little communication	some communication on certain topics	professional issues discussed freely, but not social	social issues discussed but not professional	issues (professional and social) discussed openly

19. How would you describe communication between teachers and the principal?

little communication	some, though limited communication on certain topics	professional issues discussed freely	social issues discussed freely	any issue discussed openly and freely

20. How would you rate the openness of teachers to new approaches in education?

very closed in theory and practice--maintain status quo	responsive to new approaches in theory only--practices do not change	hesitant--open to implementing some new ideas but not many	responsive to initiating and implementing needed changes	always trying the newest thing

21. How would you rate yourself regarding openness to new approaches?

22. Are you involved with other schools in the district in any way?
    If so, how?

23. Are you involved with other school districts in any way?
    If so, in what manner?

24. Are you involved with any outside organizations, pertaining to school activities, in any way? If so, how?

25. Do parents and/or community members play an active or passive role in school affairs? If active, in what manner?

26. Have you had prior experiences with any innovative projects within your school?
    If so, what and when?
    Did any of these require outside funding?
    Which ones?
    Are these projects still in existence?
    How long were they in operation?
    If not, what were the major reasons for discontinuation?

Organizational Characteristics: Inservice

27. Are provisions made for the inservice education of the school staff?
    If yes, in what manner?
    Do you have inservice days?
    How often?
    Who initiates them?
    When are they held? (school time, after school, summer)
    Is participation required?
    Who selects the participants?
    Who determines the contents?
    Who plans the inservice days?
    Who conducts the inservice?

Organizational Characteristics: Leadership

28. How frequently do you have contact with your principal? For what reasons?

29. How frequently do you have contact with your superintendent?
    For what reasons?

30. How would you rate the support the principal gives you?

actively negates	passive support doesn't interfere	actively supports

If he actively negates, how does he show his negation?
If he actively supports, how does he show his support?

31. How would you rate the support the superintendent gives you?

actively begates	passive support doesn't interfere	actively supports

If he actively negates, how does he show his negation?
If he actively supports, how does he show his support?

32. How would you describe the school committees role in school affairs?

passive--goes along with administration	offers from direction but does not control administration	actively directs and controls school affairs including the administration

33. How would you rate their support?

APPENDIX G

Anisa Project Descriptive Materials

The Anisa Model:

A Master Plan for Equalizing Educational Opportunity

by Daniel C. Jordan

A democracy rests upon equal access of the people to its political processes. If a society wishes to maintain itself as a democracy, its governing agencies must know in fairly precise terms what the nature of equal access is and then make provisions to guarantee it. In our modern and rapidly changing society with its sophisticated technological achievements, its complicated economic system, its highly developed and intricate political and legal systems, and the additional complexities arising from its great religious, ethnic, and cultural diversity), viability of democratic functioning depends upon the full education of its citizenry.

> Unlike the industrializing economy of 19th and early 20th Centuries, our automating economy has little need for the talents the uneducated have to offer, strong backs and clever hands, simple manual strengths and manual skills. Instead, we have a growing need for trained minds, educated judgements and conceptual skills. We have arrived at a period in human history in which man is increasingly required to manage vast categories of knowledge, to identify and solve highly complicated interdisciplinary problems, and to arrive at infinitely complex concepts and judgements in order to maintain, control, and advance the technological and social organization by which we live. The quality of intellect, the adequacy of conceptual competence, and the depth of human understanding and compassion required of those who must man that organization are not routinely produced in today's schools. And our failure to train the best qualified to the maximum extent is but an extension of our failure to provide even the minimum survival skills for this complex age to those whom we call the socially disadvantaged. (Gordon *et al.*, 1966)

But even more critical than acquiring the talents, skills, abilities, and knowledge required to maintain western civilization as it is today will be the making of a new generation that will seek after new kinds of knowledge, struggle for higher levels of wisdom, paint fresher visions of the possibilities for man and his future, and understand the necessity for the moral courage and stamina required to transform civilization into something far better, far more humane, far more just, and far more beautiful than anything we now have. Given the present state of western society, it hardly seems a favor to anyone merely to prepare him to maintain society as it is now and thereby perpetuate a number of distressing trends which already indicate that we are venturing along the borders of disaster. The Commission on the Year 2000 of the American Academy of Arts and Sciences identified such trends as a means of gaining some perspective on the Year 2000, providing information for sketching hypothetical futures, finding ways to make better decisions by anticipating problems, and identifying means for stalling undesired developments—all in the hope of producing a new political theory that would enable us to approach the Year 2000 with some assurance of survival. The report represents an extraordinary compendium of possibilities that might be realized in the future depending upon the kinds of choices we make now and the extent to which those choices become operational. Throughout the report, the implications for the role of education in the successful negotiation of the challenges lying ahead for our democracy were stressed:

> If we are to remain true to our democratic heritage, one of the most obvious implications of the predictive increase in population is that our already crowded educational system will have to be vastly expanded and overhauled . . . put together the increased knowledge to be communicated and the increased duration of the educational experience, and then try to imagine what kind of educational system we will need by the year 2000. Can anything short of an educational revolution meet our needs? (Miller, 1967)

We believe that indeed a revolution in education is needed. But to undertake a revolution so that everyone can have an equal opportunity to participate in a civilization that may have difficulty making it to the year 2000 is pointless. Thus, in our view, the issue of equalizing educational opportunity only makes sense when viewed in the context of a broader scheme of thought and vision which also places an obligation on education

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"... a master plan for equalizing educational opportunity by dealing with the technological, moral and aesthetic values which are unavoidably implicated in the broader issues of survival."

to play a major role in securing our survival while also significantly improving its quality.

Over the last few years there have emerged two extensive bodies of literature which address these two concerns. One deals more or less directly with equalization of educational opportunity[1] and the other deals with the general failure of education to foster the growth of the whole human being and to prepare him for dealing with the problems of survival. (See Illich, 1971; Goodman, 1964; Leonard, 1968; Rogers, 1969; Kozol, 1972; Dennison, 1970; Glasser, 1969; Holt, 1964; Silberman, 1970; and Kohl 1967).

In spite of a decade of educational innovations little headway has been made to create a significant alternative to the traditional system of public education—a system which many believe to be ineffective in this era of rapid social change and unsuitable for the maintenance of a democracy because it violates a fundamental democratic principle by failing to equalize educational opportunity.

Implicit in the innovative efforts and analytic thinking of the sixties concerning how to equalize educational opportunity was a bright hope that we could eventually achieve it. But that hope has now become haunted by the notion that having an equal educational opportunity that would open doors to social participation on all levels would be of dubious worth because the society itself has grown progressively more careless about the fundamental provisions for the survival of its members, let alone mobilizing efforts and resources to improve the quality of survival. Now, more than ever before, survival will depend on our ability to draw out the potentialities of each other in service to mankind as a whole and to refrain from using any of our resources, human or otherwise, in the destruction of others or in the suppression of human potential. We therefore accept the proposition that education is inevitably a moral affair; to pretend it isn't is to render impotent any manner of thought about its role in future survival.

In our view, then, any plan designed to tackle successfully the issue of equalizing educational opportunity must simultaneously deal with the survival issue from which the former derives its ultimate meaning. The two issues are inextricably bound up with each other. Solving the problem of how to equalize educational opportunity has far deeper implications, therefore, than simply making an effort to comply with a democratic ideal, as important as this may be. Not being able to equalize educational opportunity means the perpetuation of the institutionalized suppression of human potential. Suppression of potential is the fundamental threat to survival for it gives rise to the tragedies inherent in violence, crime, and mental breakdown. The ramifications of continuing such suppression takes us to the brink of a related tragedy of unthinkable proportions—namely, the failure of man, as the only known repository of cosmic self-awareness in the universe, to take a conscious hand in the direction of evolution—a responsible pursuit of his own collective destiny. Such a responsible pursuit will necessarily rest heavily on the shoulders of an educational system founded on technological, moral and aesthetic values that insure a progressive increase in the quality of our survival.

The Anisa Model has been designed to serve as a master plan for equalizing educational opportunity by dealing with the technological, moral and aesthetic values which are unavoidably implicated in the broader issue of our survival. Since we do not believe that man's destiny can be safeguarded until we are successful in creating a social system which not only preserves as a basic human right the opportunity to develop one's potentiality as fully as possible, but one which also lovingly encourages it, any acceptable educational model for the future must actively help to create such a social system. Thus, while the emphasis in this article is on an explanation of the Anisa Model from the point of view of its promise for equalizing educational opportunity, it must be borne in mind that the test of its adequacy in relation to that promise will be met in the depth and breadth of its philosophical and theoretical foundations as they illumine the broader issue of survival itself.

The Anisa Model—An Overview

We believe that dealing with the issue of how to equalize educational opportunity ultimately depends upon identifying the fundamental principle at the heart of the idea in its broadest sense, establishing that fundamental principle as the basic premise of the educational system to be designed, and then organizing the concept of the system deductively around that fundamental principal. Any other approach is very likely to be no more than a superficial innovation that will evaporate without leaving a trace.

1. E.g., civil and human rights, compulsory education and teaching the disadvantaged, and all of the legislative efforts of the states to do something about equalizing educational opportunity: Headstart, Upward Bound, Follow-Through, Teacher Corps, Title I of the Elementary and Secondary Education Act of 1965, Neighborhood Youth Corps, Job Corps, VISTA.

To resist implementation of an innovation before it is carefully thought out and painstakingly planned is an important part of professional responsibility which federal and state funding cycles and administrative procedures have practically succeeded in destroying. Thus, most of the programs created to address some aspect of the problem of equalizing educational opportunity have been hastily conceived, prematurely implemented, undercapitalized, inadequately staffed, poorly evaluated, and almost always operated on a crisis basis.

The conceptual basis of the Anisa Model has been a decade in the making. The most intensive phase of working on the model began in 1971 with the assistance of a $242,000 grant from the New England Program in Teacher Education, Durham, New Hampshire, to the Center for the Study of Human Potential, School of Education, University of Massachusetts, Amherst. This enabled us to mobilize the resources of faculty, graduate students, and consultants and more systematically pursue the formulation of the conceptual basis of the model on a daily basis. We believe that to be one of those exceptional instances when an educational funding agency has invested heavily in thinking through a problem over a long period of time so that the resultant educational program has a higher probability for significant impact. The root word from which Anisa comes means "Tree of Life," an ancient symbol representing notions of perpetual fruitation in a setting of order and beauty.

Our effort thus far has been characterized by four major thrusts:

1. Specifying the philosophical basis of the model;
2. Generating a coherent body of theory concerning development, curriculum, teaching, administration, and evaluation from this philosophical basis;
3. Designing the actual model (explaining how the theory is to be operationalized); and,
4. Pilot implementation of selected components of the Model.[2]

The effort to develop the philosophical basis of the model centered around a clarification of assumptions about the nature of man's reality so that we would have a means for achieving logical consistency and coherence in the derivation of theory. In addition to achieving consistency and coherence, we were anxious to arrive at the broadest philosophical generalities concerning the nature of man so that comprehensiveness of theory could be attained. Because the process of philosophy of Alfred North Whitehead is in itself an extraordinary synthesis of both eastern and western thought over the last 2,500 years, we have used his cosmology, *Process and Reality*, as a general reference against which the comprehensiveness and scope of our thinking could be tested. Charles Hartshorne, the major living process philosopher summed up Whitehead's work: "The basic principles of our knowledge and experience, physical, biological, sociological, aesthetic, religious, are in this philosophy given an intellectual integration such as only a thousand or ten thousand years of further reflection and inquiry seem likely to exhaust or adequately to evaluate, but whose wide relevance, and in many respects at least, comparative accuracy, some of us think can already be discerned." (Lowe, *et al.*, 1950)

The fundamental speculation about the nature of man in the model's philosophy is that he is an organism at the apex of creation, endowed with an infinitude of potentialities; that creativity—the capacity to translate potentiality into actuality—defines his essential reality. The presumption here, then, is not whether a given child should go on to college or should prepare for this or that occupation but that every child is endowed with an infinitude of potentiality, the development of which is the central purpose of education.

The Anisa theory of development defines the nature of human potentialities; explains how their translation into actuality is sustained by the organism's interaction with the environment; classifies environments; and, describes the nature of the kinds of interactions that are required to develop particular kinds of poten-

2. Implementation of aspects of the Model began on a pilot basis in four sites: a public school (K-3) in Hampden, Maine; preschools and public kindergarten in Suffield, Connecticut; private Child Development Center in Fall River, Massachusetts; and, the Headstart Centers in Kansas City, Missouri. Pictures were taken during the Anisa school operated by the Anisa Project staff during the summer of 1972 on the University of Massachusetts campus.

ities. The theory indicates why not environments and not all interions are equally capable of drawing a given potentiality and establishes eria for determining or creating the st effective environments and inactions with them. Two basic gories of potentialities—biological d psychological—are established by theory; nutrition is fixed as the key tor in the development of biological entialities and learning is established he key factor in the development of chological potentialities. The theory defines the nature of learning and means by which learning comence is achieved.

The definition of learning was ar-ed at by a deductive process of oning from the premises derived m the philosophical base and an uctive process of reasoning which ted the analysis of all major ing theories for the purpose of tifying their common denominator. thus arrived at the definition of ing as the differentiation, ination, and generalization of exence, and the definition of learning petence as the conscious ability to k down experience, whether inl or external, into separate conible elements (differentiation); to bine those elements in a new way, by generating new perceptions, thoughts, new feelings or emotions new intentions which may or may become expressed immediately in form of new, overt behavior gration); and, to transfer the new bination or integration to similar ations (generalization).

he following categories of ntialities are established by the ry: psycho-motor, perceptual, tive, affective, and volitional. of the categories is broken down processes, each one of which is ne to learning competence in that ular category. The cognitive ory, for example, is broken down such processes as abstraction, gy, metaphor, analysis, synthesis, ity, deduction, induction, inlation, extrapolation, seriation, rvation, and number relations. processes constitute "how to think" and are therefore synonomous with "how to learn" in the cognitive area. Whereas the traditional school system emphasizes "what to think" (content), the Anisa Model adds the important dimension of "how to think."

Finally, the theory of development shows how interaction with the physical environment structures the actualized potentialities (powers) into material values on which technological competence rests; how interaction with the human environment leads to the formation of social values on which moral competence rests; and, how confronting the unknowns and unknowables in the environment precipitates the formation of religious and aesthetic values. The combinations of these values constitute the defining attributes of personal identity—the Self.

From the theory of development, we have derived theories of pedagogy, curriculum, administration, and evaluation. While it is beyond the scope of this brief article to explain these theories (see Jordan and Streets, June 1973 and Jordan, Spring 1973), it is important to know the basic propositions of the theory of teaching and curriculum.

Our theory of curriculum defines curriculum as two interrelated sets of goals; one concerns the internalization of processes on which learning depends and the other concerns content--basic factual information about the world around us. The curriculum also includes three symbol systems (math, language, and the arts) which mediate the mastery of processes and make possible the storage of information that can be symbolically represented.

Our theory of pedagogy is related to the definition of curriculum and is derived from a proposition in the theory of development which states that the translation of potentiality into actuality depends on the organism's interaction with the environment. The theory of pedagogy thus defines teaching as arranging environments and guiding the child's interactions with them for the purpose of achieving the educational objectives specified by the curriculum.

Implications for Equalizing Opportunity

With this brief description of the Anisa Model and its theoretical and philosophical foundations in mind, we now turn to an examination of the implications of the concept of opportunity and an explanation of how the Anisa Model promises to function as a master plan for equalizing educational opportunity.

The word opportunity means the quality of being opportune—being seasonable, timely, fit, suitable, convenient, or apt. It refers to a time or condition of things that is favorable to a given end or purpose and implies a convenience or an advantage afforded by a particular position or a time when there is an occasion or a need for something. Given the uniqueness of each individual, what is opportune for one will not necessarily be opportune for another. This is why providing the same curriculum for all children at the same age at a particular place and time for the same amount of time using the same approach, the same materials, and the same teacher, destroys the fundamental notion of opportunity. There is no way in which the sameness of all of these things can be equally suitable, appropriate, favorable, advantageous, and effective, for all children at the same age at one particular time. Sameness has been confused with equality; it is, in fact, the sameness of everything which guarantees inequality, precisely because the same things cannot be, in all cases, opportune for every member of a class at a given point in time. Thus for learning experiences to be equal for any group of children, they must fit each one and will therefore necessarily be *different* for each one, rather than the same. This does not mean that there can be no teaching of children in groups or no group activities; it does mean that experiences planned for groups of children must reflect a range of ... teractions so that each participant can relate to whatever aspects of the ex-

periences are suitable or opportune for him.

The Anisa theory of development will ultimately enable parents and teachers to assess the child's developmental levels so that his particular needs can be identified. Parents or teachers can then arrange environments and guide the child's interaction with them to provide the experience which meets his developmental needs, thereby making the experience "opportune" (timely and advantageous) for him. Making experiences opportune depends on knowing children in their specificity—recognizing the *differences* among them and differentiating experiences to match needs and developmental levels.

Since the physical health of the child is essential to normal psychological development, assessment includes examination of biological as well as psychological needs. Extensive studies have shown how nutritional injury, particularly when it occurs prenatally and during the post-natal period, can cause irreversible damage to the biological integrity of the organism and reflect itself in impaired perceptual, psycho-motor, cognitive, affective or volitional functioning. Obviously, any child who has sustained nutritional injury during the prenatal period or suffers from under-nutrition after he is born faces a perpetual inequality and will inevitably be at a disadvantage when compared to his peers who are well nourished.[3] The applicability of the Anisa Model therefore begins a year or so prior to conception so that an adequate nutritional status of the mother and the father may be assured at the time of conception, during pregnancy and particularly throughout the post-natal months. While adequate nutrition remains generally important throughout life, it has more direct implications for efficient learning than formerly realized. We know, for instance, that it is difficult for a child to pay attention if he is suffering from a vitamin B deficiency. Very little learning can take place without attention. Obviously, a child who cannot pay attention will find a very large number of experiences "inopportune" for him and he certainly will not be on an equal footing when compared to his more attentive and less distractable peers. Thus the schools patterned after the Anisa Model will have nutritional experts on their staffs who will maintain accurate records on the nutritional status of all children and staff and will work with parents of children to make certain that their diets are appropriate.

The process curriculum of the Anisa Model (which focuses on the attainment of learning competence in the five general areas) is the optimal means by which the maximum development of each child's psychological potentialities is guaranteed. When fully refined, the Anisa theory of development will enable a teacher to assess developmental levels of the children in each of the five categories so that instruction can be geared to those levels and learning thereby individualized. *It is only through the individualization of instruction and the particularization of learning that differences among children are honored and educational opportunities equalized.* The ultimate purpose of the Anisa theory of development is to enable every teacher to make every experience opportune for each child. Several years of empirical testing will be required before the theory is refined enough to be used in assessing developmental levels with great accuracy. However, we believe that the fundamental elements of the theory have all been articulated and that they insure its fecundity and comprehensiveness of scope.

Most programs for individualizing instruction fail to equalize educational opportunity because they fail to particularize learning. In such programs, individualization has been too narrowly conceived as a breaking down of the curriculum content into smaller units and working with fewer children at a time. To be sure, this may be an important step, but until processes are understood and an ability to *match* both the content and process elements of the curriculum to the child's developmental levels is achieved,

3. For an extensive analysis of the relationship between biological integrity and learning, please see the position paper of the Food and Nutrition Board of the National Academy of Sciences, National Research Council entitled: *The Relationship of Nutrition to Brain Development and Behavior.* Washington, D.C., June 1973.

ming cannot be particularized in any eliberate way. Making such a match epends on using a theory of evelopment first to assess needs and en to design an experience (by ranging environments and guiding e child's interaction with them) that is us "opportune" for the child in ques-ion.

Since the process curriculum of the del is concerned with the universals human development, it is applicable oss-culturally and can accommodate y child. We would therefore expect children in an Anisa system to velop their competencies as learners fully as possible at optimum rates. me will nonetheless turn out to be re competent than others, but the erage competence of each cultural oup will be approximately the same. us, the model preserves the very portant creative element in society, mely its diversity, while at the same e providing equal access to the political processes on which the viability of a democracy rests.

We believe learning competence to be the greatest gift a school system can bestow upon its children, for it is the means by which each child will achieve the greatest probability of negotiating successfully all of the problems that he will confront in the course of his life. Seen in this light, learning competence functions as the guarantor of independence and the door to responsible freedom, indispensable elements in a real democracy. Both independence and responsible freedom are among the important consequences of the process curriculum which, in the cognitive area, stresses the how of thinking and reasoning and therefore explicitly places a very high value on a continual search after truth and humility before the facts. Educational systems based on the model necessarily become benevolent transformers of the culture in which they exist rather than passive transmitters of the culture as status-quo. It is this transformation element of the model which not only complements the equalization of educational opportunity but helps to create that which makes the opportunity meaningful, namely access to participation in a society whose survival is not only guaranteed but one which provides for the perpetual improvement of its quality through its educational program.

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The Earl C. McGraw School in Hampden, Maine, became a pilot site for the ANISA Model through a Title III,E.S.E.A. grant from the Maine Department of Educational and Cultural Services.

The project was introduced through a five-week workshop in the summer of 1973. Since then, the teachers and principal have participated in two summer workshops and two years of in-service training.

The entire school staff was introduced to the theories of development, pedogogy and curriculum of the ANISA Model. The seven specifications of attention, classification, cooperation, figure ground, inflection, laterality, seriation, and verticality were introduced with a lot of reinforcement in the practical use of these specifications.

The philosophy of the school is "The children belong to all of us. We are all working for the benefit of each child. As we discuss a child's problem, we all try to help with solutions."

The following school-wide ground rules were adopted and are followed by children and adults alike: Here we walk, here we talk, here we cooperate, here we speak on an individual basis (one at a time), here we borrow with permission only, and here we recycle our own environment. The following moral values are taught and practiced: kindness, courtesy, honesty, justice, reliability, fairness, patience, and respect.

The school environment is very relaxing. The children have an opportunity to move about the room quite freely. The classroom environment is arranged to serve children and differentiated so that there is room for a wide variety of activities to be going on at the same time. Sitting on the platform, or on the floor near the platform, allows children to move their bodies in numerous ways without taking their focus off the activity at hand. Materials are accessible to children, located adjacent to the work space, and are displayed with neatness and clarity. If children are to be in charge of their own learning, they must be active participants in it. While the environment is rich in sensory stimulation and novelty, it should also provide security and be free of unnecessary distractions.

Much emphasis has been placed on individualizing math and reading. The remedial reading teacher and learning disabilities teacher work in the classrooms with the teachers and children. The Moffett Interaction program has been used to help in individualizing reading, and the Copeland materials and approach in individualizing math.

The school is open to visitors by appointment on Tuesday of each week. Arrangements for a visit can be made by phone (862-3830) or by mail.

Willard Hillier

Willard N. Hillier, Principal
Earl C. McGraw School
Hampden, Maine 04444

John W. Skehan

John W. Skehan,
Superintendent of Schools, SAD #22
Hampden, Maine 04444

APPENDIX H

Profile of Overall Level of Use of Anisa Project

Teacher	Categories of Use							
	Knowledge	Acquiring Information	Sharing	Assessing	Planning	Status Reporting	Performing	Overall LoU
1	IVb	IVb	IVb	IVb	V	IVb	IVb	IVb
2	IVb	IVb	NI	IVb	IVb	IVb	IVb	IVb
3	IVb	IVa	IVa	IVb	IVb	IVa	IVa	IVa
4	IVb	NI	NI	IVb	IVb	IVb	IVb	IVb
5	IVb	IVb	IVb	IVb	IVb	IVb	IVb	IVb
6	IVb	IVa	IVa	IVb	IVa	IVa	IVa	IVa
7	IVb	III	IVa	IVb	IVa	IVa	IVa	IVa
8	V	IVa	V	IVa	IVa	V	V	IVa
9	III	IVa	III	IVa	III	IVa	IVa	IVa
10	IVa	IVa	IVa	IVa	IVa	IVa	NI	IVa
11	IVb	IVa	IVa	IVb	IVa	IVa	IVa	IVa
12	IVb	IVa	IVa	IVb	IVa	IVb	IVb	IVb
13	IVb	IVa	IVb	IVb	IVa	IVb	IVb	IVb
14	IVb	IVa	IVa	IVb	IVa	IVb	IVb	IVb

KEY: Level III. Mechanical Use. User for uses most effort on short-term day-to-day use of the innovation with little time for reflection. Use is often disjointed and superficial.

Level IVa. Routine Use. Use of innovation is stabilized with little variation in pattern of use.

Level IVb. Refinement. Use of innovation is varied to increase impact on clients.

Level V. Integration. User collaborates with others in use of innovation to expand impact on clitents.

APPENDIX I

Results of the Arbuckle Interview--Anisa Project

Project Teachers

Project Characteristics

1. Who initiated the project--whose idea was

3 - unsure (entered project third year)
1 - Dan Jordan came looking for a pla
1 - State Department
9 - Superintendent

2. Who determined the need for the project?

2 - unsure
1 - no response
10 - superintendent

3. Who was directly involved in the planning?

10 - Anisa team, principal became involved
3 - unsure
1 - no response

4. Were you involved in the planning in any way? If so, how?

1 - no response
3 - not part of project until third year
7 - no
3 - indirectly, feelings taken into consideration

5. How were you informed about the project?

13 - through the principal at teachers meeting or individually
1 - no response

6. Why did you get involved?

1 - no choice
3 - no choice - talked into it, but sounded great
2 - no choice but could have said no.
7 - sounded exciting
1 - was in operation when joined staff

7. Who made project decisions? Were teachers involved in project decisions in any way?

1 - no response
10 - Anisa plus principal, but responsive to teachers, increased input as progressed
3 - Anisa staff

8. Did you have project staff meetings?
If yes; How often?
For what purposes?
Who initiated them?
Who determined the agenda?
Who led them?

1 - no response
13 - Yes. Every week with school staff, every other week with Anisa staff
9 - Anisa staff and/or principal led
4 - Leader varied, anyone could

All teachers reported that purposes varied, from feedback, discussion, information giving.

9. Do you presently have any staff meetings?
If so, How often?
For what purposes?
Who initiates them?
Who determines the agenda?
Who leads them?

(Integrated into regular staff meetings)

10. The project centered around extensive training of teachers-- Who determined the content of the inservice?
Who designed the inservice?
Who conducted the inservice?
How would you describe the primary method of training?
lecture | combination | active workshops | other

9 - Anisa staff determined content
5 - Anisa staff with increased feedback from staff as project progressed
14 - Anisa staff designed
11 - Anisa staff conducted
2 - Anisa staff and principal conducted
7 - training combination - dominantly lecture
5 - Combination
2 - Combination - dominantly workshop
14 - followup provided
11 - utilized
3 - did not utilize

(responses included observations, demonstrations, conferences,

11. Did this project involve any additional materials?
If so, from whom and how did you get them?

14 - Yes, Lots of teachers made and/or poublished materials.
Funded through Anisa project

12. How frequently did you have contact with the Director?

14 - Daily. Reasons varied (assistance, support, information)

Organizational Characteristics: Communication and Decision Making

13. Do you have staff meetings?
If yes, Who initiates these meetings?
How frequently are they held?
When are they held? (during school time, after school)
What are the primary purposes for the staff meetings?
Who determines the agenda?
Who leads them?

1 - no response
13 - Yes. Initiated by principal or staff
8 - Led usually by principal but responsive to teachers
6 - Led by principal or teachers

All teachers reported that purposes, time, agenda and leadership vary in accordance with the nature of the meeting.

14. Do you have teacher committees in the school?
If so, For what purposes?
Who determines the members of the committees?
Who initiates the committees--who determines the purposes or needs?
Who leads these committees?
How frequently do they meet?
When do they meet? (during school time, after school)

1 - no response
13 - Yes.
7 - Principal initiates but responsive to teachers needs.
6 - Principal or teachers initiate

All teachers reported that purposes, time, leadership varied in accordanec with needs of the committee.

15. Who determines the goals and philosophy of the school?

1 - No response
11 - Teachers and administration
1 - Supervisor
1 - School board

16. Who determines the curriculum?

14 - Teachers have much say. Teachers, principal and board all have input.

17. How would you describe the degree of input the teachers have in making mdecisions about school affairs?

1	2	3	4
have no input	have limited input	teachers views are actively solicited and acted upon	teachers share final decision making with principal

3 -(3-4)
1 -(2-3-4)
10 - 3

18. How would you describe communication among staff in your school?

little communication	some communication on certain topics	professional issues discussed freely, but not social	social issues discussed but not professional	issues (professional and social) discussed openly

10 - 5
1 - Excellent now (without Anisa)
1 - 2
1 - (4-5)(more relaxed now, in past tied up with Anisa meetings)
1 - 4

19. How would you describe communication between teachers and the principal?

little communication	some, though limited communication on certain topics	professional issues discussed freely	social issues discussed freely	any issue discussed openly and freely

12 - 5
1 - Very good most of time
1 - Generally pretty good

20. How would you rate the openness of teachers to new approaches in education?

very closed in theory and practice--maintain status quo	responsive to new approaches in theory only--practices do not change	hesitant--open to implementing some new ideas but not many	responsive to initiating and implementing needed changes	always trying the newest thing

12 - 4
2 - (3-4)

21. How would you rate yourself regarding openness to new approaches?

14 - 4

22. Are you involved with other school districts in any way? If so, in what manner?

8 - No
1 - Grade level meetings
1 - Negotiations
1 - socials
1 - Taught course
1 - Coaching
1 - Works between two schools

23. Are you involved with any outside organizations, pertaining to school activities, in any way? If so, how?

10 - No
1 - State coordinator
3 - Taught courses

24. Are you involved with other schools in the district in any way? If so, how?

12 - No.
1 - University
1 - Outside people in

25. Do parents and/or community members play an active or passive role in school affairs? If active, in what manner?

14 - Active involvement

(responses include parent evaluation team, volunteers, room mothers, enrichment activities, visitors)

26. Have you had prior experiences with any innovative projects within your school?
If so, what and when?
Did any of these require outside funding?
Which ones?
Are these projects still in existence?
How long were they in operation?
If not, what were the major reasons for discontinuation?

10 - No
2 - Course on Classer
1 - Cross grouping to self-contained
1 - No response

Organizational Characteristics: Inservice

27. Are provisions made for the inservice education of the school staff?
If yes, in what manner?
Do you have inservice days?
How often?
Who initiates them?
When are they held? (school time, after school, summer)
Is participation required?
Who selects the participants?
Who determines the contents?
Who plans the inservice days?
Who conducts the inservice?

14 - Yes. Wed. afternoons 1:30-4:30
13 - Principal or teachers initiate, principal responsive to teacher needs.
1 - Principal or specialists initiate, teachers don't have much input

Organizational Characteristics: Leadership

28. How frequently do you have contact with your principal? For what reasons?

14 - Daily contact - frequent classroom visits, in and out continually

29. How frequently do you have contact with your superintendent?
For what reasons?

14 - Infrequently

30. How would you rate the support the principal gives you?

actively negates	passive support doesn't interfere	actively supports

If he actively negates, how does he show his negation?
If he actively supports, how does he show his support?

14 - Active support - demonstrated through visibility, availability, feedback, defense of teachers.

31. How would you rate the support the superintendent gives you?

actively negates	passive support doesn't interfere	actively supports

If he actively negates, how does he show his negation?
If he actively supports, how does he show his support?

5 - Passive support, doesn't interfere
7 - Active support (receptive of needs)
2 - Don't know

32. How would you describe the school committees role in school affairs?

passive--goes along with administration	offers from direction but does not control administration	actively directs and controls school affairs including the administration

5 - Offer firm direction
4 - passive
5 - No response

33. How would you rate their support?

5 - Passive
6 - Active (education committee
2 - Don't know

Project Director

Project Characteristics

1. Are project activities or goals continuing to be implemented in any form?
   If so, in what manner?

   All practices continue, workshops being conducted.

2. Is the district presently providing any financial support?

   No.

3. Were provisions made for continuation of project goals following termination of federal funds?
   If so, in what manner?

   Expect to be budgeting figure for next year. Anisa practices now a part of the teachers.

4. Do you presently have any project staff meetings?
   If so, how often?
   For what purposes?
   Who initiates them?
   Who determines the agenda?
   Who leads them?

   (Project discussions now integrated into regular staff meetings.)

5. Has any inservice training related to the project been conducted since withdrawal of federal funds?
   If yes; For what purposes?
   Who initiated the inservice?
   Who determined the content?
   Who planned the inservice?
   Who conducted it?

   Some money was reallocated, contract with Anisa staff for more training.

6. How would you describe the support of the principal toward the project when it was in full operation?

actively negates	passive supports--doesn't interfere	actively supports

If active negates--how does he show negation?
If active support--how does he show support?

Director is the principal.

7. How would you describe the support of the superintendent toward the project when it was in full operation?

actively negates	passive support doesn't interfere	actively supports

If actively negates, how does he show negation?
If actively supports, how does he show support?

Passive then and now.

8. How would you describe the support of the school committee toward the project?

actively negates	passive support--doesn't interfere	actively supports	was uninformed of its existence

Passive.

9. During the period of federal funding how frequently did you have contact with the teachers?

Daily.

10. During the three years of federal funding, did you have project staff meetings?
If yes; How often?
For what purposes?
Who initiated them?
Who determined the agenda?
Who led them?

Yes. Weekly as part of the regular staff meeting. Bimonthly with the Anisa team. Purposes varied, feedback, discussion, information, problem-solving, Anisa team and principal led.

11. The project centered around extensive inservice training of teachers;
Who designed the inservice?
Who conducted the inservice? (university personnel, district personnel, other)
How would you describe the primary method of training?
Lecture-- / combination/ hands on workshops / other

Did teachers have any contact with persons who conducted the training following the training? If so, in what form?
Was there any other kind of followup to the training sessions?

Anisa team designed and conducted, based on needs of teachers. Training was combination. Followup by Anisa team included video, demonstrations, observations, conferences. First year--3 days/twice a month. Second and third--3 days/once month.

12. Did the project involve any additional materials?
If so, where did you get them--who provided them?

Yes. Teacher made and published. Federal funds.

13. Who made project decisions?

14. Were teachers involved in project decisions in any way?
If so, in what manner?

Started with Anisa staff and principal, as progressed more input from teachers.

15. Do you expect project practices to continue?
If yes, in what manner?

Things teachers have learned are and will continue; workshops continue.

16. If the project were to be done over again, would you make any changes?
If so, what?

1. Involve other schools from the beginning.
2. Have co-directors or directors who are not principals.

17. Who initiated the project? Whose idea was it?

Superintendent heard about it. Met with Dan Jordan and Don Streets, brought in the principal. Proposal written and accepted by school board.

18. Who determined the need for the project?

Superintendent

19. Who was directly involved in the planning?

Anisa staff, superintendent, principal, Ed DiCenzo (Title III)

20. How were the participants chosen?

Target--whole school.

21. What were the incentives for involvement?

If not want to be involved could transfer to another school. Incentives: (1) Desire to remain in the school, (2) Need for improvement.

Principal

Organizational Characteristics: Communication and Decision Making

1. Do you have staff meetings?
   If yes, Who initiates these meetings?
   How frequently are they held?
   When are they held? (during school time, after school)
   What are the primary purposes for the staff meetings?
   Who determines the agenda?
   Who leads them?

Yes. Regular. Wednesday p.m.'s (attendance required). Agenda could come from anyone. Principal usually leads. Regular PET meetings Wed. a.m Weekly grade level meetings (required). Informal gatherings morning and noon. Specialists meet weekly with teachers. Leader depends on specifics involved.

2. Do you have teacher commitees in the school?
   If so, For what purposes?
   Who determines the members of the committees?
   Who initiates the committees--who determines the purposes or needs?
   Who leads these commitees?
   How frequently do they meet?
   When do they meet? (during school time, after school)

Yes. Principal usually initiates, needs from anyone. Leader varies on needs. Voluntary participation.

3. Who determines the goals and philosophy of the school?

Total group.

4. Who determines the curriculum?

Teachers and principal

5. How would you describe the degree of input the teachers have in making decisions about school affairs?

have no input	have limited input	teachers views are actively solicited and acted upon	teachers share final decision making with principal

6. How would you describe communication among staff in your school?

little communication	some communication on certain topics	professional issues discussed freely, but not social	social issues discussed but not professional	issues (professional & social discussed openly

Issues (professional and social) discussed openly.

7. How would you describe communication between teachers and the principal?

little communication	some, though limited communication on certain topics	professional issues discussed freely	social issues discussed freely	any issue discussed openly and freely

Any issue discussed openly and freely.

8. How would you rate the openness of teachers to new approaches in education?

very closed in theory and practice--maintain status quo	responsive to new approaches in theory only--practices do not change	hesitant--open to implementation some new ideas but not many	responsive to initiating and implementation needed changes	Always trying the newest thing

Responsive to initiating and implementing needed changes

9. How would you rate yourself regarding openness to new approaches?

Open. Responses to initiating needs changes.

10. Was this school involved with other schools in the district in any way? If so, how?

Involved with other schools through science, mathematics, reading with committees.

11. Was this school involved with other school districts in any way? If so, in what manner?

Upon request for Anisa workshops

12. Was this school involved with any outside organizations, pertaining to school activities, in any way? If so, how?

University of Main interns
Counseling Center - Bangor

13. Do parents play an active or passive role in school affairs? If active, in what manner?

Parent volunteers. Title I committee of parents.

14. Have you had prior experiences with any innovative projects within your school?
If so, what and when?
Did any of these require outside funding?
Which ones?
Are these projects still in existence?
How long were they in operation?
If not, what were the major reasons for discontinuation?

No. New building

Organizational Characteristics: Inservice

15. Are provisions made for the inservice education of the school staff?
If yes, in what manner?
Do you have inservice days?
How often?
Who initiates them?
When are they held? (school time, after school, summer)
Is participation required?
Who selects the participants?
Who determines the content?
Who plans the inservice days?
Who conducts the inservice?
Is release time allowed for teachers?
If yes, for what purposes? What kinds of activities?
How much release time is allowed per teacher?
Are teachers reimbursed for reourses taken?

Yes. Wed. afternoons - required - 1:30 - 4:30
Two days per year professional days plus visits on approval.
Teachers reimbursed. Activities initiated by principal or teachers, in response to needs.

III. Organizational Charaeteristics: Leadership

16. How and where do you spend the bulk of your time?

Most of time in elassrooms with teachers, assistance, feedback,

17. How would you rate the support the superintendent gives you?

actively negates	passive support doesn't interfere	actively supports

If he actively negates, how does he show this negation?
If he actively supports, how does he show his support?

Actively supports, is responsive to requests.

18. How would you deseribe the school committees role in sehool affairs?

Passivc--goes along with administration	offers from direction but docs not control administration	actively directs and controls school affairs--including the administration

Offer firm direction--supportive.

APPENDIX J

Profile of the Overall Level of Use of the CST Project

Teacher	Category	Knowledge	Acquiring Information	Sharing	Assessing	Planning	Status Reporting	Performing
1		NI	NI	NI	NI	NI	IVa	NI
2		NI	IVa	NI	NI	NI	IVa	NI
3		NI	IVa	O	NI	NI	IVa	NI
4		NI	IVa	V	NI	NI	IVa	NI
5		NI	IVa	IVa	IVb	NI	IVb	NI
6		IVa	IVa	IVa	NI	NI	IVa	IVa
7		IVb	IVb	IVb	IVb	NI	IVb	IVb
8		IVb	IVa	IVa	NI	NI	IVa	IVa
9		NI	IVa	O	NI	NI	IVa	NI
10		NO	O	O	O	O	O	O
11		NOT APPLY AS IS LD SPECIALIST						

KEY: Level O: Non-Use. User has little or no knowledge about the innovation, no involvement with the innovation and is doing nothing toward becoming involved.
Level IVa: Routine Use. Use of innovation is stabilized with little variation in pattern of use.
Level IVb. Refinement. User varies the use of the innovation to increase impact on clients.
Level V. Integration. User collaborates with others in use of innovation to expand impact on clients.
NI Insufficient information

(See Appendix for a more detailed description of the LoU instrument.)

APPENDIX K

Results from the Arbuckle Interview

CST Project

Project Teachers

Project Characteristics

1. Who initiated the project--whose idea was it?

5 - Mr. Dews and Mr. Lambert
2 - Mr. Dews
4 - Unsure

2. Who determined the need for the project?

5 - Mr. Dews and Mr. Lambert
2 - Mr. Dews
4 - Unsure

3. Who was directly involved in the planning?

5 - Mr. Dews and Mr. Lambert
6 - Unsure

4. Were you involved in the planning in any way? If so, how?

11 - No

5. How were you informed about the project?

4 - notice
2 - meeting
5 - unsure

6. Why did you get involved?

1 - for contact with teachers (LD teacher)
2 - need for help plus credits
2 - credits (reinforced what already knew)
6 - need for help

7. Who made project decisions? Were teachers involved in project decisions in any way?

4 - unsure
7 - Mrs. Dews and Mr. Lambert

8. Did you have project staff meetings?
If yes; How often?
For what purposes?
Who initiated them?
Who determined the agenda?
Who led them?

4 - unsure
3 - no
4 - meeting every week through course (first year only)

9. Do you presently have any staff meetings?
If so, How often?
For what purposes?
Who initiates them?
Who determines the agenda?
Who leads them?

(No)

10. The project centered around extensive training of teachers-- Who determined the content of the inservice?
Who designed the inservice?
Who conducted the inservice?
How would you describe the primary method of training?

lecture	combination	active workshops	other

Did you have any personal contact with the persons who conducted the inservice, following the training? (Was there any followup to the training?)
If so, in what manner?

Instruction

11 - Dr. Walker and LD personnel

Method

1 - combination
10 - primarily lecture

Followup

11 - Lou Lambert (all but 2 teachers utilized; viewed CST's help very useful)
3 - LoU's work strength of project
1 - university follow would have been useful
2 - additional followup workshops desirable

11. Did this project involve any additional materials?
If so, from whom and how did you get them?

4 - No
3 - some additional materials
4 - unsure

12. How frequently did you have contact with the Director?

6 - unsure
5 - infrequent with Director
6 - frequent with CST

Organizational Characteristics: Communication and Decision Making

13. Do you have staff meetings?
If yes, Who initiates these meetings?
How frequently are they held?
When are they held? (during school time, after school)
What are the primary purposes for the staff meetings?
Who determines the agenda?
Who leads them?

10 - irregular, once/month when needed
1 - regular, once/month
7 - administration lead but teachers have input
4 - may be initiated by teachers
11 - administrators lead

14. Do you have teacher committees in the school?
If so, For what purposes?
Who determines the members of the committees?
Who initiates the committees--who determines the purposes or needs?
Who leads these committees?
How frequently do they meet?
When do they meet? (during school time, after school)

11 - yes
committee of teachers and administrators meet at end of year set priorities for following year. Teachers volunteer for committees
6 - teachers determine needs
3 - elementary supervisor pushes his own ideas
2 - Mr. Dews initiates and leads

15. Who determines the goals and philosophy of the school?

10 - teachers, administrators and citizens
1 - board

16. Who determines the curriculum?

11-teachers have much input

17. How would you describe the degree of input the teachers have in making decisions about school affairs?

have no input	have limited input	teachers views are actively solicited and acted upon	teachers share final decision making with principal

8 - teachers views are actively solicited and acted upon
2 - have limited input
1 - quite a few have no input
1 - quite a bit of sharing in final decision making with principal

18. How would you describe communication among staff in your school?

little communication	some communication on certain topics	professional issues discussed freely, but not social	social issues discussed but not professional	issues (professional and social) discussed openly

2 - excellent
2 - very good
5 - pretty good
1 - poor
1 - grade levels only

19. How would you describe communication between teachers and the principal?

little communication	some, though limited communication on certain topics	professional issues discussed freely	social issues discussed freely	any issue discussed openly and freely

8 - very good
2 - generally good
1 - adequate (listens;accessible; responsive; visible)

With the elementary supervisor
6 - generally good
4 - hears what he wants to hear
1 - very good

20. How would you rate the openness of teachers to new approaches in education?

very closed in theory and practice--maintain status quo	responsive to new approaches in theory only--practices do not change	hesitant--open to implementing some new ideas but not many	responsive to initiating and implementing needed changes	always trying the newest thing

3 - runs gamut, generally open

21. How would you rate yourself regarding openness to new approaches?

10 - responsive to initiating needed changes
1 - try anything

22. Are you involved with other schools in the district in any way?
If so, how?

11 - no

23. Are you involved with other school districts in any way?
If so, in what manner?

1 - school board
1 - mainstream
9 - no

24. Are you involved with any outside organizations, pertaining to school activities, in any way? If so, how?

2 - planetarium
1 - Portland museum
1 - Boston aequarium, outside resources
1 - University of Maine
6 - no

25. Do parents and/or community members play an active or passive role in school affairs? If active, in what manner?

2 - passive
9 - active (volunteers, visitors, lead field trips, tutoring, lead mini courses)

26. Have you had prior experiences with any innovative projects within your school?
If so, what and when?
Did any of these require outside funding?
Which ones?
Are these projects still in existence?
How long were they in operation?
If not, what were the major reasons for discontinuation?

5 - team teaching
1 - director, neighborhood program
5 - no

Organizational Characteristics: Inservice

27. Are provisions made for the inservice education of the school staff?
If yes, in what manner?
Do you have inservice days?
How often?
Who initiates them?
When are they held? (school time, after school, summer)
Is participation required?
Who selects the participants?
Who determines the contents?
Who plans the inservice days?
Who conducts the inservice?

11 - yes Wednesday afternoons
3 - teachers determine activities
3 - activities determined by elementary supervisor but teacher needs considered
3 - teachers don't have much say, determined by elementary supervisor
5 - working pretty well
2 - could be more relevant

Organizational Characteristics: Leadership

28. How frequently do you have contact with your principal? For what reasons?

9 - daily or several times/week (depending on school)
2 - infrequent (since fire) but is accessible and responsive if needed

29. How frequently do you have contact with your superintendent? For what reasons?

7 - rarely see
3 - several times/year
1 - twice/month (through negotiating committee)

30. How would you rate the support the principal gives you?

actively negates	passive support doesn't interfere	actively supports

If he actively negates, how does he show his negation?
If he actively supports, how does he show his support?

11 - listens; open; feedback; accessible; visible; understands realities of classroom
11 - active support from elementary supervisor

31. How would you rate the support the superintendent gives you?

actively negates	passive support doesn't interfere	actively supports

If he actively negates, how does he show his negation?
If he actively supports, how does he show his support?

1 - active support (never refused)
3 - passive (rarely see)
7 - don't know

32. How would you describe the school committees role in school affairs?

passive--goes along with administration	offers from direction but does not control administration	actively directs and controls school affairs including the administration

11 - offers firm direction but does not control the administration

How would you rate their support?

11 - supportive (active; interested; very involved; try to bring in teachers views; accessible; active but ignorant of needs)

Project Director; CST; and Principal

Project Characteristics

1. Are project activities or goals continuing to be implemented in any form?
   If so, in what manner?

Director	CST
Yes. Practices continue. 4 LD specialists. Acceptance of special education teachers by school staff. No formal inservice at this point.	Somewhat. Have seen more awareness, asking more questions, adapting testing, continued improved diagnostic skills

2. Is the district presently providing any financial support?

Director	CST
District supports 4 LD specialists	No

3. Were provisions made for continuation of project goals following termination of federal funds?
   If so, in what manner?

Director	CST
Behaviors learned continue	Behaviors integrated into teachers

4. Do you presently have any project staff meetings?
   If so, how often?
   For what purposes?
   Who initiates them?
   Who determines the agenda?
   Who leads them?

Director	CST
No	No

5. Has any inservice training related to the project been conducted since withdrawal of federal funds?
   If yes; For what purposes?
   Who initiated the inservice?
   Who determined the content?
   Who planned the inservice?
   Who conducted it?

Director	CST
No formal training	Many teachers taking related courses

6. How would you describe the support of the principal toward the project when it was in full operation?

actively negates	passive supports--doesn't interfere	actively supports

If active negates--how does he show negation?
If active support--how does he show support?

How about now?

Director	CST
Active--took part in the training. Now--same	Active.

7. How would you describe the support of the superintendent toward the project when it was in full operation?

actively negates	passive support doesn't interfere	actively supports

If actively negates, how does he show negation?
If actively supports, how does he show support?

How about now?

Director	CST
Active--permit to do financial support for substitutes	Passive.

8. How would you describe the support of the school committee toward the project?

actively negates | passive support--doesn't interfere | actively supports | was uninformed of its existence

Director

Passive.

CST

Active. Very strong, very supportive. Every board member had close person involved in special education. [illegible] out of way to keep themselves informed. Still same way.

9. During the period of federal funding how frequently did you have contact with the teachers?

How about now?

Director

Daily with CST
Vary with teachers.

CST

Daily with Director. Vary with teachers, several times/week. Both hit schools--need feedback to talk and share.

10. During the three years of federal funding, did you have project staff meetings?
If yes; How often?
For what purposes?
Who initiated them?
Who determined the agenda?
Who led them?

Director

First year, meetings through course. Prior to workshops. After that discussion on individual basis with CST.

CST

Course workshops served as time to talk, feedback, frequent discussions. No group meetings after first year.

11. The project centered around extensive inservice training of teachers;
Who designed the inservice?
Who conducted the inservice? (university personnel, district personnel, other)
How would you describe the primary method of training?
Lecture-- / combination/ hands on workshops/ other

Did teachers have any contact with persons who conducted the training following the training? If so, in what form?
Was there any other kind of followup to the training sessions?

Director	CST
CST and Dr. Walker (special Education at University) designed. University personnel taught. Combination--heavy on lecture. CST did primary followup.	Dr. Walker-content. Director and CST, in consideration of teachers designed. University personnel also CST conducted. Largely lecture to start--as more specialized more group activities. Followup--much discussion with instructors, no followup in class by university personnel. Planned but didn't occur.

12. Did the project involve any additional materials?
If so, where did you get them--who provided them?

Director	CST
Not substantial--district funds	Minimal. District.

13. Who made project decisions?

14. Were teachers involved in project decisions in any way?
If so, in what manner?

District	CST
Director and CST. Some informal input from staff.	Teachers and CST. Informal input from staff.

15. Do you expect project practices to continue?
If yes, in what manner?

Director	CST
Teachers continue to implement what learned.	Yes. In sense that have become aware--How much do when alone? Learned behaviors will continue.

16. If the project were to be done over again, would you make any changes? If so, what?

Director	CST
Additional followup workshops. Did what was intended.	Run workshop 2 or 3 years in row. More mainstreaming of special education in classrooms Model was too abstract--highly idealistic--need framework to work to relate to teachers. Teachers had to adapt to classroom needs.

17. Who initiated the project? Whose idea was it?

Director	CST	Principal
Elementary supervisor and LD teacher	LD teacher	Elementary supervisor or LD teacher - not sure

18. Who determined the need for the project?

Director	CST	Principal
informal Assessment from teachers	Talked with university and polled teachers to determine if interested	Not sure--poll of some kind.

19. Who was directly involved in the planning?

Director	CST	Principal
Elementary supervisor and LD, help from Title III and university	Elementary supervisor and LD, help from university but from our point of view	Elementary supervisor and LD teacher

20. How were the participants chosen?

Director	CST	Principal
Voluntary	Voluntary	Voluntary

21. What were the incentives for involvement?

Director	CST	Principal
Personal--relief of frustration. Certification credits	Relevancy. Many teachers had kids who fit into this category.	Met real need.

Organizational Characteristics: Communication and Decision Making

1. Do you have staff meetings?
   If yes, Who initiates these meetings?
   How frequently are they held?
   When are they held? (during school time, after school)
   What are the primary purposes for the staff meetings?
   Who determines the agenda?
   Who leads them?

Director	CST	Principal
Supposedly regular. Bldg. meetings. once/month. Some whole group meetings. Mr. French or Dews initiates and leads. Some in AM or PM	Administration initiates. Regular about once/month. Room for teacher feedback. Often lead to other meetings on specific needs. Input from teachers sought. 1-1/2 hours.	Yes. Irregular Teachers wanted monthly meetings. Mr. French leads.

2. Do you have teacher commitees in the school?
   If so, For what purposes?
   Who determines the members of the committees?
   Who initiates the committees--who determines the purposes or needs?
   Who leads these commitees?
   How frequently do they meet?
   When do they meet? (during school time, after school)

Director	CST	Principal
Yes. Grade level. Most committees chaired by Mr. French or Dews. Members voluntary. Staff initiates committees. Sets priorities for following year. Meetings vary, depend on need.	Evaluation committee voluntary. Administration initiates but solicits information from teachers.	Meet in spring to determine goals--set priorities (democratic vote). Mr. Dews or French usually lead.

3. Who determines the goals and philosophy of the school?

Director	CST	Principal
Teacher, administration, citizen.	Largely community project, wide representation.	Everyone.

4. Who determines the curriculum?

Director	CST	Principal
Teachers.	Teachers have wide freedom to select what want.	Teachers and administration.

5. How would you describe the degree of input the teachers have in making decisions about school affairs?

1	2	3	4
have no input	have limited input	teachers views are actively solicited and acted upon	teachers share final decision making with principal

Director	CST	Principal
3	3 - Have chance to voice opinions but not final power	3 - High level of input.

6. How would you describe communication among staff in your school?

1	2	3	4	5
little communication	some communication on certain topics	professional issues discussed freely, but not social	social issues discussed but not professional	issues (professional & social discussed

Director	CST	Principal
5	Good communication, closely knit groups	Good within schools, within district difficult because of distance

7. How would you describe communication between teachers and the principal?

1	2	3	4	5
little communication	some, though limited communication on certain topics	professional issues discussed freely	social issues discussed freely	any issue discussed openly and freely

Director	CST	Principal
5	Very open.	Very good.

8. How would you rate the openness of teachers to new approaches in education?

1	2	3	4	5
very closed in theory and practice--maintain status quo	responsive to new approaches in theory only--practices do not change	hesitant--open to implementation some new ideas but not many	responsive to initiating and implementation needed changes	Always trying the newest thing

Director	CST	Principal
3-4	4	Very high

9. How would you rate yourself regarding openness to new approaches?

Director	CST	Principal
4	4	4

10. Was this school involved with other schools in the district in any way? If so, how?

Director	CST	Principal
Administration have regional organization	No	Regional organization

11. Was this school involved with any outside organizations, pertaining to school activities, in any way? If so, how?

Director	CST	Principal
Part of University Center, Member of PRIME	Minimal	Not directly

12. Do parents play an active or passive role in school affairs? If active, in what manner?

Director	CST	Principal
Active. Parent volunteers, tutoring, clerical.	Active. Parent volunteers	Active. Parent volunteers. Open door policy--can visit classrooms at any time. Taught mini-courses. No PTA

14. Have you had prior experiences with any innovative projects within your school?
If so, what and when?
Did any of these require outside funding?
Which ones?
Are these projects still in existence?
How long were they in operation?
If not, what were the major reasons for discontinuation?

Director	CST	Principal
Career education, team teaching, individualized instruction. No federally funded projects.	Not really.	Teaming, individualization No federal funded projects.

Organizational Characteristics: Inservice

15. Are provisions made for the inservice education of the school staff?
If yes, in what manner?
Do you have inservice days?
How often?
Who initiates them?
When are they held? (school time, after school, summer)
Is participation required?
Who selects the participants?
Who determines the content?
Who plans the inservice days?
Who conducts the inservice?
Is release time allowed for teachers?
If yes, for what purposes? What kinds of activities?
How much release time is allowed per teacher?
Are teachers reimbursed for courses taken?

Director	CST	Principal
Yes. 1/2 day/week released time for inservice. School attendance required until 3. Information solicited from teachers. Committee of teachers to administer, set priorities, generate ideas. 1 professional day. Visits to other schools common. Teachers reimbursed.	Yes. Administration initiates--committee discusses ideas--sees common needs. Wed. p.m.'s for inservice. Participation usually required.	Yes. Wed. p.m.'s. Committee of teachers and administrators set major things want to do. Afternoons also used for individual planning time. Release time provided for visitations.

16. How and where do you spend the bulk of your time?

Director	CST	Principal
60-70% in school bldg.	Bulk in schools	90% in schools.

17. How would you rate the support the superintendent gives you?

actively negates	passive support doesn't interfere	actively supports

If he actively negates, how does he show this negation?
If he actively supports, how does he show his support?

Director	CST	Principal
Passive	Passive--but no trouble in getting money for projects.	Passive

18. How would you describe the school committees role in school affairs?

Passive--goes along with administration	offers from direction but does not control administration	actively directs and controls school affairs--including the administration

Director	CST	Principal
Overall supportive. Policy making body.	Firm--very concerned--open to community, to calls, are involved, honest.	Firm direction--less support now than in past.

Innovation Characteristics (principal)

19. What is your overall reaction to the CST project?

Overall reaction good. Seemed to key teachers into special needs. Lead to greater understanding. Can pinpoint diagnosis--recognize problems, quicker to seek help, referrals are up.

20. Are project activities or goals continuing to be implemented in any form now? If so, in what way?

Is a continuing growth, starting with the project.

22. Do you or did you have any serious reservations about the project? If yes, what?

No.

23. If it were to be done over again, do you have any suggestions of changes to be made?

Might have been more extensive--more workshops.