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ABSTRACT

This document reports on a project undertaken to determine the feasibility of a periodic national survey of a sample of U.S. school districts to obtain information on the performance of the existing dissemination and utilization network for educational innovations. The first section of volume 1 describes the content and consequences of innovation, and the second section examines the innovation process. Of the 353 responses received, 346 (98 percent) reported at least one major innovation during the 1970-71 school year. The survey results indicate that the amount of innovative effort per pupil is dramatically and inversely related to size of district. Individualized instruction and team teaching were the innovation types cites most frequently as the most significant in 1970-71. There is a strong tendency for showcase innovations to be directed to the elementary level, with considerably less emphasis on senior high schools and very little attention paid to middle or junior high school years. Teachers are by far the highest participants in innovations, and internal resources generally received more usage than did external resources. The appendixes contain the survey questionnaire, letters to respondents, and background information on the characteristics of the sample. (Author/DN)

EDUCATIONAL INNOVATION IN THE UNITED STATES

Volume I:
The National Survey: The Substance and the Process

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CHAPTER ONE: INTRODUCTION, METHOD, SUMMARY, AND IMPLICATIONS

A. INTRODUCTION

1. THE PROBLEM

A physician needs to know the general state of health of the patient and his symptoms before he can prescribe a plan of treatment. In very much the same way a sound national policy for applied research and development should be based on an accurate understanding of the existing state of affairs in the system being served. The "system" in this case is the existing network for the dissemination and utilization of new knowledge in the field of education. We know that as of today this "network" hardly deserves the name: it is incomplete and inadequate in a number of respects; it is unable to identify or disseminate a great deal of what is known, and it rarely insures the adequate utilization of what is disseminated. Although reasons for such defects are often put forward, we have up to now had very little reliable information on the way the system is actually working at present so that we can pinpoint those areas where improvements are most needed and would have maximum pay-off.

The 1960's saw the emergence of a new awareness that research by itself does not provide direct answers to the problems faced in the practical world, and this awareness has been articulated in the formation of a new discipline focused on the problem of knowledge dissemination and utilization (D&U). Research studies of the D&U process were virtually non-existent prior to World War II and were restricted largely to the area of agricultural innovations until a decade ago. In recent years, however, we have seen a dramatic growth of interest in this topic in many fields of practice including education.

Together with this growing interest in D&U as a research concern have come increasing efforts to establish dissemination networks, new roles, and institutions designed specifically to speed the flow of knowledge from research to practice. U.S. education has been in the forefront of this innovative trend. Starting with major federal legislation on education in the early 1960's, there has been a very rapid growth of research and development centers, information clearinghouses, regional laboratories and locally and regionally based dissemination projects, conferences, and training programs. All these developments have had one primary objective: educational self-renewal and progress through the infusion of new ideas and innovations based on research knowledge.

Clearly the time has come to begin a serious and empirically accurate accounting of these developments by monitoring their impact on educational practice at the level of operating school districts. From such a knowledge base it should eventually be possible to assign priority weights to new project and program proposals so that this knowledge delivery system can be improved and expanded in ways conducive to its optimal performance.

This project was undertaken to determine the feasibility of a periodic national survey of a statistically representative sample of U.S. school districts to obtain from them detailed information on the performance of the existing D&U network.

2. BACKGROUND AND RELATED RESEARCH AND DEVELOPMENT

The study of diffusion and adoption of innovations has a long tradition in educational research beginning with the studies of Paul R. Mort and his colleagues at Columbia Teachers College. Mort (1964) cites 200 studies beginning in the late 1930's and continuing through the late 1950's, covering a very large range of innovations and focusing on various aspects of school system structure and finance which affect what he called "adaptability." With Mort's retirement that tradition of research at Columbia came to an end although some major studies of educational innovation diffusion have been done since (e.g., Carlson, 1965, Lin et al. 1966). Furthermore, the work of Everett Rogers (1962, 1971), in summarizing over 1000 emplrical studies of innovation diffusion, has demonstrated the compatibility of findings from education with findings from such diverse fields as agriculture, medicine, and community and national development.

A seminal event in the history of educational innovation research was publication of Matthew Miles' compendium Innovation in Education (1964). This book brought together the empirical work of Mort, Carlson, and others with case studies of innovation at all levels of education. Miles also provided an integrative summary which suggested that there was considerable substance to the field.

It is somewhat remarkable that all of this work was done before passage of the Elementary and Secondary Education Act of 1965 in which "innovation" on a large scale was endorsed and funded in a major way by the national government. Unfortunately, however, the major implementation efforts of ESEA did not exploit the insights of Mort, Miles, or Rogers to any great extent. Under Title I and Title III of the act thousands of "innovations" were initiated at the local level all across the country without very much planning or comparative evaluation. Hence, the opportunity to apply and to extend our understanding of innovation processes was largely lost.

Beginning in 1966, with the support of the Division of Research Training and Dissemination of the United States Office of Education,* the Center for Research on Utilization of Scientific Knowledge (CRUSK) at the University of Michigan began to study innovation processes from the special focus of knowledge utilization. As a first project a review was conducted of all relevant sources in the literature on "dissemination," "planned change," "communication," "technology and information transfer" and "innovation." Of over 4000 potential sources identified (Havelock, 1968), about 1000 key items were summarized and integrated in the final report to the U.S. Office of Education (Havelock, 1969).

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*Subsequently re-organized as the National Center for Educational Communication before becoming part of NIE in 1972.

In brief, the report suggested that there were three major orientations toward innovation in education which were identified as: 1) Research, Development and Diffusion (most closely identified with the national "system" planners of the 1960's); 2) Social Interaction (the diffusion researchers); and 3) Problem-Solving (the human relations and client-centered consultation school). We argued in concluding the report that although the above three models of D&U are espoused by different authors and represent different schools of thought, they can be seen as elucidating different but equally important aspects of a total process. In attempting to build a synthesis from these various schools, we have derived the concept of "linkage." According to this principle, the internal problem-solving process of the user is seen as the essential starting point, but the process of searching for and retrieving new outside knowledge relevant to the problem-solving cycle is also vital. To coordinate helping activities with internal user problem-solving activities, the outside resource person (or system) must be able to recapitulate or simulate that internal process. The resource person needs to develop a good "model" of the user system in order to "link" to him effectively. Clinically speaking, we would say that he needs to have empathy and understanding.

At the same time, the user must have an adequate appreciation of how the resource system operates. In other words, he must be able to understand and partially simulate such resource system activities as research, development, and evaluation.

In order to build accurate models of each other, resource and user must provide reciprocal feedback and must provide signals to each other which are mutually reinforcing. It was proposed that this type of collaboration would not only make particular solutions more relevant and more effective, but would also serve to build a lasting relationship of mutual trust and a perception by the user that the resource person is a truly concerned and competent helper. In the long run initial collaborative relations build effective channels through which innovations can pass efficiently and effectively from researchers to developers, from developers to practitioners, and from practitioners to consumers. As the RD&D school holds, there must be an extensive and rational division of labor to accomplish the complex tasks of innovation building. However, each separate role-holder must have some idea of how other roles are performed and some idea of what the *linkage system as a whole* is trying to do.

Two recent survey studies have attempted to explore innovation and R&D utilization from the perspective of nationally representative samples of school administrators using mailed questionnaires. Lindeman, et al. (1969) received 342 returns from a probability sample representing 9000 school districts of enrollment size 600 to 100,000. They found that few school district superintendents could make reference to specific use of R&D and that the importance of R&D in local innovations was only dimly perceived. On the other hand, attitudes toward R&D and interest in receiving such information was found to be very high. Rittenhouse (1970) explored the possibility of comparing school districts on a dimension of "innovativeness" through the use of a checklist of educational innovation categories. Unfortunately, both studies leave in doubt the question of what constitutes an "innovation" and they draw rather different inferences on the amount of innovation going on in education; Lindeman, et al. seemed to feel that there was very little on a per pupil basis when all grades and all classes were considered. On the other hand, the Rittenhouse checklist suggested an enormous volume and variety of innovations

on a district-by-district calculation. It also appeared to us that neither of these studies shed much light on the process of innovation, i.e., the persons involved, the procedures used, the range of resources utilized, and the barriers encountered.

These, then, were the considerations which led us to propose a national survey of innovation processes. Primarily, we wanted to extend and support the propositions emerging from the literature review and synthesis so that statements could be made about existing national realities and trends in these terms. We also wanted to continue and enrich the empirical research tradition in this field and to provide policy makers with a sounder basis for decision making on such matters as support of extension agents, dissemination networks, demonstration projects and R&D and D&U operations generally.

B. METHOD

1. NARRATIVE OVERVIEW

The survey project was initiated in June of 1970 as one segment of a project commissioned by the National Center for Educational Communication, U.S. Office of Education. The NCEC at that time was contemplating a program of research studies on dissemination and utilization phenomena to supplement and provide guidance to their existing D&U efforts (e.g., ERIC, targetted communications, state dissemination centers and agents, etc.).

To begin this program, NCEC called upon principal investigator Havelock to set up an advisory committee of leading scholars in the field of D&U research to provide guidelines and judgments on priorities for such a program.

Committee members included the following:

Dr. Richard O. Carlson
Center for Advanced Study of
Educational Administration
University of Oregon

Dr. Robert Chin
Department of Psychology
Boston University

Dr. Neal Gross
Graduate School of Education
University of Pennsylvania

Dr. Ronald O. Lippitt
Center for Research on Utilization
of Scientific Knowledge
Institute for Social Research
University of Michigan

Dr. Matthew B. Miles
Program in Humanistic Education
State University of New York at Albany

Dr. William Paisley
Institute for Communication Research
Stanford University

Dr. Everett Rogers
Department of Communication
Michigan State University

The work of the committee spanned approximately one and one half years from the fall of 1970 to the spring of 1972 and the demise of the NCEC. During that time, three committee meetings were held in addition to considerable reporting and feedback by mail and telephone, and two reports were issued outlining priority topics for research and development projects in the areas of dissemination, utilization, and innovation.

One major function of this committee was to provide input and critique to the innovation-monitoring survey. Therefore, prior to its first meeting a tentative questionnaire form was developed and design specifications laid out for their reaction. As a result of these inputs the original design calling for a sample of 200 districts was expanded to 500 in anticipation of response rate problems, and several areas of questioning were added.

Initial pilot testing of the form with a few superintendents in Michigan supplemented with extended interviews with these respondents indicated the feasibility and appropriateness of the questions, but a subsequent pilot test using the mail under approximately the same conditions anticipated for the national study suggested the need for drastic revisions, particularly in the direction of simplification. Most distressing was the reluctance of respondents to cite innovations deemed to be "unsuccessful."

Concurrent with these problems with the form, the project staff became embroiled in a very long and difficult negotiation with the U.S. Office of Education prior to submitting to the Office of Management and Budget for forms clearance. A special unit set up in OE to screen forms prior to formal OMB submission called on the project staff to submit many revisions of their supporting statement over a six month period. This process, while it may have contributed in some measure to the soundness of the methodology (the form, itself, received very little comment), caused an unanticipated delay of 4 to 6 months in getting the survey into the field and resulted in an unanticipated (and unrecoverable) cost to the project of at least $10,000 while staff hired for the purpose waited for the go-ahead signal.

The delay also had the effect of precluding feedback on innovation process either to the advisory committee or to NCEC and to its new NIE counterpart during crucial transition and policy redirection periods.

The final survey form was put in the field in the fall of 1971 and, after considerable and complex efforts, 71% had responded by May of 1972. Data processing and table construction took place over the following six months with final analysis and report writing taking place in the spring of 1972.

The long turn-around was very disappointing and discouraging for prospects for an efficient national monitoring and feedback. Nevertheless, there are some reasons to believe that a resurvey would not have the same fate. To begin with, the forms clearance difficulties had a chain reaction effect on the cost and staffing of the project such that by the time returns were coming in there was little money and a skeleton residual staff who at this point had competing commitments. Presumably a regular monitoring project could (a) maintain a semi-permanent staff, (b) develop forms and procedures which were, in the main, routine and redundant from year to year, obviating the complicated dialogue on forms clearance, (c) build a respondent panel which would be identical or largely overlapping from year to year, obviating the need for new sample construction and increasing the likelihood of responding through habituation.

A more detailed summary of the method with particular emphasis on the effort to build a satisfactory response rate follows in the next few pages. For additional details on methodology the reader should consult the Appendices which include the form as it was finally approved, detailed tables on response rates for different groups, and the supporting statement used to facilitate forms clearance.

2. SAMPLE CONSTRUCTION

The study population was comprised of superintendents in all operating public school systems in the contiguous United States as of September 1970. These were stratified into 8 geographical regions and 7 categories of pupil enrollment size. A sample of 500 systems was selected randomly within strata such that one system would be selected for every 80,000 pupils with the exception that all systems with more than 80,000 pupils were included, with certainty, rather than sampled. A detailed explanation of the sampling procedures used may be found in the Supporting Statement in Appendix C.

3. PILOT TESTING

Prior to conducting the national survey, an extensive series of pilot tests were conducted to refine the instrument and procedures. In January, 1971 the first questionnaire was pilot tested and reviewed by three selected superintendents in the state of Michigan. Their comments were used to revise the form which was further tested in April. The results of this second pretest, combined with the comments of several educational researchers including the research advisory committee described earlier, were used to modify the questionnaire further. After another pilot test conducted in June yielded an unacceptably low response rate (under 20%), two new abbreviated versions of the questionnaire were developed. These were administered to small randomly selected samples of superintendents during the month of August. One form asked for detailed comment on two innovations, one successful and one "problematic" in some significant respect. The other form asked only for an innovation (successful or unsuccessful) which stood out as noteworthy from the respondent's point of view, but added a page for listing an inventory of other innovations. Because respondents generally failed to identify the "problematic" innovation, and because NCEC expressed a strong desire to receive the "inventory" data, the second form was selected for final administration.

4. HOW THE FINAL FORM WAS ADMINISTERED

a. Commitment Form

In attempting to increase the response rate several strategies were explored. The most promising was to write to each potential respondent explaining the objectives of the survey and inviting him to participate in the study. Enclosed with the letter was a reply form on which the superintendent was asked to check if he would be willing to complete a questionnaire, and, if not, to describe the reasons for his unwillingness. A subsample of 44 superintendents was selected out of our larger sample of 500 to receive this letter; the response was over 90%, with all but one of the respondents indicating a willingness to participate.

This letter and reply form were mailed to the remaining school systems in the sample during the late fall. Within three weeks, those superintendents who had not returned a form were sent another. After another three weeks an attempt was made to reach non-replying superintendents by telephone.

As indicated in Table 1.1, by December 10, 1971 a total of 346 superintendents (69%) had agreed to participate in the survey. Thirty-eight superintendents (8%) wanted more information on the study before they would agree to participate. Several attempts were made to contact all of these persons by telephone to answer their questions and to provide additional information in a personal way.

TABLE 1.1
STATE OF COOPERATION FROM THE SUPERINTENDENTS FOR PARTICIPATION IN THE PROJECT AS OF DECEMBER 10, 1971

	Number of Superintendents	Percent
Willing to participate	346	69%
Wanted more information before agreeing to participate	38	8%
Declined to participate	60	12%
Did not respond	56	11%
Total	500	100%

Sixty replies were received from superintendents who declined to participate in the study. These accounted for 12% of the sample. Despite follow up efforts, 56 superintendents (11% of the sample) did not respond to the letter.

b. Mail Out and Follow-Up

Subsequently questionnaires were mailed to these 56 non-responders as well as to the 346 who had agreed to participate and to the 38 who had requested additional information. Therefore by December 18, 1971, a total of 440 superintendents (88% of the original sample) had been mailed the form.

On January 18, 1972 a second letter and questionnaire were mailed. On February 22, 1972 and again on March 15, 1972, non-respondents were sent telegrams. These telegrams produced very positive results. Within 2 days we had received phone calls from 26 superintendents requesting additional forms or indicating that they were returning a questionnaire; a total of 52 questionnaires were received after the first telegram was sent.

As a final effort several person-to-person telephone calls were made in late March and early April to the remaining superintendents. In addition to yielding more responses, these phone calls were useful in studying non-respondents. As a result of the follow-up efforts, by May 19, 1972, we had received completed questionnaires from 353 school systems for a final response rate of 71%.

The responses from these 353 school systems came in five waves spread over a period of five months, as illustrated in Table 1.2.

TABLE 1.2
RESPONSE RATE GROWTH

	Number Responding	Percent of 500
Questionnaire received after first mailing	196	39%
" " " second "	52	10%
" " " first telegram	52	10%
" " " second "	24	5%
" " " phone call	29	6%
Total received	353	71%
Declined to participate	60	12%
Refused to complete questionnaire	72	14%
Total refusals	132	26%
No response	15	3%
GRAND TOTAL	500	100%

5. NON-RESPONSE STUDY

In addition to the 60 superintendents who declined to participate in the study, a total of 72 school administrators chose not to fill out the questionnaire. Their reasons are listed in Table 1.3. By far the greatest reason mentioned was time pressure. Among those giving reasons, 60% of the superintendents who declined to participate in the study and 43% of those who

TABLE 1.3
REASONS FOR NOT COMPLETING THE QUESTIONNAIRE

Reason	Declined to Participate		Refused to Complete Questionnaire		Total Refusals	
	Freq.	Percent of 48	Freq.	Percent of 42	Freq.	Percent of 90
Time: Can't afford time	29	60%	18	43%	47	52%
Time: Overwhelmed with surveys	7	15%	3	7%	10	11%
Time: Lack of staff	1	2%	2	5%	3	3%
Not interested	5	10%	--	--	5	6%
No innovations to report	--	--	12	29%	12	13%
Political problems take priority	3	6%	1	2%	4	4%
Superintendent is new at job	2	4%	2	5%	4	4%
Questionnaire unworkable	--	--	2	5%	2	2%
Other (e.g., illness)	1	2%	2	5%	3	3%
Total	48	100%	42	100%	90	100%
No reason given	12		30		42	

refused to complete the questionnaire said that they couldn't afford the time. Related reasons such as being overwhelmed with surveys and lacking enough staff accounted for an additional 17% of the former group and 12% of the latter. Among those who refused to complete the questionnaire 12 superintendents (29% of those giving reasons) said they had no memory of any innovations in their school systems and therefore chose not to participate in the study. A total of 42 superintendents (12 in the first group, 30 in the second) did not give any reason for not participating.

There were 15 superintendents who neither refused, nor returned the questionnaire, although when contacted by phone several said they would try. Eight of the 15 said that, although they would try, they couldn't guarantee a return because of their lack of time.

Appendix B includes tables which shed further light on characteristics of responding vs. non-responding districts. Table B.2 shows no systematic differences in response rate by district enrollment size, and Table B.3 shows no substantial difference by region, except of course, for the very large districts where small numbers of cases produce large but non-significant fluctuations.

C. SYNOPSIS OF FINDINGS

The findings of this survey are divided into two main sections, the first dealing with the *innovations* of the 1970-71 school year and the second dealing with the *process* by which those innovations came about, the barriers encountered, the procedures followed, and the various characteristics of the school districts which appeared to be relevant to innovative effort.

1. THE INNOVATIONS

Respondents were asked to list and describe briefly in writing all the major innovations occurring in their school districts in the 1970-71 school year. For one of these innovations they were also asked to provide more detailed information as to participants, key factors in success or failure, and consequences. From the 353 responses out of an original probability sample of 500 districts, we received an overwhelming response, suggesting to us that typical U.S. school districts are embroiled in change at all levels and in all spheres of activity, and that from such changes they see themselves deriving great benefit at reasonable cost. These are, of course, self-appraising and perhaps self-serving responses and for these reasons they may be partly discounted. It would appear, however, that massive distortion is improbable concerning the bare facts, i.e., that innovations bearing such labels were indeed attempted. Sceptics and persistent critics of U.S. education will justifiably point out the absence of hard objective criteria, especially on outcomes, for which far more exhaustive and intensive on-site investigations are needed.

a. How Much Innovation is Going On?

Of 353 reporting districts, 346 (98%) reported at least one innovation which they considered "major" during the 1970-71 school year. The definition of "major" which we asked respondents to use was as follows:

> *"A major change introduced in the last year for the purpose of improving the quality of education within your district. This change may have involved any of the following:*
>
> *a. a substantial reorientation on the part of staff,*
> *b. a reallocation of resources,*
> *c. adoption of new practices, programs, or technology."*

In our judgment most of the responses received would indeed fit these criteria from the point of view of an objective observer. For example, the largest single category of innovation was "Individualized instruction and team teaching" (the two generally being reported together as integral aspects of one innovation). Most educators will agree that changes of this sort are indeed fundamental, minimally requiring reorganization of role relationships, space utilization, grading practices, and curriculum elements. While it is true that innovations of a more trivial nature were numerous (e.g., adding a course here and there, and purchasing new equipment and materials) nearly every district could point to something significant they had done in the year. Minor innovations were also frequently cited as contributing to or components of a larger, more comprehensive, or more fundamental effort.

A grand total of 3,185 innovations were spontaneously cited in all categories, all purportedly meeting the criteria of "major" cited above. This represents an average of over nine innovations per district per year for schools representative of all regions and enrollment sizes throughout the United States. Even assuming zero innovativeness in the 147 non-responding districts out of the stratified probability sample of 500, this represents an absolute minimum rate of well over six innovations per district.

Number of innovations reported is directly related to district size in ascending order. Hence, we might conclude that larger districts are more innovative. However, as illustrated in Table I.4, there are lies, damn lies and statistics, because on a per pupil basis exactly the reverse is true; the

TABLE 1.4
FREQUENCY OF U.S. SCHOOL DISTRICT INNOVATION IN
THE 1970-71 SCHOOL YEAR
(Estimated)

Size of Enrollment	Mean Frequency of Innovations Per District	Mean Frequency of Innovations Per 80,000 Pupils
Under 300	5.67	3024.0
300 - 2,499	7.67	438.3
2,500 - 4,999	8.54	182.2
5,000 - 9,999	9.53	101.6
10,000 - 24,999	11.09	50.4
25,000 - 79,999	12.80	19.5
80,000 and over	13.22	7.3

amount of innovative effort per pupil is dramatically and inversely related to size. Of course, both figures are misleading because a single district-wide innovation where there are 100,000 pupils can hardly be equated with one where there are only 100 pupils. Nor is it reasonable to suppose that respondents in the very largest districts were as easily able to enumerate all innovations going on throughout the district as those in small districts.

Among regions of the U.S., New England rated as most innovative with an average of 12 innovations per district while the Rocky Mountain States ranked lowest with an average of 7.5 innovations.

b. What Types of Innovation Were Most Popular?

"Individualized instruction and team teaching" was the innovation type cited most frequently as the "most significant" district innovation of 1970-71. A summary of all innovation types for all reporting districts is presented in Table 1.5.

TABLE 1.5*
TYPES OF U.S. SCHOOL DISTRICT INNOVATION IN THE 1970-71 SCHOOL YEAR

Innovation Category	Percent Chosen as "Showcase" Innovation (% of 346)	Percent of Total Innovation Effort (% of 3185)	Mean Number Per District
Individualized Instruction and Team Teaching	29%	16%	1.5
Administrative Innovations (includes R&D, Budget, School-Community Relations, Staffing and Staff Training)	21%	28%	2.6
Programmatic Approaches to Instruction (includes special programs for special groups, disadvantaged, tutoring, aides, paraprofessionals)	19%	12%	1.1
Curriculum Change	16%	21%	2.0
Organizational Innovations (includes grade levels, scheduling, attendance units, alternative schools)	12%	8%	0.7
Instructional Technology and Facilities	5%	15%	1.4

*Throughout this summary data will be reported in combined totals for all responding districts unless otherwise indicated. In subsequent chapters analysis will be subdivided into "representative districts" each representing 80,000 pupils in the probability sample and "very large districts," i.e., those over 80,000 and hence above the size of the sampling unit.

The first column of Table 1.5 represents responses only to the first question in the survey, i.e., "the most significant innovation that has been tried out in your district in the last year." We will generally refer to this as the "Showcase Innovation." The second column represents all innovations reported both on the first question and on the subsequent open-ended "inventory" question. It is evident that these figures for total innovation effort follow a somewhat different pattern. Instructional technology, curriculum change and administrative innovation are considerably more common in the over-all tabulations than they are in the "showcase" category while individualization and organizational innovation are less common. Nevertheless, it is also clear from the last column that all these innovation types occur with high frequency throughout our sample. On the average at least one innovation in each category was cited for each school district in the country with the sole exception of "organizational innovation."

We feel that the focus on complex and multi-facetted changes such as individualization is a highly significant fact and suggests the need for a multitutde of outside expert and technical resources, community support, financial investment, internal communication and willingness to take risks to bring about desired improvements.

In view of these findings it may be interesting to look at the frequencies of mention of a few very specific types of innovation which represent some of these supports and resources, including all categories of new technology with more than 20 mentions.

TABLE 1.6
TECHNICAL AND SOCIAL SUPPORT INNOVATIONS

Innovation	Total Mentions	% of Sample (N=353)
Human relations programs	153	43%
In-service training	145	41%
Planning, research, and evaluation	141	40%
Media centers	107	32%
Aides and paraprofessionals	107	32%
Video tape, T.V.	102	29%
Computer and data processing	76	22%
Audio tape, tape recorders	27	8%
Teaching machines	22	6%

Among curriculum content areas, where mentioned, there was a heavy emphasis on basic reading and math, indicating perhaps that the 3 r's are still alive and well in U.S. education.

Types of innovation did not differ significantly from region to region, nor did they differ by enrollment size of the district nor according to average per pupil expenditure.

c. For Whom Are Innovations Intended?

There is a strong tendency for "showcase" innovations to be directed to the elementary level, with considerably less emphasis on senior high school and very little attention paid to middle or junior high school years. When all innovations included in the inventory are taken into account this pattern is somewhat less pronounced but still evident. Individualized instruction and team teaching are almost always directed at elementary grades, whereas curriculum changes and instructional facilities were cited usually in connection with senior high school. Very few innovations, usually administrative, covered all grades.

For only 24% of the 346 showcase innovations were specific target groups other than grades identified. Almost all of these were disadvantaged, handicapped or low performing students. Special programs for the gifted were cited in only two cases.

d. What Were the Consequences of the Innovation?

To an overwhelming degree, positive consequences were cited for the showcase innovation although directions on the questionnaire specifically invited mention of unsuccessful or rejected innovations. Over all, 83% of consequences were reported as positive, 3% negative and 14% mixed. Consequences were reported most often for students (76% of cases), less often for teachers (52%), and much less often for administrators (16%), community (16%) and parents (13%).

Consequences for students, when cited, were particularly positive (94%+), somewhat less so for teachers (82%+), and even less so for administrators (72%+). Consequences were also rated as somewhat less favorable by the very largest districts (68% + for those with 80,000 enrollment or greater contrasted to 85% + for all other size categories combined).

Among specific consequences for students, attitudes toward self and school were cited most (54 times) followed by scholastic performance (51 times).

"Individualized instruction and team teaching," while being the most popular 1970-71 innovation type, was also the type with more mixed consequences than others. Superintendents were also most guarded in recommending innovations of this type for adoption by other districts.

Since our question on consequences was entirely open-ended, it does not yield either quantitative or adequately comparative data to show either which innovations or which districts derived the most benefits or suffered the severest costs.

2. THE PROCESS

The principal objective of this survey was to obtain an empirical understanding of typical *processes* of innovation at the local level in U.S. public education. To this end, both closed- and open-ended questions were asked concerning participation, resources utilized, procedures followed, and barriers encountered. We also sought to determine the influence of various contextual and situational variables on over-all innovativeness. All these findings are presented in detail in Section II of this volume, including Chapters Six through Ten.

a. Participation in the Innovation

Data on persons who participated or played key roles in the innovation process were derived from the open-ended questions on page 1 of the instrument. They are thus spontaneous mentions and probably underestimate those actually participating or involved in some way. Nevertheless a strong pattern emerges. Teachers are by far the highest participants, being mentioned in 66% of all showcase innovations. Assistant superintendents were reported as next most involved, with mentions in 56% of cases. Following in descending order were principals (47%), staff unspecified (46%), superintendents (39%), supervisors and specialists (29%), administrators unspecified (27%), community (26%), school boards (23%), students (22%), parents (19%), counselors and psychologists (12%), and teacher aides (11%). All other categories were mentioned in less than 10% of cases.

We felt that it was particularly noteworthy that outside resource persons representing various types of expertise were rarely mentioned spontaneously. University personnel were mentioned in 8% of cases, state education agencies in 7%. Private companies and regional laboratories had 2% and 1% mentions respectively.

This over-all pattern of participation was consistent across enrollment size categories with a few exceptions. In the 31 largest districts, the teachers' role was somewhat less salient (55%) while the participation of the assistant superintendent was most evident (91%). Community participation was also much more evident in the largest districts (48% vs. 24%) and was very often seen as a key factor in innovation success (39% vs. 16%).

In response to the specific question "What seemed to be the key factor(s) in making the adoption and acceptance of this innovation successful or unsuccessful?" most respondents named the participation of various persons and groups. While these "key factor" responses correspond to figures for over-all participation, there are some interesting differences. Teachers are again top listed with 38% (131 mentions over the 346 showcase innovations) followed by staff unspecified (28%). Next in line, however, are community and students with 18% and 14% mentions respectively. Principals and other administrators are far less likely to be mentioned as "key factors" than merely as participants.

Once again, outside resource groups get very little mention as key factors. University participation receives only six mentions as "key factors" (under 2%) while state agencies get only five (a little over 1%). Regional labs get only one mention as a key factor (less than 1/2 of 1%) and private companies get none. We feel that these findings are among the most significant to emerge from our survey, for while they probably underestimate actual utilization of outside resources, they suggest something about the very low visibility of the external resource universe as far as the overwhelming majority of U.S. school districts are concerned.

b. Resource Utilization in the Innovation

The last page of the form contained a list of resources which might be used in promoting, adopting, or implementing innovations; the list was divided into two halves, one representing "internal resources" and one representing "external," and were labelled as such. Respondents were asked first to indicate over-all extent of use in the school district and then to indicate whether or not the resource was used in the showcase innovation specifically. Responses generally confirm the pattern emerging from the participation data summarized above. Teacher discussions and teacher in-service training were rated as used "frequently" or "very frequently" by almost all respondents and were mentioned as used in the showcase innovation 48% and 44% of cases respectively.

Once again internal resources generally received more usage than external resources, although differences were less pronounced than in the spontaneously reported data, confirming the "salience" hypothesis proposed above.

Because of the nature of this project, several of the "external resource" items referred to specific programs of the federal government. We found that 36% of districts in the representative sample used at least one federal resource, usually, we inferred, as a source of financial support (e.g., Title I and Title III of ESEA cited for 18% and 13% of showcase innovations respectively). Federal information resources represented by ERIC and the Regional Laboratories were far less utilized. ERIC was used by 9% of the 315 representative districts while the REL's were used by 5%. Among the very large districts, however, reported use was higher (23% for ERIC, 19% for REL's).

c. Procedures Emphasized and Philosophy of Change

Respondents were asked to rate the showcase innovation process in terms of 21 innovation "procedures," in response to the question "How much emphasis was given?" Each item was to be checked on a five point scale from "extreme" (=5) to "none" (=1). The highest rated items in order of mean ratings were "persistence by those who advocate the innovation " (4.17), "systematic planning" (4.12), "providing a climate conducive to sharing ideas (4.11), "selecting a competent staff to implement change" (4.04), "creating awareness of the need for change" (4.03), "adequate definition of objectives" (4.00), and "adequate diagnosis of the real educational need" (3.98). Among the 31 very largest districts the pattern was generally very similar but "planning" (4.30), "competent staff" (4.30), "definition of objectives" (4.27) and "diagnosis of needs" (4.23) were all rated higher.

At the low end of the ratings, distinctly below the 19 other items, were "taking advantage of crisis situations" (2.59), and "participation by key community leaders" (2.84). Very large districts again believed that community leader participation was more important, however (3.13).

Each of these 21 items had been selected intentionally by the principal investigator to represent major tenets of differing change strategies advocated in the literature (as summarized in Havelock, 1969, Chapter II). It was predicted that various superintendents would show patterns of response corresponding to three major "perspectives" on change identified by Havelock as "problem solving," "social interaction," and "R,D&D."

Through a principle component factor analysis subjected to a varimax rotation, empirical clusters of items emerged corresponding reasonably closely to predictions. The strongest such factor, labelled as "participative problem solving" was clearly represented by four items:

Maximizing chances of participation by many groups.
Finding shared values as a basis for working.
Providing a climate conducive to sharing ideas.
Stressing self-help by the users of the innovation.

A second factor was clearly related to the RD&D philosophy. Key items in this cluster were:

Systematic evaluation.
Solid research base.
Systematic planning.
Adequate definition of objectives.

A third factor, somewhat related to the predicted "social interaction" perspective, we preferred to label "strategic manipulation." It centered on the item "participation by key community leaders" but also included "taking advantage of crisis situations" and "involvement of informal leaders of opinion inside the schools." This factor was also somewhat related to the suspicion that outside resource groups were unwilling to help revise or adapt innovations.

A fourth procedure factor, not predicted, appeared to represent a kind of new politics or "greening of America" view of change which we labelled "open advocacy and human revolution." Items in this cluster were as follows:

Confrontation of differences.
Resolution of interpersonal conflicts.
Creating awareness of the need for change.
Creating an awareness of alternative solutions.
Providing a climate conducive to risk-taking.

On the whole the findings confirmed predictions and at the same time added something to our understanding of different change philosophies.

We also analyzed spontaneous responses to the open-ended "key factor" question discussed earlier to see if different types of procedures than those in our list revealed themselves. The coded responses showed up heavily in four categories as indicated in Table 1.7.

(Insert Table 1.7 here)

Our analysis of other procedures mentioned indicated that the 21 item list was, indeed, reasonably comprehensive. The list was also rated as "potentially useful" as a procedural checklist for managers of innovation by 9[illegible]% of all respondents.

TABLE 1.7
KEY PROCEDURAL FACTORS IN SUCCESS OF THE SHOWCASE INNOVATION

Procedure Codes	Percent of Representative Districts (N=315)	Percent of Very Large (≥80,000) Districts (N=31)
Participation	25%	31%
Planning	16%	39%
Staff Training	13%	16%
Cooperation	11%	26%

d. Perceived Barriers to Innovation

Another list of 18 items illustrating typical "barriers" to innovation was included in the questionnaire; respondents were asked to rate the importance of each for the showcase innovation (5="extreme importance"; 1="none"). Most of these items were selected to represent major empirical research findings from past studies of the diffusion of innovations. In the main, however, the items failed to yield dramatic results; perhaps because the showcase innovation was almost always rated a success, respondents generally checked "slight" or "none" for each of the barriers listed and the range of response was narrow. The highest rated barrier item was "confusion among staff about the purpose of the innovation" with a mean rating of 2.59 (i.e., about midway between "slight" and "moderate"). Almost as strong were the items "unwillingness of teachers and other school personnel to change or listen to new ideas" (2.57), "shortage of funds allocated for the innovation" (2.57), and "staff's lack of precise information about the innovation" (2.53).

As with the procedures, we attempted to understand the pattern of response through factor analysis, but with the barrier items the results were less satisfying and more difficult to interpret, perhaps because of the lower item variances. One very strong general factor emerged which we labelled "general confusion" because the above mentioned "confusion" and "lack of precise information" items were most strongly associated with it. In addition, however, most other "barrier" items also had substantial association with this factor.

One other easily interpretable "barrier" factor which did emerge independent of the "general confusion factor" was labelled "capacity." The highest associated items to this cluster were "shortage of funds allocated for the innovation," "starting out with adequate financial resources to do the job," and "shortage of qualified personnel." Funding aspects were rarely mentioned spontaneously as key factors in innovation success (6% of cases).

It was also of interest that the lowest rated barriers were "unwillingness of resource groups to help us revise or adapt" (1.73), and "lack of contact with other school systems who had considered the same innovation" (1.94), both related to external resource linkage. Thus, it appears that while external resources find little use and very low saliency among school district innovators, there is also no evidence of strong barriers to receiving such help.

Although respondents' ratings of all barriers were lower than expected, we discovered that this set of items, like the procedure item set, reasonably well covered the barrier topics suggested in responses to open-ended questions. The list was likewise very strongly endorsed as a useful checklist.

e. The Correlates of Innovativeness

From the responses to the open-ended innovation "inventory" question (Question #5 on the form), we were able to construct an "innovativeness" index to compare highly innovative and less highly innovative districts on a number of dimensions. Using Pearson product moment correlations, relationships were computed between innovativeness score and 82 other variables including resource utilization, use of media, school district policies of various sorts, unrest, financing, and all the procedure and barrier items mentioned above. While findings are to be interpreted with extreme caution, several are quite interesting, at least as hypothesis generators.

Highest correlation was with district enrollment *size* ($r = .27$), but, as we noted at the beginning of this summary, such a statistic is difficult to credit with much meaning since, in fact, smaller districts may provide more innovative effort on a per-pupil basis than larger ones.

In addition to size we found that 37 other variables had low but statistically significant ($p < .05$) relationships to the innovativeness score. Suspecting that many of these were primarily a function of district size, we also controlled on the size variable. The resulting set of partial correlations did markedly reduce the number of significant relationships but many remained.

Second in importance to district size and quite independent of it is estimated *per pupil expenditure* of the district. Other correlations which retain significance after size is controlled are use of *media specialists and centers*, use of *in-service training*, use of *lay advisory groups*, and the frequency of *teachers' strikes*.

Student and community protests are also related to high innovativeness but only when size is not controlled. Other correlations apparently dependent on size are use of *television and newspapers* to explain innovations.

No relationship was found, in spite of expectations, between innovativeness and percent of *graduates going on to four year colleges*, *pupil-teacher ratio* and rated difficulty in obtaining *financing* for new or existing programs.

Several items from our "procedures" list were also significantly correlated with innovativeness. Strongest among these were "resolution of interpersonal conflicts" ($r = .21$, $p < .001$), "creating awareness of the need for change" ($r = .21$, $p < .001$) and "maximizing chances of participation by many groups" ($r = .17$, $p < .005$). None of these items was greatly affected by controlling on size. Generally the items which were positively correlated with innovativeness belonged to the two factor clusters "participative problem solving" and "open advocacy-human revolution."

There was essentially a zero relationship between the RD&D items and innovativeness. In fact, emphasis on evaluation seemed to have a slight negative relationship, suggesting, perhaps, that too much emphasis on evaluation dampens the innovative spirit. It may, of course, also portend a greater concern for innovation quality than quantity.

We are very concerned not to exaggerate the importance of these correlations. The measure of "innovativeness" in particular is flawed as a criterion measure because it rewards sheer numbers and verbosity without regard to either quality or genuine numerical equivalence of measurement units. Nevertheless, it does seem desirable to continue searching for and trying out various sorts of outcome or criterion measures to help us evaluate the relative importance of procedures, barriers, resources, and all other purportedly "important" variables in the innovation process.

D. IMPLICATIONS

It is not easy and perhaps not even appropriate for a researcher by himself to derive implications from his work for either policy makers or practitioners. Probably the easiest and most obvious comment might be "more research is needed" and indeed it is. However, such a statement is likely to be viewed in today's educational environment as both evasive and self-serving. The researcher and the sponsor have an obligation to seek out implications for policy and practice as well as for further research. Such implications are preferably to be derived as a joint endeavor and not as a solo exercise by the researcher, but perhaps what follows may provide some dialogue about what these many survey results "really" mean.

1. INNOVATIVENESS, PER SE, IS NOT THE PROBLEM

Our findings suggest a continuous ferment of change in almost all U.S. school districts. On the face of it, many of these changes are profound, not trivial. They are complicated, involve many participants, require many types of skills, and presumably all sorts of expert resources. The ubiquitousness of innovation was a finding we did not expect but one which seems compelling from our data. It seems to run counter to the idea that many have of the U.S. educational "establishment" as frozen in its ways, indifferent to change and unresponsive to the needs of students. If such imagery is as pervasive as I feel it is, then somebody should be doing something to contradict it because (a) it isn't so, and (b) it does injury to professional educators by demoralizing and lowering public esteem and confidence.

2. WE NEED TO FOCUS ON QUALITY WITHOUT REDUCING QUANTITY.

There appear to be enough forces at work on U.S. education to act as a stimulus for change, but a will to act is not enough if one knows not how to act wisely. The lack of attention to external expert resources and to the experience of other school districts suggests that each district is out to reinvent many wheels. The consequences of a go-it-alone strategy of innovation are sometimes good in terms of enthusiasm and intensity of local involvement, but the costs are overwhelming. Mistakes are made over and over again; large sums are spent in creating essentially parallel and duplicate materials, and certain cost-saving and benefit-increasing options are not considered because no one is aware that they exist.

Careful evaluation, by itself, will not do much to improve quality and may discourage innovativeness. It is more important that districts bring in and adapt innovations which have been carefully evaluated in other settings than that they expend limited internal resources on exhaustive evaluations.

3. THERE IS A TREMENDOUS FUND OF EXPERIENCE WITH INNOVATION GOING TO WASTE.

Every year there are at least 20,000 and probably more like 100,000 innovation efforts begun in U.S. school districts. Many will be successful; many will also fail and be terminated; but the experience gained in one place in 1972 should be made available to someone contemplating a similar activity in another place in 1974. True, every district is unique in some respects but in most respects most districts are not unique; they have direct counterparts in other states and regions and even in their immediate vicinity, and these counterparts will be trying out similar or identical innovations. Up to now we have had no satisfactory way of codifying and banking such experiences so that they can be drawn upon by others, and no retrieval system exists to make such banks highly utilized.

Yet the experience of local innovation effort in the U.S. is so vast that it dwarfs even the largest federal programs (e.g., ESEA, Title III).

4. THERE IS A CRYING NEED FOR IMPROVED EXTENSION SERVICES TO INFORM AND ASSIST LOCAL INNOVATORS.

The existing information networks external to schools seem to have very low saliency for innovation managers within school systems, yet there is no apparent reluctance to bend an ear to outsiders or to receive their help. The prime barriers perceived by innovators center around informational issues, e.g. "confusion about the purpose of the innovation" and "lack of precise information about the innovation." The implication is that schools are ready and waiting for effective extension services (perhaps analagous to the Cooperative Extension Service in Agriculture but probably with a good deal less resistance to cope with).

5. LOCAL INNOVATORS CAN MAKE VERY GOOD USE OF SKILLS IN PROBLEM-SOLVING AND COMMUNICATING

"Participation" is the most important key to success in innovation, according to our respondents; this means participation by teachers, community, and students. Yet providing effectively for such participation in a genuine collaborative sense requires great skill in human relations and group management. We found human relations training programs of one sort or another mentioned in a little less than half the districts, but the need for quality programs in this area is apparent. Respondents also indicated that they would find guidance on innovation process helpful in their own future planning and action.

6. EXPERT ADVICE ON INDIVIDUALIZED INSTRUCTION AND TEAM TEACHING WAS SORELY NEEDED IN 1970-71 AND PROBABLY STILL IS.

Individualizing instruction is probably one of the most complex and difficult innovation assignments educators have ever put to themselves. Nevertheless, this was the most popular innovation area in 1970-71. Because it is a difficult and complex innovation area and because various federally supported R&D projects have been undertaken in this area, it would appear to be an especially promising target topic for mass dissemination efforts (and an appropriate vehicle for introducing outside information resources to locals).

7. NATIONAL INNOVATION MONITORING IS FEASIBLE AND DESIRABLE.

The federal government must be able to look at the forest as well as the trees, and indeed there is a forest here where some have thought there might be a desert. With a fair degree of persistence we were eventually able to get 71% of a very busy population of educators to respond at length to a mailed questionnaire survey. The cost of a first year effort was well under $100,000 and could be expected to decrease over time as sampling procedures, forms, data processing, and reporting became routinized.

However, some major deficiencies of the first year study can and should be remedied. Most important of the problems still facing us is the lack of a solid dependent variable which makes sense to researchers, practitioners, and policy makers as a manifest "benefit". An improved measure of "innovativeness" is one aspect of this.

Future monitoring efforts should also make more satisfactory probes for negative cases. There was an apparent reluctance on the part of our respondents to own up to negative consequences and innovations that ran awry. We tried to get reports specifically on "unsuccessful" or "problematic" innovations in our pilot work but drew a blank. A creative way should be found to surmount this problem.

Future studies should also begin to probe the infrastructure of the educational change network between the local district and the national government, including activities by universities, state agencies, and sundry private sector groups. Their near-invisibility in this study remains a mystery to us.

Finally, studies should begin to probe in more depth organizationally and temporally within the district. Principals, teachers and other key figures within the district should be sampled using equivalent or identical items for comparison. A start in this direction has been made via the exploratory case studies which constitute the second volume of this report.

SECTION I:
INNOVATION CONTENT AND CONSEQUENCES

CHAPTER TWO: THE 1971 SHOWCASE INNOVATION

In a survey which attempts to compare the relative innovativeness of school districts around the country and to analyze the types of changes introduced, innovations of any form and content must be considered. However, since innovations may vary greatly in their comprehensiveness, it was necessary to limit our comparison and analysis to those which could be considered significant in terms of some pre-defined standard. We thus asked our sample of superintendents to include in their responses only those innovations which met at least one of the following three criteria:

a. a substantial reorientation on the part of staff,

b. a reallocation of resources,

c. adoption of new practices, programs or technology.

In order to further assure a valid comparison among school districts it was necessary to limit our survey to a particular span of time. Since the survey began in the fall of 1971, the 1970-71 school year seemed the most appropriate time period to sample. We reasoned that innovations introduced within this time frame would still be fresh in the minds of respondents and, in addition, that at least some preliminary assessments of the impact of the change efforts would already have been made.

A. SHOWCASE INNOVATION CATEGORIES

While we were interested in determining the total innovative effort of each school district within the time frame, we were also interested in making a detailed analysis of one particular innovation which the superintendent saw as most significant. We have termed this the "showcase innovation." Respondents were asked to describe the innovation briefly in two or three sentences, indicating what it was, what it involved in staff and resources, and who it was to benefit.* It was not necessary for the reported innovation to have been *successful* provided that the specified "importance" criteria were met.

Since the question was open-ended, the coding schema for responses was developed after the fact in such a manner as to be both inclusive and descriptive. The innovations reported fell into five broad categories which we have termed (1) "individualized instruction and team teaching", (2) "administrative innovations", (3) "curriculum revision and instructional facilities", (4) "programmatic approaches to instruction", and (5) "organizational innovations". The innovations in each of these categories are described in detail below.

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*See Question 1 a of questionnaire, "Innovation from the Superintendent's Viewpoint", in Appendix A.

Of our sample of 322 school districts with less than 80,000 students, 315 superintendents described a showcase innovation, while seven specified that no innovation meeting our criteria had been introduced in the 1970-71 school year. All of the 31 superintendents of school districts with 80,000 or more students reported a showcase innovation.

Districts serving 80,000 students or less will subsequently be identified as "representative" districts because they comprise a national sample carefully constructed to represent all regions and size categories. Each data case in the sample represents 80,000 pupils, regardless of the actual size of the district. Hence, there is approximately one case for every eight districts of 10,000 pupil enrollment, one case for every two districts of 40,000 enrollment, and so forth. If we had achieved a 100% response rate, we could have said with some assurance that these 322 districts are truly "representative" of all United States school districts up to 80,000; we can say, however, that they are truly representative of the 70% of school districts who respond to surveys! Districts serving 80,000 or more students will be referred to as the "very large" districts. They are treated separately because all such districts were sent questionnaires and each is therefore self-representing.

Table 2.1 summarizes the numbers of showcase innovations which have been classified into the five broad categories, with totals reported separately for representative and for very large school districts. Percentages given are based on the numbers of showcase innovations actually reported in each of the two size categories.

(Insert Table 2.1 here)

The largest number of innovations (29%) reported by school districts of less than 80,000 students involved individualized instruction and/or team teaching. These two types of innovations were frequently coupled and were often part of a broader innovative effort involving an open-space classroom or school and the introduction of a multi-age, ungraded or continuous progress concept as well. A relatively smaller number of innovations of this type (16%) were adopted by school districts of 80,000 or more students.

In very large school districts the major innovative effort was in the administrative area (35%). Included in this category were those innovations which concerned administrative structure and policy, system-wide planning and budgeting procedures, staff and plant-related issues, and student issues which were not directly related to instruction. In representative school districts, 21% of showcase innovations were of this general type.

Representative school districts reported much more innovative activity than very large districts in the area of curriculum revision and the introduction of new technology and facilities related to instruction (20% for representative districts as opposed to only 3% for very large districts).

TABLE 2.1
SHOWCASE INNOVATION DESCRIPTION CATEGORIES

Innovation Category	Districts < 80,000 * Freq.	%	Districts ≥ 80,000 * Freq.	%
1. Individualized Instruction and Team Teaching	(90)	29	(5)	16
2. Administrative Innovations	(67)	21	(11)	35
3. Programmatic Approaches to Instruction	(59)	19	(6)	19
4. Curriculum Change and Instructional Facilities	(62)	20	(1)	3
5. Organizational Innovations	(37)	12	(8)	26
Total	(315)	100 **	(31)	100 **
No Innovation or No Information	(7)		-	
Grand Total	(322)		(31)	

* Throughout most of this report data are presented for two different system size groups because of the separate sampling procedures used. Data for districts of less than 80,000 pupils are derived from a statistically representative sample, whereas findings for the 80,000 and over category represent unweighted averages of all large districts in the population.

** Throughout this report the percentages in each column may not equal the total for that column due to rounding.

Representative and very large school districts placed an equal emphasis on new programmatic approaches to instruction, with 19% for both groups. Innovations in this category included new programs for special groups of students, work-study programs, the introduction of teacher aides, tutors and paraprofessionals as assistants to classroom teachers, and a few specialized programs introduced by students or teachers.

Finally, 12% of innovations in representative districts and 26% of innovations in very large districts were what we have termed "organizational." Innovations in this category are concerned with such issues as how the school is structured in terms of grade and attendance units, how the school year and school day are organized, and the operation of alternative schools or model schools or grades in the district.

We will look at each of the five categories of innovation types in more detail below.

I. INDIVIDUALIZED INSTRUCTION AND TEAM TEACHING

The scope of innovations in the category of individualized instruction and team teaching varied considerably from one district to another. Sometimes the innovation was described simply as individualized instruction in the content of one course in one grade, but more often a more comprehensive innovation was reported which applied to all course material in several or all grades; this pattern tended to coincide with the introduction of a multi-age, ungraded or continuous progress concept, and, in turn, often implied the introduction of the open-space school. This comprehensive approach to individualized instruction was frequently coupled with the initiation of team teaching or differentiated staffing. Since this broad array of innovations were so often interrelated, we were unable to separate them into discrete categories, even though any one of them might be considered a significant change in itself.

Although there were proportionally fewer innovations in this category for very large districts than for representative school systems, the innovations were described in similar terms. However, when we consider the implications of introducing open education into the elementary or middle schools of a district of over 80,000 students, we must recognize the massiveness of this effort.

Table 2.2 shows that, of the 90 innovations which representative school systems adopted in this category, 69 were general in nature, while 21 were limited to specific curriculum areas. Of the five cases of individualized instruction and team teaching reported by superintendents of very large school districts three were broad innovations which involved the total school curriculum while the other two were curriculum-specific.

TABLE 2.2
SHOWCASE INNOVATION DESCRIPTIONS
INDIVIDUALIZED INSTRUCTION AND TEAM TEACHING

Innovation	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
Applies to all Curriculum Areas	(69)	22	(3)	10
Applies to Specific Curriculum Areas	(21)	7	(2)	6
Total	(90)	29	(5)	16

*Percentages are based on the 315 showcase innovations reported by districts in this size category.

**Percentages are based on the 31 showcase innovations reported by districts in this size category.

In the 21 cases reported by representative schools in which the innovation applied to specific curriculum areas, reading and math were most commonly mentioned; in eight cases reading was the innovative area, in four cases it was math, and in an additional three cases individualized instruction and team teaching were initiated in both reading and math. The remaining six cases applied to language arts, spelling, science, government, homemaking and chemistry. The curriculum areas mentioned by superintendents of the two very large school systems in which curriculum-specific innovations were introduced were reading and math in the elementary schools of one district and social studies and English in the senior high schools of the other district.

It was frequently mentioned that the demands on the classroom teacher were increased both in terms of the time required for lesson preparation and in terms of the utilization of classroom time. In-service training programs were sometimes provided to introduce teachers to these new approaches, and frequently teacher aides were hired to reduce the workloads of the classroom teachers.

In a number of cases it was necessary to redesign existing plant facilities or to plan new school buildings to accomodate the open school program. Thus for many districts a considerable financial commitment was required for additional facilities as well as for staff and materials.

The benefits sought by the school districts adopting innovations in this category were summed up in a description provided by one superintendent: "Children will benefit from a better learning environment which revolves around the pooling of professional skills, more instructional alternatives and greater individual attention".

2. ADMINISTRATIVE INNOVATIONS

Innovations which school systems adopted in the administrative area have been grouped for descriptive purposes into seven subgroups: a) research, development and budget, b) relations with community, parents and students, c) staff-related issues, d) administrative structure, e) student-related issues, f) plant issues, and g) administrative philosophy change.

Table 2.3 lists the specific types of innovations placed in each of these subgroups, giving the percentages they represent of the total number of showcase innovations reported by school systems in each of the two size categories.

(Insert Table 2.3 here)

a. Research, Development and Budget

The most frequently cited types of innovations in the administrative area, both for representative school districts and for very large systems, were those which have been grouped together under "research, development and

TABLE 2.3
SHOWCASE INNOVATION DESCRIPTIONS
ADMINISTRATIVE INNOVATIONS

Innovation	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
a. Research, Development and Budget				
Planning, Research and Evaluation	(14)	4	(4)	13
Curriculum Development	(7)	2	(1)	3
Finance Allocation	(3)	1	-	-
Performance Contracting	(1)	*	-	-
b. Relations with Community, Parents and Students				
Guidance, Counseling and Diagnosis	(11)	3	-	-
Desegregation	(3)	1	(2)	6
Human Relations Programs	(3)	1	-	-
Public Relations Programs	(3)	1	-	-
Parent-Teacher Conferences	(2)	1	-	-
c. Staff-Related Issues				
In-Service Training and Workshops	(11)	3	(1)	3
Teacher Corps	(1)	*	-	-
d. Administrative Structure				
Staff Structure Changes	(3)	1	(1)	3
Decentralization	(2)	1	(2)	6
e. Student-Related Issues	(1)	*	-	-
f. Plant-Related Issues	(1)	*	-	-
g. Administrative Philosophy Change	(1)	*	-	-
Total	(67)	21	(11)	35

*Less than 0.5%

budget" (8% of innovations in representative districts and 16% for very large systems). The largest number of innovations in this subgroup were those which had to do specifically with planning, research and evaluation (14 cases, or 4% for representative districts; four cases, or 13% for very large districts). In these innovations a broad look was taken at the operation of the school system to establish objectives and to develop new methods of achieving these objectives. In some cases the emphasis was on improving the learning opportunities for children, while in other cases the innovation represented an attempt to institute a more business-like method of running the school. Needs and performance assessment studies were undertaken, divisions were set up to plan and evaluate federal and other instructional programs, and research into improving the instructional and learning environments were established. Three superintendents of representative schools specified their primary innovation to be the adoption of a planning, programming and budgeting system (PPBS). This was described by one superintendent as a system which would "benefit pupils by providing the schools and public with better evaluation information, improved decision-making, long range planning and a better sense of direction". In very large schools two of the four innovations in this area were directed towards improvement of the educational program for students, while the other two were concerned with increasing the effectiveness of staff, either through leadership training or through training in new instructional approaches.

Also included in the "research, development and budget" subgroup were those innovations which were concerned with curriculum development as an on-going process rather than as a reorganization of material within a specific course or curriculum area (2% for representative districts and 3% for very large districts). In the seven cases reported by superintendents of representative schools we found that sometimes one or more individuals acted as curriculum coordinators to improve instruction through daily contacts with teachers, while in other cases a system-wide study of curriculum was undertaken involving the total school staff. The one curriculum development program reported by a very large district involved students as well as all members of the staff.

Three innovations in representative districts were directed at new approaches to funds dispersement. Two of these increased the flexibility with which financial resources might be allocated, by allowing teachers or principals increased discretion in the spending of specified funds. The third was a case in which a new superintendent allocated a larger percentage of resources for new staff salaries in order to increase the teacher/student ratios in all classes. No innovations reported by very large school systems were concerned specifically with finance allocation.

Finally, performance contracting, which some educators and laymen have hailed as the ultimate solution to the problem of assuring a dollar value for a dollar spent, has not yet materialized as a significant approach. Only one superintendent of a representative district reported this to be his system's showcase innovation, while no cases were reported by very large systems.

b. Relations with Community, Parents and Students

Table 2.3 shows that 7% of all showcase innovations adopted by representative districts affected relations with community, parents and students. The students received more attention than did the parents or community in these districts: 3% of innovations were concerned with guidance, counseling and diagnosis of students' needs and problems. The traditional functions of career counseling and guidance in selection of courses represent only one aspect of these new programs. Some school systems employed, in addition, educational psychologists who were available to consult with students on any problem, and some districts were concerned with early diagnosis of learning disabilities in order to provide treatment before any educational impairment might result. No very large districts reported showcase innovations in the area of guidance, counseling and diagnosis.

Three superintendents (1%) of representative districts and two superintendents of very large districts (6%) reported that desegregation was the most significant innovation in their systems. We recognize that desegregation often involves administrative restructuring, a subgroup which will be discussed below, but it was evident that, in terms of the issues to be solved in instituting such a change, those concerned with student, parent and community relations tended to be by far the most salient. Two of the three representative districts which implemented a desegregation plan instituted human relations programs, involving staff, community and students, to study the implications of desegregation and to assist in its implementation. Both cases reported by very large districts called for desegregation of several schools at the same time, and one of the superintendents stressed the importance of a bi-racial human relations team which was created to assist in the process.

Other human relations programs which aimed at achieving better understanding and communication among all groups, both inside and outside the school, accounted for another 1% of showcase innovations in representative schools. In addition, the community was the direct target of three public relations programs (1%) which attempted to describe educational programs to the taxpayer. An effort was made to involve parents in their children's progress in another 1% of cases, by means of parent-teacher conferences. Very large districts reported no showcase innovations directed at parents or the community.

c. Staff-Related Issues

Table 2.3 shows that new in-service training programs and workshops for teachers and other staff accounted for 3% of showcase innovations both in representative and in very large school districts. The one case reported by a very large system was an ambitious program which called for intensive training of teachers from inner city schools. Groups of teachers were trained at a "professional development center", located in an inner city school, for a period of eight weeks during the school term. Previously trained substitute teachers took over the classes during the training period.

Some of the staff training programs reported in representative districts were instituted as a first step in the initiation of a broader change program; one superintendent specified that the staff in his district were being trained in preparation for "a venture in continuous progress education" which was to begin in the fall of 1972. Some training programs were for the purpose of acquainting teachers with new media and methods, while others had the objective of helping teachers to develop new understanding and skills in their handling of students.

One superintendent of a representative district described the formation of a "teacher corps" which involved the training of 35 interns in three schools under the supervision of eight team leaders.

d. Administrative Structure

Three innovations (1%) were reported by representative districts in the subgroup of changes in administrative structure; these involved alterations of staff positions in terms of function, salary and reporting relationships. One innovation (3%) which was concerned with changes in staff structure was reported by a very large system; this was a renovation of the function and structure of supervisory services in order to increase teacher-supervisor contact, and it involved the hiring of additional supervisory staff.

Two cases of decentralization were reported as showcase innovations in each of the size categories of school systems (1% for representative districts and 6% for very large systems). The purpose of this innovation, which involved a shift from a central administration to locally based administrative districts, was to increase local autonomy and to enable the schools to be more responsive to local needs. In both of the representative districts and in one very large district community advisory committees representing the affected communities were involved in the planning and implementation of the innovation.

e. Student-Related Issues

Only one innovation was classified as being related to student issues outside the area of instructional concerns. This innovation in a representative district was described as a "get-tough policy" in enforcing student rules and in applying disciplinary action.

f. Plant Issues

Again, only one innovation fell in the subgroup of plant-related issues. This innovation, also in a representative district, was described as an attempt to provide immediate school service to all buildings.

g. Administrative Philosophy Change

The final innovation in the administrative category was a total system effort in a representative district to develop a more humanistic approach to education. This innovation called for a "massive turnabout" both in philosophy and in practices.

3. PROGRAMMATIC APPROACHES TO INSTRUCTION

As illustrated in Table 2.4, new programmatic approaches to instruction constituted 19% of reported showcase innovations both in representative districts and in very large districts. A few of these programs were intended to benefit all children, but a large majority were directed at special groups of students.

TABLE 2.4
SHOWCASE INNOVATION DESCRIPTIONS
PROGRAMMATIC APPROACHES TO INSTRUCTION

Innovation	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
a. Special Instructional Programs				
Remedial	(14)	4	(2)	6
Learning Disabilities	(7)	2	-	-
Pre-School	(6)	2	(2)	6
Compensatory	(6)	2	-	-
Gifted	(2)	1	-	-
b. Teacher Aides, Tutors & Paraprofessionals				
Cross-Age Helping	(6)	2	-	-
Paraprofessionals	(2)	1	(1)	3
Trained Aides	(2)	1		
c. Work-Study & Occupational Preparation	(8)	3	(1)	3
d. Other (e.g. Student and Teacher Initiated Approaches)	(6)	2	-	-
Total	(59)	19	(6)	19

a. Special Instructional Programs

Students in 35 special instructional programs (11%) in representative districts ranged from the gifted to the emotionally disturbed, but the largest number of programs (14 cases) were concerned with remedial education, principally in reading, in the primary grades. The second largest group of programs (7 cases) were provided for children with a variety of learning disabilities which could not be solved through regular classroom instruction. Six more programs were compensatory in nature and were intended to provide additional learning experiences for underachievers, potential dropouts and "educationally disadvantaged" children. There were also six new programs initiated for pre-school children. These programs, sometimes directed at the disadvantaged child, were generally intended to prepare the child for primary education and to help him or her to overcome any existing social or mental handicap. Parents were sometimes urged to participate in these early childhood educational experiences. A number of the programs in this group, particularly those aimed at benefitting the disadvantaged child, were federally funded. Finally, two representative school districts initiated programs for gifted students, both providing an opportunity for independent study in a field of the student's choosing.

Two of the four special instructional programs adopted by very large school systems were remedial reading programs, while the other two were directed at pre-school children. One pre-school program was established to benefit emotionally disturbed children and children with potential learning disabilities, while the other program was designed to "provide systematic cognitive development for the pre-school child."

b. Teacher Aides, Tutors and Paraprofessionals

Table 2.4 also shows some utilization of teacher aides, tutors and paraprofessionals (3% for both representative and very large districts) to alleviate the workload of the classroom teacher and to provide some individual attention to those students who required additional instruction. Out of the ten innovations in this area reported by representative districts, six were cases of cross-age helping in which older children acted as aides in lower grades or tutored children with special needs under the supervision of the classroom teacher. Two school systems added non-professional personnel to their staff to enrich the learning environment, and in the final two representative school districts in this group aides with specialized training were employed to assist the teacher by handling students with special learning problems.

None of the very large school districts in our sample reported the use of cross-age helpers, but one school system developed a "Careers Opportunities Program" in which paraprofessionals worked as teacher aides while at the same time earning college credit.

c. Work-Study and Occupational Preparation

Programs providing occupational preparation for students in grades 8-12 represented 3% of showcase innovations for both representative and very large school systems. Innovations in this group included more than a simple orientation to possible career choices. Some of these involved in-school instruction by practitioners of trades and professions in the community; others took the students out into the community during school hours for on-the-job training in business or trades. Still other programs combined these two approaches. The students who participated in these programs included potential dropouts, students who were unable to benefit from a more formal high school program, and educable mentally retarded students. The importance of a high degree of cooperation from employers in the community was frequently stressed. In the work-study program adopted by the very large school in this area the resources of a large corporation were used to assist the district in developing a comprehensive career education program for students in grades 10-12.

d. Other Programmatic Approaches

Six additional diverse programmatic approaches comprised 2% of showcase innovations for representative school districts. In one program the total community was used as a "learning resource" for high school students, while in another, high school students volunteered their time, during or after school, to the school or to non-profit institutions in the community. One superintendent reported a new program in which courses selected, planned and run by students were offered as electives in the high school curriculum. One high school initiated a program in which candidates for public office appeared at school assemblies for presentations and student questions, and in another high school a teacher-initiated change was reported in which students were dismissed from class when the teacher was absent, rather than having a substitute teacher brought in. Finally, one school system reported a change in its kindergarten classrooms, moving from unstructured classroom procedures to semi-structured methods.

4. CURRICULUM CHANGES AND INSTRUCTIONAL FACILITIES

In the fourth category of innovations, changes in curriculum and an increase in instructional facilities and technology, representative school systems adopted 62 innovations (20%), while only one innovation (3%) was reported by very large districts. There is thus a sharp contrast between very large and representative school systems in the emphasis which they placed on innovations in this category. Table 2.5 presents the specific types of innovations adopted in this area.

TABLE 2.5
SHOWCASE INNOVATION DESCRIPTIONS
CURRICULUM CHANGE AND INSTRUCTIONAL FACILITIES

Innovation	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
a. Curriculum Changes				
Specific Curriculum Areas	(25)	8	(1)	3
Unit Courses, Mini-Courses and Electives	(16)	5	-	-
Packaged Courses and Materials	(8)	3	-	-
b. Instructional Technology and Facilities				
Learning Centers	(6)	2	-	-
Media Centers	(2)	1	-	-
Computer	(2)	1	-	-
Other (Driver Ed. Eqpt., Info. System)	(3)	1	-	-
Total	(62)	20	(1)	3

a. Curriculum Changes

There were 49 cases (16%) of changes reported in the curricula of representative school systems. Twenty-five superintendents (8%) reported as their showcase innovation a change in specific curriculum areas, and in different districts these changes covered a broad range of subjects and all grades. Six school districts either introduced occupational orientation meterials within the regular course structure (in one case as early as grade two), or expanded or added to their industrial arts programs in high schools. Five systems introduced bi-lingual or multi-ethnic programs, and there were three cases each of curriculum revision or expansion in English, social studies and humanities courses. Reading, health education and human relations were mentioned as areas of curriculum revision in other districts.

The one innovation in the area of curriculum revision reported by a very large school system was described as the introduction of an occupational orientation program in grades 7-9. It was designed "to help pupils make realistic program choices in senior high school."

A second type of change reported by representative districts in the curriculum area was elective "mini-courses" in high schools. Of the 16 cases (5%) in which this innovation was reported, ten applied strictly to English courses, while three more covered both English and social studies. One district adopted mini-courses in language arts, and one introduced electives in a variety of non-basic curriculum areas. Only two school districts instituted a unit course or mini-course program for all subjects. In this type of program, rather than offering a full year course required of all students, a large number of diverse units were developed which generally covered a quarter term of about nine weeks in length. The students were allowed to choose any four of these each year, and thus a number of these mini-courses became ungraded since students from all high school grades could elect to register for the same course.

Only eight superintendents (3%) of representative school systems cited packaged materials as the most significant innovation in their districts. Of these, three were completely packaged science programs for elementary students, two were supplementary reading materials for the primary grades, and two more were packaged materials for instruction in computer programming. One school system introduced packaged materials in a variety of courses. We did find that packaged materials were further utilized in some broader innovations, particularly in individualized instruction (see earlier discussion).

b. Instructional Technology and Facilities

It is somewhat surprising in this day of advanced technology that no very large districts reported showcase innovations in the area of instructional innovations dependent upon new technology and facilities; in addition, this area represents only 4% of the total of showcase innovations in representative school systems. The most frequently cited innovation in this subgroup was the installation of new learning centers, reported by six school districts (2%). The emphasis of these was on individualized diagnosis, guidance and instruction for students in elementary grades through adult education classes. Instructional materials in a variety of media were often acquired to aid in these programs.

Related to the learning centers, but more limited in purpose, were media centers which were reported in two representative school systems. These districts expanded their library facilities to include materials in a variety of new media, including slides, cassettes and audio-visual equipment.

Only two superintendents (1% of representative districts) reported as their showcase innovations the addition of computers for use by teachers and students, including adult education classes. The computer was, however, a factor in some additional innovations, even though the addition of a computer was not in itself considered to be the showcase innovation. In particular, some individualized instruction was implemented through the use of computers (computer assisted instruction, or CAI).

Three representative school systems expanded their technology and facilities in other areas. One system added a driving range for multiple car use in its driver education program, and another district adopted an information dissemination program which utilized a wide variety of resources and was available to both students and staff. The final innovation in this category was the development of a "Math Instructional Objectives Catalog" for use in grades K-12.

5. ORGANIZATIONAL INNOVATIONS

Proportionally, very large school systems adopted more than twice as many innovations in the organizational category as did representative districts (26% as opposed to 12%). Table 2.6 lists the types of innovations reported in this category.

TABLE 2.6
SHOWCASE INNOVATION DESCRIPTIONS
ORGANIZATIONAL INNOVATIONS

Innovation	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
a. Operational Aspects				
Grade and Attendance Unit	(18)	6	(1)	3
Semester Structure; Extended Day or Year	(4)	1	(2)	6
Open Campus	(3)	1	-	-
b. Flexible Modular Scheduling	(7)	2	(1)	3
c. Model Schools or Grades	(3)	1	(2)	6
d. Alternative Schools	(2)	1	(2)	6
Total	(37)	12	(8)	26

a. Operational Aspects

From Table 2.6 we can see that the largest number of organizational innovations reported by representative school systems were changes in the grade and attendance units in the districts' schools. Eighteen such changes were reported, representing 6% of all showcase innovations for representative school districts. The most common change (11 cases) was described as a regrouping of the grades to form a *middle school*; generally the schools moved from a K-6, 7-9, 10-12 system to a K-5, 6-8, 9-12 arrangement. The rationale for this shift was based on a supposition that students in the middle age range have special needs which in the past have not been recognized. Six representative schools with innovations in the "grade and attendance unit" area added a *transitional grade* between Kindergarten and grade one. Generally between 12 and 15 children, judged "not quite ready" for first grade work after the completion of Kindergarten, were placed in this transitional grade which provided a high teacher/student ratio and specialized instructional materials. The hope was that the majority of these children would be ready for second grade at the end of the school year.

One very large school district reported having made a commitment to large comprehensive high schools which would enroll all students in grades 9-12. The opening of the first of these schools was the showcase innovation.

There were four innovations (1%) in representative districts which involved a change in the structure of the school calendar or alterations in the length of the school day or year. One school district changed its semester structure for grades 10-12 by setting aside three weeks at each end of the school year for student-designed mini-courses in which no grades were given. Another school system extended its elementary school year by 40 days by offering an individualized curriculum to a selected group of students during July and August. Two changes were reported by representative school systems in the length of the school day; these were both due to building space constraints. One district put its high schools on dual sessions because of overcrowding, and the other added an extra hour to each end of the school day "to allow students to take courses in proper areas by increasing effective building space by 25%."

The school calendar was altered in two very large school districts (6%). In one of these systems the regular 180 day school year was divided into three terms, or trimesters; in the other the entire year was divided into five periods of 45 days each, with students required to attend any four "quinmesters."

Three representative school systems (1%) instituted an "open campus" policy which allowed students in senior high school to be released from school when they were not in class.

b. Flexible-Modular Scheduling

Innovations which were reported in flexible-modular scheduling (2% for representative districts and 3% for very large systems) were instructionally linked, but their primary intent was described as a scheduling of classes in such a way as to make the most advantageous use of time on a day-to-day basis. Generally the school day was broken into 20-minute modules, using independent study or small group and large group instruction where appropriate. One aim of this new system was to allow for individual differences of both students and teachers and to allow students to pursue their individual needs and interests. The one very large district which reported the introduction of flexible-modular scheduling in its high schools designed its program to include both on-campus and off-campus options. Maximum use was made of community resources in both phases of the program. Included in the off-campus program were opportunities for senior students to audit university courses or gain experience in business, government, social services or cultural areas.

c. Model Schools or Grades

The operation of model schools was reported in two districts in the representative sample. These were designed as demonstration centers for instructional, curricular and staff development innovations. A third representative district operated six model first grades which were a modified version of the British Infant Schools.

Among very large districts there was one reported case of a model grade and one of a model school. The model grade was a *pilot* Kindergarten program, designed to "provide information and recommendations for implementation of a county-wide program." The model school was intended to be a *magnet* school which was described as "a unique approach to achieving improved racial integration through development of superior and, therefore, attractive ('magnet') programs for students."

d. Alternative Schools

Alternative schools were reported to be the most significant innovation in two representative school districts (1%) and in two very large districts (6%). These schools were set up to accomodate those students who were alienated from, or who did not function well in, the traditional high school environment. They might attract both the potential dropout and the student highly motivated to learn in a more challenging and individualized setting.

8. ANALYSIS CATEGORIES

In much of the remainder of this report we will analyze the showcase innovations described in Question 1a of our questionnaire as they relate to other variables. Three levels of analysis will be provided. First we will discuss how showcase innovations as a whole, for representative and for very large school districts, relate to other variables. Secondly we will make an analysis of each of the five categories into which we have placed the showcase innovations, again describing separately those innovations reported by the representative sample and by very large districts. Finally, we will select for analysis those innovations of which there were ten or more cases reported by all school districts combined.

1. THE TOP TEN INNOVATIONS

Out of the 35 specific types of innovations* which were listed in response to Question 1a, on the showcase innovation, ten were mentioned ten or more times; we have chosen these ten innovations for a detailed analysis. Table 2.7 lists these ten innovations, with an indication of the major category from which each was drawn.

(Insert Table 2.7 here)

This table indicates the numbers of times each innovation was cited both by representative districts and by very large districts, and totals are also given for all school districts combined.

These ten innovations represent 71% of all showcase innovations reported in the survey, accounting for 73% of innovations in the representative sample and 55% of showcase innovations of the very large school districts reporting.

Two of these most frequently mentioned innovations ("guidance, counseling and diagnosis"; "unit courses, mini-courses and electives") were not cited at all by superintendents of very large districts. However, we should point out that we are dealing with a very small set of large districts and thus it is hard to say with precision which innovations were truly "representative" among them. The highest frequency for any innovation in very large schools was four; this occurred two times (once for "planning, research and evaluation" and once for "special instructional programs") and both of these innovation types were included in the top ten. Only one innovation ("individualized instruction and team teaching in general areas") was mentioned three times by superintendents of very large districts, and this innovation is also included in the top ten.

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*The 35 specific types of innovations are distributed in the five categories as follows: 2 in individualized instruction and team teaching; 16 in administrative; 7 in curriculum change and instructional facilities; 4 in programmatic approaches to instruction; and 6 in organizational (see Tables 2.2 through 2.6).

TABLE 2.7
THE TOP TEN SHOWCASE INNOVATIONS

Innovation	Innovation Category	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%	Combined Freq.	%
1. Individual Instruction and Team Teaching -- All Curriculum Areas	Ind. Instr. & Team Teaching	(69)	22	(3)	10	(72)	21
2. Special Instructional Programs	Programmatic Approaches	(35)	11	(4)	13	(39)	11
3. Curriculum Revision in Specific Areas	Curr. Change & Inst. Tech.	(25)	8	(1)	3	(26)	8
4. Individual Instruction and Team Teaching -- Specific Curriculum Areas	Ind. Instr. & Team Teaching	(21)	7	(2)	6	(23)	7
5. Grade and Attendance Unit	Organizational	(18)	6	(1)	3	(19)	5
6. Planning, Research and Evaluation	Administrative	(14)	4	(4)	13	(18)	5
7. Unit Courses, Mini-Courses and Electives	Curr. Change & Instr. Tech.	(16)	5	--	--	(16)	5
8. In-Service Training and Workshops	Administrative	(11)	3	(1)	3	(12)	3
9. Guidance, Counseling and Diagnosis	Administrative	(11)	3	--	--	(11)	3
10. Teacher Aides, Tutors and Paraprofessionals	Programmatic Approaches	(10)	3	(1)	3	(11)	3
Total		(230)	73	(17)	55	(247)	71

The top ten innovations include at least one innovation in each of the five major categories which was mentioned both by very large and by representative districts. Thus, on the whole, this analysis will be quite representative for all districts.

C. RELATIONSHIP OF INNOVATION TYPE TO DISTRICT SIZE, REGION AND PER PUPIL EXPENDITURE

1. DISTRICT SIZE AND REGION

Earlier in this chapter we discussed the fact that our sample was carefully drawn to represent school systems of all pupil sizes and all regions of the country. One area we were interested in investigating was whether systems of different sizes or from different regions of the country tended to adopt different types of innovations. Our data showed that there was no significant relationship in either case. *Within each size category and within each region of the country school systems adopted roughly equivalent numbers of innovations in each of our innovation description categories*, and, similarly, no differences emerged in district size or region and adoption of innovations among the top ten.

2. PER PUPIL EXPENDITURE

We found considerable variation among our sample districts in the amount of money expended per pupil. This information was provided by superintendents of 278 representative districts and 24 very large districts; Table 2.8 presents this data.

TABLE 2.8
PER PUPIL EXPENDITURE

Per Pupil Expenditure	Districts < 80,000 * Freq.	%	Districts ≥ 80,000 ** Freq.	%
Less than $500	(22)	8	--	--
$500 - 599	(34)	12	(3)	13
$600 - 699	(48)	17	(2)	8
$700 - 799	(60)	22	(7)	29
$800 - 899	(53)	19	(6)	23
$900 - 999	(30)	11	(5)	21
$1,000 and over	(31)	11	(1)	4
Total	(278)	100	(24)	100
Mean	$785.39		$789.50	
Median	$750.39		$796.50	

* 278 districts reporting out of 315 with showcase innovations

** 24 districts reporting out of 31.

In representative districts the mean per pupil expenditure was $785.39, with a median of $750.39. For very large districts the mean was very similar, with $789.50, and the median, at $796.50 was slightly higher.

We were interested in finding out whether the amount of money available in a district influenced the type of innovation adopted. Our data showed that there was no significant relationship in either size sample between per pupil expenditure and innovation category. However, we did find some small differences in adoption of innovations among the top ten. Table 2.9 gives the precent distribution of top ten showcase innovation across seven categories of per pupil expenditure.

TABLE 2.9
PER PUPIL EXPENDITURE AND THE TOP TEN INNOVATIONS
PERCENT DISTRIBUTION

Per Pupil Expenditure	Ind. Instr. & Team Teaching--General N=60	Special Instructional Programs N=33	Curriculum Revision N=23	Ind. Instr. & Team Teaching--Spec. Curr. N=22	Grade & Attendance Unit N=17	Planning, Research & Evaluation N=15	Unit, Mini-Courses & Electives N=14	In-Service Training N=12	Guidance, Counseling & Diagnosis N=10	Teacher Aides Tutors & Para. N=6	Combined N=212
Less than $500	7	12	-	14	6	-	-	17	30	-	8
$500 - 599	5	15	39	9	-	7	14	8	20	33	13
$600 - 699	18	21	-	27	6	20	29	17	-	17	16
$700 - 799	25	24	22	18	24	13	7	25	40	17	22
$800 - 899	20	12	17	14	41	40	14	8	-	17	19
$900 - 999	5	6	13	9	12	20	29	17	10	-	10
$1,000 and over	20	9	9	9	12	-	7	8	-	17	11
Total	100	100	100	100	100	100	100	100	100	100	100
No Information	N=12	N=6	N=3	N=1	N=2	N=3	N=2	N=0	N=1	N=5	N=35

This table shows a slight tendency for systems with lower expenditures to adopt special instructional programs. More outstanding is the trend in districts with moderately high expenditures to adopt changes in the grade and attendance unit structure; 41% of innovations of this type were adopted by districts spending between $800 and $899 per pupil. Districts in this category also adopted 40% of the innovations in the area of planning, research and evaluation, but the data do not show any clear trend for this type of innovation. Finally, the adoption of 39% of innovations concerning curriculum revision in specific areas by districts expending between $500 and $599 per pupil stands out as significant, but again this does not reflect any general tendency of districts with lower expenditures to adopt innovations in this area.

D. GRADE LEVEL OF THE SHOWCASE INNOVATION

In 212 out of the 315 showcase innovations reported in representative districts it was possible to determine the grade level to which the innovation applied. While the grade level could be established for only 37% of administrative innovations, this information was available for over 70% of innovations in each of the other four innovation description categories.

In very large school systems grade level information was provided for 17 out of the 31 showcase innovations. Again administrative innovations most frequently lacked this data; it was reported in only 18% of cases. This does not imply that grade level information was not relevant in these cases, however, and we regret that we do not have this data.

Table 2.10 shows, for districts of both size samples, the grade level of the showcase innovations. Immediately apparent is the fact that in represen-

TABLE 2.10
GRADE LEVEL OF THE SHOWCASE INNOVATION

Grade Level	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
Elementary	(102)	48	(3)	18
Junior/Middle	(8)	4	(1)	6
Senior High	(52)	25	(4)	24
Elementary-Senior	(40)	19	(6)	35
Other	(10)	5	(3)	18
Total	(212)	100	(17)	100

tative districts the largest number of showcase innovations (48%) were designed for elementary students. Another 25% were intended for students in senior high school, while only 4% were introduced for the student at the junior high or middle school level. Nineteen percent of showcase innovations in representative school systems had relevance to all students from Kindergarten through senior high school, while the remaining 5% applied to other groups of students, including pre-schoolers and adults. For very large districts a larger proportion of showcase innovations applied to all grade levels (35%), while again the fewest number of innovations (6%) were designed for the junior or middle school student.

For very large systems, with grade levels reported for only 17 innovations, it is not meaningful to compare grade levels across the five innovation categories; for representative school systems, however, this comparison is quite interesting. The data for representative systems, presented in Table 2.11, is highly significant statistically ($P<.00$) and it can be seen that within innovation categories the distribution across grades differs sharply from the distribution for all innovations combined.

TABLE 2.11
GRADE LEVEL OF THE SHOWCASE INNOVATION CATEGORIES
PERCENT DISTRIBUTION
DISTRICTS <80,000

Grade Level	Ind. Instr. Team Teach. N=69	Administration N=25	Programmatic N=42	Curr. Ch. Instr. Fac. N=44	Organizational N=32	Combined N=212
Elementary	80	32	36	32	31	48
Junior/Middle	3	4	7	5	-	4
Senior High	9	12	29	48	31	25
Elem.-Senior	9	52	10	14	34	19
Other	-	-	19	2	3	5
Total	100	100	100	100	100	100
No Information	N=21	N=42	N=17	N=18	N=5	N=103

The largest percentage of innovations at the elementary level were concerned with individualized instruction and team teaching (80%), while about a third of innovations in the other four categories were designed for this grade level. The largest percentage of innovations at the senior high level were in the category of curriculum change and instructional facilities and technology (48%). Administrative innovations stand out as being most relevant to students within all academic grades, while the largest percentage of innovations adopted for students outside the regular grade structure were in the area of programmatic approaches; 19% of programmatic approaches were designed for students in this group. Finally, no one innovation type was prevalent at the junior or middle level.

As we examine the grade distribution for the top ten showcase innovations we can see some specific innovations which are contributors to the figures in Table 2.11. Table 2.12 shows that individualized instruction and team

TABLE 2.12
GRADE LEVEL OF THE TOP TEN SHOWCASE INNOVATIONS
PERCENT DISTRIBUTION

Grade Level	Ind. Instr. & Team Teaching-- All Areas N=54	Special Instructional Programs N=26	Curriculum Revision N=19	Ind. Instr. & Team Teaching-- Spec. Curr. N=19	Grade & Attendance Unit N=19	Planning, Research & Evaluation N=2	Unit, Mini-Courses & Electives N=12	In-Service Training N=6	Guidance, Counseling & Diagnosis N=6	Teacher Aides, Tutors & Paraprof. N=6	Combined N=169
Elementary	80	46	37	79	37	-	-	67	33	50	55
Junior/Middle	-	4	10	10	-	-	-	-	17	17	4
Senior High	9	4	21	10	5	50	100	-	33	33	18
Elem.-Senior	11	12	26	-	53	50	-	33	17	-	17
Other	-	35	5	-	5	-	-	-	-	-	6
Total	100	100	100	100	100	100	100	100	100	100	100
No Information	N=18	N=13	N=7	N=4	N=0	N=16	N=4	N=6	N=5	N=5	N=78

teaching, both as it applies to specific curriculum areas and the general curricula, is the outstanding innovation type at the elementary level. Special instructional programs are the most common innovation (35%) for students outside the regular grade structure, while at the senior high level the percentage of innovations in unit courses, mini-courses and electives is outstanding. In fact, all innovations of this type were designed for the senior high student.

E. CURRICULUM AREAS OF THE SHOWCASE INNOVATION

The questionnaire did not inquire directly as to which curriculum areas, if any, the showcase innovation applied, but this information was supplied spontaneously by 109 superintendents of representative districts and 6 superintendents of very large districts. Table 2.13 lists the frequencies of mention of specific curriculum areas for the two sizes of districts separately and for all districts combined. The fourth column shows the percentages which these combined frequencies represent of all curriculum areas mentioned. The final column on the right lists the percentages they represent of all showcase innovations for all districts combined.

(Insert Table 2.13 here)

Curriculum areas are reported for one third of all showcase innovations; there are undoubtedly a few additional curriculum-specific innovations for which this information was not supplied. However, when we later examine the curriculum areas of the top ten innovations we will see that curriculum areas are generally supplied for those innovations which are directly related to curriculum. Thus the figure of 33% is probably not far off the true mark.

The areas of reading and English were by far the most frequently mentioned curriculum Areas. If we combine all areas in which reading and English are mentioned, either alone or with other curriculum areas, we find that they comprise a total of 49% of all curriculum areas mentioned for the two size samples combined. Math ranks as a distant second; when the areas of "math" and "reading and math" are combined, they represent 17% of curriculum areas mentioned. Career-oriented curriculum areas are also well represented; combining the areas of "occupations and career preparation" with "vocationa, industrial arts and business education", we find 16% of curriculum-specific showcase innovations fall in this general area.

TABLE 2.13
CURRICULUM AREAS OF THE SHOWCASE INNOVATION

	Districts < 80,000 Freq.	Districts ≥ 80,000 Freq.	Combined Freq.	Combined % * of Curr. Innov.	Combined % ** of All Innov.
Reading	23	2	25	22	7
Reading & Math	12	1	13	11	4
English	12	-	12	10	3
Occupational, Career Prep.	10	2	12	10	3
Math	7	-	7	6	2
Voc., Ind. Arts, Business Ed.	7	-	7	6	2
English & Other	6	1	7	6	2
Science	5	-	5	4	1
Social Studies & History	4	-	4	3	1
Language Arts	4	-	4	3	1
Humanities & Arts	4	-	4	3	1
Computer Programming	3	-	3	3	1
Other ***	12	-	12	10	3
Total	109	6	115	100%	33%
No Information	206	25	231		
Grand Total	315	31	346		

* Percentages in this column are based on the 115 reported curriculum-specific showcase innovations.

** Percentages in this column are based on the total number of showcase innovations in all districts combined (346).

*** Curriculum Areas with a frequency of 1 are combined; included are such areas as spelling, bi-lingual, multi-ethnic and human relations curricular content.

1. CURRICULUM AREAS OF THE FIVE INNOVATION DESCRIPTION CATEGORIES

As would be expected, curriculum-specific innovations were not distributed evenly through the five categories of showcase innovations. Only 9% of administrative innovations and 2% of organizational innovations were identified as being specific to curriculum areas. Of the 115 innovations which were curriculum-specific, 107 or 93% fell into the three innovation categories which are concerned with instruction. Three fourths of all innovations in the category of curriculum changes and instructional facilities were curriculum-specific, while nearly half of the innovations in the category of programmatic approaches and nearly one third of innovations in the area of individualized instruction and team teaching were specific to curriculum areas.

Table 2.14 lists the frequency and percent distribution of curriculum areas in the three instructional categories of innovations. In the category of individualized instruction and team teaching the emphasis is on reading

(Insert Table 2.14 here)

and math, with 65% of all curriculum-specific innovations being in these two areas. No innovations in this category were specified as being concerned with occupational or vocational curricula.

Innovations in the category of programmatic approaches were devoted primarily to reading (59% when the area of "reading and math" is combined with "reading") and vocational and occupational preparation (33% for these two areas combined).

The emphasis in the category of curriculum changes was on English, with 34% of curriculum-specific innovations being in this area (when "English and other" is combined with English). The remainder of curriculum-specific innovations in this category are spread through other curriculum areas to a greater extent than is the case with the other two instructional categories.

2. CURRICULUM AREAS OF THE TOP TEN SHOWCASE INNOVATIONS

Again, curriculum-specific innovations were not distributed evenly throughout the top ten innovations but were concentrated in those innovation areas which were related to curriculum and instruction. Five innovation types stand out as having a considerable portion of curriculum-specific innovations; the distribution of curriculum areas for these five types are given in Table 2.15.

(Insert Table 2.15 here)

TABLE 2.14
CURRICULUM AREAS OF THE
INSTRUCTIONAL INNOVATION CATEGORIES
ALL DISTRICTS COMBINED

Curriculum Area	Curr. Change & Instr. Tech. & Facilities (N=47)		Programmatic Approaches (N=31)		Ind. Instr. & Team Teaching (N=29)	
	Freq.	%	Freq.	%	Freq.	%
Reading	(4)	9	(12)	39	(9)	31
English	(11)	23	-	-	(1)	3
Reading & Math	-	-	(6)	20	(5)	17
Occupational Preparation, Careers	(4)	9	(7)	23	-	-
Math	(1)	2	(1)	3	(5)	17
English & Other	(5)	11	-	-	(2)	7
Vocational, Ind. Arts, Business Ed.	(3)	6	(3)	10	-	-
Science	(3)	6	(1)	3	(1)	3
Social Studies, History	(3)	6	-	-	(1)	3
Language Arts	(1)	2	-	-	(2)	7
Computer Programming	(3)	6	-	-	-	-
Humanities & Arts	(3)	6	-	-	-	-
Other	(6)	13	(1)	3	(3)	10
Total	(47)	100	(31)	100	(29)	100

TABLE 2.15
CURRICULUM AREAS OF THE
TOP TEN INNOVATIONS

Curriculum Area	Ind. Instr. & Team Teaching - Specific Areas Freq.	Curriculum Revision Freq.	Unit Courses, Mini-Courses & Electives Freq.	Teacher Aides, Tutor, & Para-professionals Freq.	Special Instructional Programs Freq.
Reading	8	2	-	2	10
Reading & Math	4	-	-	2	4
English	1	2	9	-	-
English & Other	1	2	3	-	-
Math	4	-	-	-	1
Voc., Ind. Arts. Business	-	3	-	-	1
Occupational, Careers	-	4	-	-	-
Social Studies	1	3	-	-	-
Humanities & Arts	-	3	-	-	-
Language Arts	1	-	1	-	-
Science	1	-	-	1	-
Other	2	4	1	-	1
Total	23	23	14	5	17

In three cases (individualized instruction, teacher aides and special programs) reading and math are the most heavily represented curriculum areas. In contrast, there are no innovations in these areas in "unit courses, mini-courses and electives;" here the emphasis is heavily on English. Innovations in "curriculum revision" were more evenly spread through the curriculum areas, with the highest concentration being in the occupational and vocational areas.

F. TARGET GROUPS OF THE SHOWCASE INNOVATION

Specific groups of students were mentioned as the primary target of the showcase innovation in 73 representative districts and 9 very large districts. The frequency of mention of each target group is listed in Table 2:16. The fourth column shows the percentages which the combined frequencies for all districts represent of innovations directed at special groups, and the final column lists the percentages they represent of all showcase innovations.

(Insert Table 2.16 here)

Since the innovations which were directed at special groups of students comprise 24% of the total, presumably the remaining 76% of innovations were intended to benefit students in general, either directly or indirectly. Understandably, those innovations which were directed at selected sub-groups of students were intended, for the most part, to tackle particular problem areas. Regrouping the target groups in Table 2.16 we can see the pattern more clearly. Underachievers, dropouts and potential dropouts together are the target of 33% of these innovations. Those students who are disadvantaged, from a low socio-economic group or who belong to an ethnic minority are singled out in 27% of cases. Students with disabilities or handicaps, either physical, mental or emotional, are the target groups in 15% of cases. These "problem groups" together represent 74% of the total of targetted innovations and 18% of all innovations.

Taken together, the programs for pre-first grade, first grade and other elementary students comprise another 19% of the total of targetted innovations and 4% of all showcase innovations. Many of these programs are intended to prevent problems from developing in later years.

The preadolescent and the gifted student are each the target of 2% of innovations in this special group and 1% of showcase innovations in general.

1. TARGET GROUPS OF THE FIVE INNOVATION DESCRIPTION CATEGORIES

Table 2.17 lists the number of innovations in each innovation category which were directed at specific target groups; the fourth column shows the total number of innovations in each category for all districts combined, and the final column gives the percentage of innovations in each category which are targetted to specific groups of students.

(insert Table 2.17 here)

TABLE 2.16
TARGET GROUPS OF THE SHOWCASE INNOVATION

Target Group	Districts < 80,000 Freq.	Districts ≥ 80,000 Freq.	Combined Freq.	Combined % ** of Target Innovations	Combined % *** of All Innov.
Underachievers, Slow Progress	17	2	19	23	6
Low Socio-Economic, Disadvantaged	13	-	13	16	4
Pre-First Grade, First Grade	10	1	11	13	3
Ethnic Minority	6	3	9	11	3
Dropout, Potential Dropout	6	2	8	10	2
Learning Disability	6	-	6	7	2
Emotionally Disturbed	2	1	3	4	1
First Grade Cross-Age Tutoring	2	-	2	2	1
Elementary Cross-Age Tutoring	2	-	2	2	1
Preadolescent	2	-	2	2	1
Gifted	2	-	2	2	1
Retarded	1	-	1	1	*
Aurally Handicapped	1	-	1	1	*
Speech Handicapped	1	-	1	1	*
Other	2	-	2	2	1
Total	73	9	82	100	24
No Information	242	22	264		
Grand Total	315	31	346		

* Less than 0.5%
** Percentages in this column are based on the 82 cases for which a target group was reported.
*** Percentages in this column are based on the total of 346 showcase innovations.

TABLE 2.17
FREQUENCY OF TARGET GROUPS IN THE
INNOVATION DESCRIPTION CATEGORIES

Innovation Category	Innov. With Target Groups			All Innov. Total Combined Freq.	Percent of all 346 Innov. Combined
	Districts < 80,000 Freq.	Districts ≥ 80,000 Freq.	Combined Freq.		
Programmatic Approaches	44	5	49	65	75
Organizational	11	2	13	45	29
Curriculum Change & Inst. Facilities	9	-	9	63	14
Administrative	6	2	8	78	10
Ind. Inst. & Team Teaching	3	-	3	95	3
Total	73	9	82	346	24

As would be anticipated from earlier discussions, the category with the largest number of targetted innovations is that of programmatic approaches; 75% of innovations in this category are of this type. Other categories show considerably smaller percentages, with the category of individualized instruction and team teaching containing the least number of targetted innovations, with only 3%.

In Table 2.18 the detailed frequency and percent distribution of target groups for the five innovation categories are given. Of particular interest is the category of programmatic approaches since by far the largest number

(Insert Table 2.18 here)

of targetted innovations fall in this category. It should be noted that none of the innovations in this category are directed at students of ethnic minority background; rather, innovations for this subgroup are concentrated in the categories of curriculum change and administration where innovations for this group comprise nearly half of the totals. When we examine the target groups of the top ten showcase innovations, we will be able to identify in many cases the particular innovation types which account for the distribution in Table 2.18.

TABLE 2.18
TARGET GROUPS OF THE INNOVATION DESCRIPTION CATEGORIES
ALL DISTRICTS COMBINED

Target Group	Programmatic Approaches		Organizational		Curr. Change & Instr. Facilities		Administrative		Ind. Instr. & Team Teaching		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Underachievers, Slow Progress	(17)	35	-	-	(1)	11	(1)	13	-	-	(19)	23
Disadvantaged, Low Socio-Ec.	(7)	14	(2)	15	(1)	11	(1)	13	(2)	67	(13)	16
Pre-First Grade, First Grade	(5)	10	(5)	38	-	-	-	-	(1)	33	(11)	13
Ethnic Minority	-	-	(1)	8	(4)	44	(4)	50	-	-	(9)	11
Dropout, Potential Dropout	(5)	10	(3)	23	-	-	-	-	-	-	(8)	10
Learning Disability	(4)	8	-	-	(1)	11	(1)	13	-	-	(6)	7
Emotionally Disturbed	(2)	4	-	-	(1)	11	-	-	-	-	(3)	4
First Grade Cross-Age	(2)	4	-	-	-	-	-	-	-	-	(2)	2
Elementary Cross-Age	(2)	4	-	-	-	-	-	-	-	-	(2)	2
Gifted	(2)	4	-	-	-	-	-	-	-	-	(2)	2
Preadolescent	-	-	(2)	15	-	-	-	-	-	-	(2)	2
Other	(3)	6	-	-	(1)	11	(1)	13	-	-	(5)	6
Total	(49)	100	(13)	100	(9)	100	(8)	100	(3)	100	(82)	100

2. TARGET GROUPS OF THE TOP TEN INNOVATIONS

Table 2.19 shows what percentage of each of the ten top innovations was mentioned as being directed at specific target groups. There were 64 such innovations in all in the top ten, with over half of these being "special instructional programs". All of the innovations of this type were targetted

TABLE 2.19
PERCENTAGES OF THE TOP TEN INNOVATIONS WHICH ARE DIRECTED AT SPECIFIC TARGET GROUPS

Innovation Type	Total Number of Innovations In Each Type	Number Reporting Target Group	Percent Of Total
Special Instructional Programs	39	39	100
Teacher Aides, Tutors & Para-professionals	11	6	55
Grade and Attendance Unit	19	8	42
Curriculum Revision	26	6	23
Guidance, Counseling & Diagnosis	11	2	18
Individualized Instr. & Team Teaching - Specific Areas	23	2	9
Individualized Instr. & Team Teaching - All Areas	72	1	1
Planning, Research & Evaluation	18	-	-
Unit Courses, Mini-Courses & Electives	16	-	-
In-Service Training	12	-	-
Total	247	64	26

to special groups of students. Teacher aides, tutors and paraprofessionals were employed to benefit special groups of students in 55% of cases, and in 42% of cases grade and attendance unit alterations were intended to benefit specific target groups. Four other innovation types were directed at smaller proportions of special groups, while the final three innovation types were never designed for specific target groups.

Table 2.20 presents the frequency distribution of target groups for the top ten innovation types. The two categories of individualized instruction and team teaching (for specific curriculum areas and for general curriculum) are combined in this table and the three innovation types which included no targetted innovations are not included in the Table.

TABLE 2.20
TARGET GROUPS OF THE
TOP TEN INNOVATIONS*

Target Group	Special Instructional Programs Freq.	Teacher Aides, Tutors, & Para-professionals Freq.	Grade & Attendance Unit Freq.	Curriculum Revision Freq.	Guidance, Counseling & Diagnosis Freq.	Ind. Instr. & Team Teaching - General & Specific Freq.
Underachievers, Slow Progress	14	2	-	1	-	-
Low Socio-Economic, Disadvantaged	7	-	1	-	1	2
Pre-first Grade, First Grade	5	-	5	-	-	1
Learning Disability	4	-	-	-	1	-
Ethnic Minority	-	-	-	4	-	-
Emotionally Disturbed	2	-	-	1	-	-
Dropout, Potential Dropouts	3	-	-	-	-	-
Gifted	2	-	-	-	-	-
Preadolescent	-	-	2	-	-	-
Cross-Age Tutoring, First Grade	-	2	-	-	-	-
Cross-Age Tutoring, Elementary	-	2	-	-	-	-
Aurally Handicapped	1	-	-	-	-	-
Speech Handicapped	1	-	-	-	-	-
Total	39	6	8	6	2	3

* The two categories of "Individualized instruction and team teaching" (general, and specific curriculum areas) are combined; three innovation types with no targetted innovations (see table 2.19) are not included in this table.

Over one third of special instructional programs were directed at the "underachievers" in the student population; this reflects the large number of remedial programs which we found in this innovation type. Disadvantaged students were the object of 7 special instructional programs, and these would be related to the compensatory programs discussed above. Five programs were provided for children in the pre-first grade and first grade group, and four programs were designed for students with learning disabilities.

Five cases of grade and attendance unit shifts to benefit pre-first grade and first grade students are related to the transitional grade between kindergarten and first grade which was discussed earlier.

The only innovations in the top ten which were reported to benefit ethnic minorities were in the area of curriculum revision.

G. DESCRIPTIVE ELEMENTS OF THE SHOWCASE INNOVATION

As we coded the answers to the question which asked superintendents to describe their most significant innovation, we felt that in some cases the innovations mentioned were not adequately characterized by the type and category into which we placed them. We therefore drew up a list of 25 elements which could be used to further describe the showcase innovations; the presence or absence of each of these elements was coded for each innovation. An innovation which was administrative in nature, for instance the initiation of an in-service training program, may also have been related to instruction; it may have been in preparation for the introduction of individualized instruction. In such a case the innovation would have been coded as having "instructional elements" as well as "administrative elements." Conversely, when an innovation was described as "individualized instruction," the respondent might have added that in-service training was provided. In this case both "instructional" and "administrative" elements would again have been coded as present. In both the above examples the elements "individualized instruction" and "in-service training" would also have been coded as present. Similarly, any innovation which included the addition of teacher aides would be coded as having this element present, whether or not the introduction of teacher aides constituted the showcase innovation. Table 2.21 lists these descriptive elements and gives the frequency of mention of each for innovations in each of the two size sample categories. Percentages listed are based on the total number of showcase innovations reported in each of the two size samples and then for all showcase innovations combined.

(Insert Table 2.21 here)

TABLE 2.21
DESCRIPTIVE ELEMENTS OF THE SHOWCASE INNOVATION

Descriptive Element*	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%	Combined Freq.	%
Instructional Elements	(264)	84	(21)	68	(285)	82
Administrative Elements	(147)	47	(20)	64	(167)	48
Organizational Elements	(104)	33	(14)	45	(118)	34
Individualized Instruction	(89)	28	(7)	23	(96)	28
District-wide Coverage	(43)	14	(13)	42	(56)	16
Teacher Aides, Paraprofessionals	(35)	11	(7)	23	(42)	12
In-Service Teacher Training	(35)	11	(3)	10	(38)	11
Team/Cooperative Teaching	(34)	11	(3)	10	(37)	11
Open Space, Open School	(28)	9	(4)	13	(32)	9
Ungraded	(25)	8	(1)	3	(26)	8
Mini-Courses, Electives	(17)	5	(3)	10	(20)	6
Building, Physical Plant	(18)	6	(2)	6	(20)	6
Continuous Progress	(19)	6	-	-	(19)	5
Computer, TV	(17)	5	(1)	3	(18)	5
Community Resources	(14)	4	(4)	13	(18)	5
Learning/Resource Centers	(17)	5	-	-	(17)	5
Federal Funds*	(16)	5	(1)	3	(17)	5
Flexible-Modular Scheduling	(15)	5	(2)	6	(17)	5
Learning Packages	(14)	4	(1)	3	(15)	4
Differentiated Staffing	(13)	4	(1)	3	(14)	4
Small Groups	(11)	3	-	-	(11)	3
Cross-Age Tutoring	(8)	3	(1)	3	(9)	3
Multi-Age	(7)	2	(1)	3	(8)	2
Bi-Lingual	(5)	2	-	-	(5)	1
Multi-Unit	(4)	1	-	-	(4)	1

* Based on spontaneous mentions in open-ended questions. In some cases we expect that these are underestimates of actual utilization of these elements, e.g., Federal funds were probably available and utilized in many more innovations but this fact was not salient to the respondent.

For all districts combined, 82% of innovations contained instructional elements; for very large districts this figure was somewhat lower than for representative districts (68% as opposed to 84%). On the other hand, innovations in very large districts were characterized by a higher percentage of administrative elements than was the case for representative districts. In the very large districts 64% of innovations had administrative elements, nearly the same as the number of innovations with instrucational elements. In contrast, in representative districts only 47% of innovations had administrative elements. Innovations with organizational elements were less frequent in all districts, but here again the very large districts implemented a higher proportion of innovations which were to some degree organizational in nature. Representative districts, with less complex administrative and organizational structures, have apparently been able to place more emphasis on instructional matters than have the very large districts.

In very large districts 42% of showcase innovations are implemented on a district-wide basis, while for representative districts this is true in only 14% of cases. Teacher aides are also employed more frequently in very large districts (23% of innovations as opposed to 11% for representative districts). It should also be noted that community resources are utilized more frequently in the very large districts (13% for very large districts and 4% for representative districts). Finally, of particular interest is the fact that the use of federal funds was mentioned spontaneously in only 5% of representative systems and 3% of very large districts, a very low figure in both cases and probably a gross underestimate (see footnote to Table 2.21).

I. DESCRIPTIVE ELEMENTS OF THE INNOVATION DESCRIPTION CATEGORIES

Because of the nature of the coding system it would be expected that many of the descriptive elements would be present predominantly in certain innovation categories. For example, we would expect that the greatest number of "mini-courses and electives" would be present in the category of "curriculum revision," and "team teaching" should occur predominantly in the category of "individualized instruction and team teaching." In almost all cases this turned out to be true, and we have not analyzed the presence of these descriptive elements any further. There remain eight descriptive elements which are interesting to compare across the five innovation description categories. Tables 2.22 and 2.23 make this comparison for representative districts and very large districts respectively.

(Insert Tables 2.22 and 2.23 here)

TABLE 2.22
DESCRIPTIVE ELEMENTS OF
THE INNOVATION DESCRIPTION CATEGORIES
PERCENT DISTRIBUTION
DISTRICTS < 80,000

	Individualized Instruction & Team Teaching N= 90	Administrative N= 67	Programmatic Approaches N= 59	Curriculum Change & Instr. Facilities N= 62	Organizational N= 37	Combined N=315
Instructional Elements	100	45	100	100	62	84
Administrative Elements	27	100	34	43	24	47
Organizational Elements	46	4	8	29	100	33
Individualized Instruction	57	3	34	11	24	28
District-wide Coverage	4	43	5	6	8	14
Building/Physical Plant	8	4	2	2	16	6
Community Resources	2	3	15	2	-	4
Federal Funds	4	3	15	2	-	5

TABLE 2.23
DESCRIPTIVE ELEMENTS OF
THE INNOVATION DESCRIPTION CATEGORIES
PERCENT DISTRIBUTION
DISTRICTS ≥ 80,000

	Individualized Instruction & Team Teaching N= 5	Administrative N= 11	Programmatic Approaches N= 6	Curriculum Change & Instr. Facilities N= 1	Organizational N= 8	Combined N=31
Instructional Elements	100	36	100	100	63	68
Administrative Elements	40	100	33	100	50	65
Organizational Elements	60	18	17	-	100	45
Individualized Instruction	80	-	33	-	13	23
District-wide Coverage	-	55	67	-	38	42
Building/Physical Plant	20	9	-	-	[illegible]	6
Community Resources	20	-	17	-	25	13
Federal Funds	-	-	17	-	-	3

The last four descriptive elements in these tables provide the most interesting comparison. In representative districts innovations in the administrative area are the only ones which have a high percentage of district-wide coverage (43%). In very large districts the highest proportion of innovations with this characteristic are in the category of "programmatic approaches" (67%) although here also a high proportion of administrative innovations have district-wide coverage (55%).

In representative districts innovations which affect the buildings or physical plants of the school system occur most frequently in the organizational area, whereas in very large districts such innovations occur most often in the category of individualized instruction and team teaching.

Innovations in the category of "programmatic approaches" make use of community resources in 15% of cases in representative school districts; this figure is nearly the same for very large districts (17%), but these large districts also make use of community resources in 20% of innovations in "individualized instruction and team teaching" and in 25% of "organizational" innovations.

In all districts federal funds are used most frequently in "programmatic approaches" (15% in representative districts and 17% in very large districts).

2. DESCRIPTIVE ELEMENTS OF THE TOP TEN INNOVATIONS

The same eight descriptive elements selected above are relevant to a comparison across the top ten innovations; the percent distribution of this analysis is given in Table 2.24. Individualized instruction, though most common in the innovation types "individualized instruction and team teaching", also occurs quite often in "special instructional programs". The only

(Insert Table 2.24 here)

innovation in the top ten which is district-wide in a significant number of cases is "planning, research and evaluation" (67%). Innovations which affect the building and physical plant occur most frequently in alterations of the grade and attendance unit. Federal funds were utilized most frequently in "special instructional programs", with 23% of innovations of this type making use of this resource. Community resources were also taken advantage of most frequently in special instructional programs although to a lesser extent (10%).

TABLE 2.24
DESCRIPTIVE ELEMENTS OF
THE TOP TEN INNOVATIONS
PERCENT DISTRIBUTION

	Ind. Instr. & Team Teaching-All Areas N=72	Special Instructional Programs N=39	Curriculum Revision N=26	Ind. Instr. & Team Teaching-Specific Areas N=23	Grade & Attendance Unit N=19	Planning, Research & Evaluation N=18	Unit-Courses, Mini-Courses & Electives N=16	In-Service Teacher Training N=12	Guidance, Counseling & Diagnosis N=11	Teacher Aides, Tutors & Para-professionals N=11	Top Ten Combined N=247
nstructional	100	100	100	100	53	50	100	75	18	100	88
dministrative	31	41	62	17	32	100	25	100	100	18	45
rganizational	44	10	15	52	100	6	81	8	9	-	35
nd. Instr.	58	46	-	56	16	-	-	-	-	36	32
istrict-wide	6	13	8	-	16	67	6	8	18	9	13
uilding	11	3	-	-	26	6	-	8	-	-	6
ommunity Resources	4	10	-	-	-	-	6	-	-	-	3
ederal Funds	3	23	4	9	-	6	-	-	9	9	7

3. PROFILE OF INDIVIDUALIZED INSTRUCTION AND TEAM TEACHING

We stated earlier that innovations which often contained many significant elements were grouped together in the category of "individualized instruction and team teaching" since these elements very frequently occurred together in the same innovation. Using the descriptive elements it is possible to construct a profile of the innovations in this category; Table 2.25 presents a separate profile for innovations which apply to all curriculum areas and for innovations applying to specific areas. The combined profile is also provided, and in the final column on the right the percentage of each element which is contained in all showcase innovations together are given for comparative purposes.

(Insert Table 2.25 here)

TABLE 2.25
INDIVIDUALIZED INSTRUCTION AND TEAM TEACHING
PROFILE OF DESCRIPTIVE ELEMENTS

Descriptive Elements	Indiv. Instr. & Team Teaching						All 247 Top Ten Innov.
	All Curriculum Areas		Specific Curriculum Areas		Combined		
	Freq.	%	Freq.	%	Freq.	%	%
Individualized Instruction	(42)	58	(13)	56	(55)	58	28
Team Teaching	(28)	39	(3)	13	(31)	33	11
Open Space	(25)	35	(1)	4	(26)	27	9
Ungraded	(15)	21	(7)	30	(22)	23	8
Continuous Progress	(11)	15	(4)	17	(15)	16	5
Teacher Aides, Tutors, Paraprofessionals	(8)	11	(5)	22	(13)	14	12
Differentiated Staffing	(10)	14	(1)	4	(11)	12	4
Building Changes	(8)	11	-	-	(8)	8	6
Multi-Age	(7)	10	-	-	(7)	7	2
Learning Packages	(3)	4	(4)	17	(7)	7	4
District-wide Coverage	(4)	6	-	-	(4)	4	16

Included in this table are all those descriptive elements for which there is an appreciable difference between either of the innovation types under consideration and all innovations combined; this is the case for half of the descriptive elements presented above. Both innovation types contain similarly large proportions of innovations which include individualized instruction (58% and 56%); also in both types innovations involving continuous progress occur more frequently than is the case for innovations in general.

Most of the remaining elements in Table 2.25, however, are more characteristic of one innovation type than of the other. Innovations as they apply to all curriculum areas tend to involve team teaching (39%), open space (35%), differentiated staffing (14%), building changes (11% - presumably required by the open space design), multi-age groupings (10%), and, finally, the courses tend to be ungraded (21%), although to a lesser extent than is the case for the innovation as it applies to specific curriculum areas.

When the innovation is applied to specific curriculum areas it is more likely to involve an ungraded approach (30%), employment of teacher aides and tutors (22%) and the use of learning packages (17%).

Finally, it appears that innovations in this category are less likely to be district-wide in their coverage than are innovations in general. In particular, none of the innovations in our sample which applied to specific curriculum areas had been instituted on a district-wide basis.

H. SUMMARY

Responses to the questionnaire indicated that school systems all across the country are heavily involved in experimenting with new innovations. Out of the 322 school districts with less than 80,000 students which responded to the questionnaire, 315 were able to report that they had instituted an innovation of significant proportions during the 1970-71 school year. All of the 31 districts with 80,000 or more students which returned questionnaires had significant innovations to report. These "showcase" innovations were divided into five categories; "individualized instruction and team teaching," "administrative innovations," "programmatic approaches to instruction," "curriculum changes and instructional facilities and technology," and "organizational innovations."

In representative districts of enrollment under 80,000 the most common area of innovation was "individualized instruction and team teaching;" 29% of innovations in these districts were of this type. The most common innovations in very large districts (enrollment of 80,000 or more) were administrative in nature; 35% of innovations in these districts fell into this category. On the whole, however, there were no significant differences in the types of innovations which were introduced by districts of different sizes. Nor were there any differences in the types of innovations introduced in school districts in different regions of the country.

Nearly half of the showcase innovations were designed for elementary grade students and a quarter were for senior high students. A large part of the remaining innovations affected all students in elementary through senior grades, while only a handful were designed specifically for students in the junior high or middle school grades.

When the showcase innovation was specific to particular curriculum areas, these areas were most frequently reading, math, English or occupational and vocational preparation. Innovations in the category of individualized instruction and team teaching were most likely to concentrate on reading and math; innovations in the area of programmatic approaches tended to be connected with either reading or vocational preparation, and curriculum changes were most frequently in English.

When showcase innovations were targetted to specific groups of students there was very strong emphasis on students with low performance records; gifted students were very rarely singled out (Table 2.18).

Many of the showcase innovations were complex and contained many elements which defied simple classification (Table 2.21). The most complex as well as the most popular innovation was "individualized instruction and team teaching." Innovations of this type frequently included such features as an open space concept, ungraded or continuous progress approaches, multi-age classes and differentiated staffing. A "profile" giving further insight into the nature of individualization was drawn up on the basis of the descriptive elements (Table 2.25). Sometimes the innovation was designed for specific curriculum areas, but more commonly it was general in nature and applied to all curriculum areas. In 80% of cases it was designed for elementary grade students.

The scarcity of certain innovations is also worthy of note. Only one district reported that performance contracting was the major innovation, and only three districts initiated human relations programs. There were very few cases of packaged materials or courses among the showcase innovations (8 cases, or 3%), and in addition only 13 districts (4%) reported new instructional technology or facilities, including computers in two districts. Alternative schools were operated by four districts and model schools by five districts; one of these model schools was designed as a "magnet" school.

The broad picture which emerges shows that while the school systems are being innovative they are not being radical or daring. Although very large districts find it more necessary to improve their complex administrative operations, all districts place emphasis in the instructional areas on improving the basic skills of the students. When the regular curriculum fails to give an adequate level of basic skills to the young child or to hold the interest of the high school student, special instructional programs are initiated to fill the gap. In the elementary years the thrust is towards improving reading and math skills through individualized or remedial instruction. At the senior high level the English curriculum is made more appealing through the introduction of unit courses, mini-courses and electives, and there is also provision made for occupational preparation and vocational training for those students not headed for college. With this emphasis on basic skills of the youngest and oldest students, programs for the gifted students and students in the middle school years are rarely given much attention.

CHAPTER THREE: THE TOTAL 1970-71 INNOVATIVE EFFORT

In addition to exploring the most significant ("showcase") innovation of each school district in our sample, the questionnaire also sought to determine the extent and nature of the total innovative effort of each system during the time period under study. Superintendents were asked to make a brief listing of additional innovations introduced or attempted during the 1970-71 school year, using the same criteria which were outlined for the showcase innovation. *

Five superintendents of representative districts indicated that no further innovations had been attempted. Other superintendents listed between one and 43 innovations each; a total of 2531 innovations were reported in this "inventory" by representative districts and 348 by very large systems. When these figures are added to the number of showcase innovations reported, the mean number of innovations in the 1970-71 school year is 8.84 for representative districts and 12.22 for very large districts.

This finding that the very large districts were more "innovative" than the representative districts was indicative of a further finding. Breaking the representative districts into six size categories, and adding the very large districts as a seventh category, it was found that "innovativeness" had a .27 correlation with size of district. Regional differences were also found to exist; the New England states were the most innovative, with a mean number of 10.70 *inventory* innovations per district. Districts in the Rocky Mountain region were the least innovative, with a mean of 6.58 innovations. Means for other regions of the country ranged from 7.25 to 9.55 innovations per district. These relationships as well as other correlates of innovativeness will be explored further in a later chapter.

A. CATEGORIES OF THE 1970-71 INNOVATIVE EFFORT

The distribution of inventory responses in the five innovation categories are given in Table 3.1. The figures already reported for the showcase innovation are also given for comparative purposes, and the inventory and showcase figures are then combined to represent the total 1970-71 innovative effort.

(Insert Table 3.1 here)

Table 3.1. indicates that the greatest innovative effort for all districts was in the category of "curriculum change and instructional facilities and technology," with 39% of inventory innovations for representative schools and

* Question 5 of the questionnaire.

TABLE 3.1
TOTAL 1970-71 INNOVATIVE EFFORT
INNOVATION DESCRIPTION CATEGORIES

Rank Order of Showcase	Innovation Category	Districts < 80,000			Districts ≥ 80,000		
		Inventory Freq. %	Showcase Freq. %	Total 70-71 Freq. %	Inventory Freq. %	Showcase Freq. %	Total 70-71 Freq. %
(4)	1. Curriculum Change and Instructional Facilities and Technology	(990) 39	(62) 20	(1052) 37	(127) 37	(1) 3	(128) 34
(2)	2. Administrative Innovations	(716) 28	(67) 21	(783) 27	(115) 33	(11) 35	(126) 33
(1)	3. Individualized Instruction and Team Teaching	(380) 15	(90) 29	(470) 16	(41) 12	(5) 16	(46) 12
(3)	4. Programmatic Approaches to Instruction	(278) 11	(59) 19	(337) 12	(32) 9	(6) 19	(38) 10
(5)	5. Organizational Innovations	(167) 7	(37) 12	(204) 7	(33) 9	(8) 26	(41) 11
	Total	(2531) 100	(315) 100	(2846) 100	(348) 100	(31) 100	(379) 100
	No Innovation or No Information	(5)	(7)		(-)	(-)	
	Grand Total	(2139)	(322)		(281)	(31)	

37% for very large schools falling in this category. These percentages are far greater than those reported for the showcase innovation, suggesting that although the greatest number of innovations which were introduced were in this area, they were often not considered to be among the most significant innovations attempted.

The proportion of innovations in the administrative area listed in the inventory were roughly the same as reported for the showcase innovation, while inventory innovations in the other three innovation categories represent only about half the proportion reported for these same categories for showcase innovations. It would thus appear that altnough proportionally fewer innovations were introduced in the areas of "individualized instruction and team teaching," "programmatic approaches to instruction," and "organizational innovations," these tended to be considered as the more significant innovations.

The percentages of inventory innovations in each of the five categories are very similar for representative and very large districts. Each of the five categories will be examined in more detail below.

1. CURRICULUM CHANGE AND INSTRUCTIONAL FACILITIES

The largest number of inventory innovations were in the category of "curriculum changes and instructional facilities and technology," with 39% for representative school systems and 37% for very large systems. This is in sharp contrast with the showcase innovations reported in this category, which included 20% of showcase innovations in representative schools and only 3% in very large schools. Table 3.2 shows the frequency and percent distributions of inventory and showcase innovations and the total 1970-71 innovative effort for the specific types of innovations within this category.

TABLE 3.2
TOTAL 1970-71 INNOVATIVE EFFORT
CURRICULUM CHANGE AND INSTRUCTIONAL FACILITIES

Innovation	Districts < 80,000						Districts ≥ 80,000					
	Inventory Freq.	%	Showcase Freq.	%	Total 70-71 Freq.	%	Inventory Freq.	%	Showcase Freq.	%	Total 70-71 Freq.	%
a. Curriculum Change												
Curriculum Revision	(479)	19	(25)	8	(504)	18	(59)	17	(1)	3	(60)	16
Unit Courses, Mini-Courses & Electives	(79)	3	(16)	5	(95)	3	(12)	3	(-)	-	(12)	3
Packaged Courses	(9)	*	(8)	3	(17)	*	(1)	*	(-)	-	(1)	*
b. Instructional Technology & Facilities												
Technology & Devices	(246)	10	(2)	1	(248)	9	(34)	10	(-)	-	(34)	9
Media Centers	(95)	4	(2)	1	(97)	3	(10)	3	(-)	-	(10)	3
Laboratories & Other Facilities	(65)	3	(3)	1	(68)	2	(9)	3	(-)	-	(9)	2
Learning Centers	(17)	1	(6)	2	(23)	1	(2)	1	(-)	-	(2)	1
Total	(990)	39	(62)	20	(1052)	37	(127)	37	(1)	3	(128)	34

* Less than 0.5%

a. Curriculum Changes

Revision in specific curriculum areas accounted for 19% of all inventory innovations in representative districts and 17% in very large systems; in the area of curriculum changes this accounts for the major difference between inventory and showcase innovations. There were only 9 additional innovations in the area of packaged courses and materials reported in the inventory for representative districts, and one in very large districts.

b. Instructional Technology & Facilities

There were significantly more innovations reported in the area of instructional technology and facilities in the inventory than was the case for the showcase innovation; both representative and very large districts reported 17% of inventory innovations in this area. Media centers were reported more frequently than for the showcase innovation, and new laboratories and other facilities represented 3% of inventory innovations for all districts. These included scientific laboratories, reading laboratories, study carrels, and other special facilities.

Of particular interest is the fact that school districts of both size categories acquired new technological devices which accounted for 10% of inventory innovations, though these seldom rated as showcase innovations. It is of interest to examine this type of innovation in more detail; Table 3.3 presents the frequency of mention of various new technological equipment and devices.

TABLE 3.3
TECHNOLOGICAL EQUIPMENT AND DEVICES
MENTIONED IN THE INVENTORY

Equipment and Devices	Districts < 80,000 Freq.	Districts ≥ 80,000 Freq.
Videotape, TV VV	92	10
Computer	54	13
Audio Tape, Tape Recorders	24	3
Teaching Machines	18	4
Audiovisual, film	19	-
Electronic Data Processing Equipment	8	1
Electric Typewriter, Calculator	8	1
Other	23	2
Total	246	34

Whereas representative school districts acquired a greater proportion of videotape equipment, very large systems acquired a larger proportion of computers. Included in the "other" category were a wide variety of devices ranging from microfilm readers and xerox machines to picturephones and an aero-space module.

2. ADMINISTRATIVE INNOVATIONS

The second most frequently mentioned category of innovations in the inventory were those in the administrative area. Table 3.4 gives the frequency and percent distributions for innovation types in this area for both representative and very large districts. The pattern of frequency for both sizes of school systems is very similar.

(Insert Table 3.4 here)

Human relations programs were mentioned frequently in the inventory by superintendents of both representative districts (5%) and very large districts (7%). In districts of all sizes "planning, research and evalution" innovations represent 4% of the total of inventory innovations. This is in contrast with the 13% of showcase innovations of this type in very large schools, which suggests that when these innovations were adopted they were often considered to be the most significant innovation in the district.

Included in "other student-related issues" are such innovations as the revision of a suspension policy, a new discipline policy and the institution of a policy of student rights and responsibilities. "Other staff-related issues" include innovations in the area of staff promotion practices, teacher negotiations, and inter-school visitation programs. New health services, food services and the renovation or acquisition of buildings are included in "plant issues".

3. INDIVIDUALIZED INSTRUCTION AND TEAM TEACHING

Table 3.5 shows the proportion of innovations in individualized instruction and team teaching which applied to all curriculum areas and those which applied only to specific areas. For both types of innovation and for both sizes of school districts the percentages of inventory innovations were less than for showcase innovations. Whereas this innovation category ranked first

(Insert Table 3.5 here)

for showcase innovations, it ranks third for inventory innovations.

TABLE 3.4
TOTAL 1970-71 INNOVATIVE EFFORT
ADMINISTRATIVE INNOVATIONS

Innovation	Districts < 80,000						Districts ≥ 80,000					
	Inventory		Showcase		Total 70-71		Inventory		Showcase		Total 70-71	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
a. Relations With Community, Parents & Students												
Human Relations Programs	(125)	5	(3)	1	(128)	5	(25)	7	(-)	-	(25)	6
Guidance & Counseling	(51)	2	(11)	3	(62)	2	(6)	2	(-)	-	(6)	2
Public Relations Prog.	(38)	2	(3)	1	(41)	1	(7)	2	(-)	-	(7)	2
Desegregation	(22)	1	(3)	1	(25)	1	(7)	2	(2)	6	(9)	2
Parent-Teacher Conf.	(11)	*	(2)	1	(13)	*	(-)	-	(-)	-	(-)	-
b. Staff-Related Issues												
In-Service Training	(120)	5	(11)	3	(131)	5	(13)	4	(1)	3	(14)	4
Internship	(7)	*	(-)	-	(7)	*	(1)	*	(-)	-	(1)	*
Release Time	(6)	*	(-)	-	(6)	*	(-)	-	(-)	-	(-)	-
Teacher Corps	(4)	*	(1)	*	(5)	*	(-)	-	(-)	-	(-)	-
Other	(12)	1	(-)	-	(12)	*	(1)	*	(-)	-	(1)	*
c. Research, Development & Budget												
Planning, Res., & Eval.	(108)	4	(14)	4	(122)	4	(15)	4	(4)	13	(19)	5
Curriculum Development	(19)	1	(7)	2	(26)	1	(8)	2	(1)	3	(9)	2
Finance Allocation	(17)	1	(3)	1	(20)	1	(2)	1	(-)	-	(2)	1
Performance Contracting	(5)	*	(1)	*	(6)	*	(2)	1	(-)	-	(2)	1
d. Administrative Structure												
Decentralization	(36)	1	(2)	1	(38)	1	(8)	2	(2)	6	(10)	3
Staff Structure Changes	(35)	1	(3)	1	(38)	1	(7)	2	(1)	3	(8)	2
e. Student-Related Issues												
Progress Reports	(44)	2	(-)	-	(44)	2	(5)	1	(-)	-	(5)	1
Other	(25)	1	(1)	*	(26)	1	(5)	1	(-)	-	(5)	1
f. Plant Issues	(30)	1	(1)	*	(31)	1	(3)	1	(-)	-	(3)	1
g. Administrative Philosophy	(1)	*	(1)	*	(2)	*	(-)	-	(-)	-	(-)	-
Total	(716)	28	(67)	21	(783)	27	(115)	33	(11)	35	(126)	33

*Less than 0.5%

TABLE 3.5
TOTAL 1970-71 INNOVATIVE EFFORT
INDIVIDUALIZED INSTRUCTION AND TEAM TEACHING

Innovation	Districts < 80,000						Districts ≥ 80,000					
	Inventory		Showcase		Total 70-71		Inventory		Showcase		Total 70-71	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
a. Applies to all Curriculum Areas	(338)	13	(69)	22	(407)	14	(38)	11	(3)	10	(41)	11
b. Applies to Specific Curriculum Areas	(42)	2	(21)	7	(63)	2	(3)	1	(2)	6	(5)	1
Total	(380)	15	(90)	29	(470)	16	(41)	12	(5)	16	(46)	12

4. PROGRAMMATIC APPROACHES TO INSTRUCTION

Table 3.6 presents in detail the distribution of inventory innovations in the category of "programmatic approaches to instruction". "Special instructional programs" amounted to only 3% of inventory innovations in both size samples

(Insert Table 3.6 here)

whereas they totalled 11% and 12% of showcase innovations for representative and very large districts respectively. Particularly notable are the low proportion of remedial programs and the absence of pre-school programs in the inventory.

The employment of trained teacher aides represented 3% of inventory innovations in representative schools, whereas this figure was 1% for showcase innovations. Only three cases of cross-age tutoring were reported on the inventory.

Included in the category of "other programmatic approaches" were several cultural programs, an agriculture program, a program for teen age mothers, and a variety of other approaches designed to improve the effectiveness and relevance of the school experience.

5. ORGANIZATIONAL INNOVATIONS

Very few "organizational" innovations were mentioned in the inventory; only 7% of innovations for representative school systems and 9% for very

TABLE 3.6
TOTAL 1970-71 INNOVATIVE EFFORT
PROGRAMMATIC APPROACHES TO INSTRUCTION

Innovation	Districts < 80,000						Districts ≥ 80,000					
	Inventory Freq.	%	Showcase Freq.	%	Total 70-71 Freq.	%	Inventory Freq.	%	Showcase Freq.	%	Total 70-71 Freq.	
a. Special Instructional Program												
Learning Disabilities	(20)	1	(7)	2	(27)	1	(2)	1	(-)	-	(2)/	1
Compensatory	(17)	1	(6)	2	(23)	1	(3)	1	(-)	-	(3)/	1
Special Education	(14)	1	(-)	-	(14)	1	(2)	1	(-)	-	(2)/	1
Bi-Lingual, Non-English	(10)	*	(-)	-	(10)	*	(-)	-	(-)	-	(-)	-
Remedial	(7)	*	(14)	4	(21)	1	(1)	*	(2)	6	(3)	1
Pre-School	(-)	-	(6)	2	(6)	*	(-)	-	(2)	6	(2)/	1
Gifted	(2)	*	(2)	1	(4)	*	(-)	-	(-)	-	(-)	-
Other	(4)	*	(-)	-	(4)	*	(2)	1	(-)	-	(2)	1
b. Teacher Aides, Tutors & Paraprofessionals												
Trained Aides	(75)	3	(2)	1	(77)	3	(4)	1	(1)	3	(5)	
Paraprofessionals	(21)	1	(2)	1	(23)	1	(2)	1	(-)	-	(2)	
Cross-Age Tutoring	(3)	*	(6)	2	(9)	*	(-)	-	(-)	-	(-)	
Tutors (Unspecified)	(5)	*	(-)	-	(5)	*	(1)	*	(-)	-	(1)	
c. Work-Study, Occupational Preparation	(48)	2	(8)	1	(56)	2	(5)	1	(1)	3	(6)	
d. Other Programmatic Approaches	(52)	2	(6)	2	(58)	2	(10)	3	(-)	-	(10) 3	
Total	(278)	11	(59)	19	(337)	12	(32)	9	(6)	19	(38) 10	

* Less than 0.5%

large districts are in this category; these figures are considerably smaller than the 12% and 26% respectively for showcase innovations, although this was also the least frequently mentioned category for showcase innovations. Table 3.7 presents the distribution of innovations within this category.

TABLE 3.7
TOTAL 1970-71 INNOVATIVE EFFORT
ORGANIZATIONAL INNOVATIONS

Innovation	Districts < 80,000						Districts ≥ 80,000					
	Inventory Freq.	%	Showcase Freq.	%	Total 70-71 Freq.	%	Inventory Freq.	%	Showcase Freq.	%	Total 70-71 Freq.	%
a. Operational Aspects												
Grade & Attendance Unit t	(59)	2	(18)	6	(77)	3	(12)	3	(1)	3	(13)	3
Summer Prog., Camp, Outdoor Education	(11)	*	(-)	-	(11)	*	(2)	1	(-)	-	(2)	1
Semester Structure, Extended Day or Year	(12)	1	(4)	1	(16)	1	(3)	1	(2)	6	(5)	1
Open Campus	(4)	*	(3)	1	(7)	*	(1)	*	(-)	-	(1)	*
b. Instructional-Linked Aspects												
Flexible-Modular Schedule	(40)	2	(7)	2	(47)	2	(7)	2	(1)	3	(8)	2
Departmentalization	(11)	*	(-)	-	(11)	*	(1)	*	(-)	-	(1)	*
c. Model Schools or Grades	(21)	1	(3)	1	(24)	1	(5)	1	(2)	6	(7)	2
d. Alternative Schools	(4)	*	(2)	1	(6)	*	(2)	1	(2)	6	(4)	1
e. School-Within-A-School	(5)	*	(-)	-	(5)	*	(-)	-	(-)	-	(-)	-
Total	(167)	7	(37)	12	(204)	7	(33)	9	(8)	26	(41)	11

*Less than 0.5%

Only 2% of inventory innovations in representative districts were concerned with alterations in the grade and attendance unit, whereas 6% of showcase innovations for these districts were of this type. For very large schools 3% of inventory innovations were of this type. The next most frequently mentioned organizational innovation was flexible-modular scheduling which was listed by 2% of the districts in both size groups. No other innovation type in the organizational category was mentioned in more than 1% of cases in either size sample.

B. THE TOP TEN 1970-71 INNOVATIONS

Combining the figures for the showcase innovation and the inventory, a list may be drawn up which represents the top ten 1970-71 innovations in both sizes

of school districts combined. This list is prepared for purposes of comparison with the top ten showcase innovations, although the latter will continue to be used for detailed analysis in the remainder of this report. Table 3.8 lists the top ten 1970-71 innovations in decreasing order of frequency of mention. Included in this list are all innovations which were mentioned 97 times or more by all districts combined (3% of total 1970-71 Innovations).

TABLE 3.8
THE TOP TEN 1970-71 INNOVATIONS

Rank in Top Ten Showcase	Innovation	Innovation Category	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%	Total 70-71 Freq.	%
3	1. Curriculum Revision in Specific Areas	Curr. Change & Instr. Tech.	(504)	18	(60)	16	(564)	18
1	2. Ind. Instr. & Team Teaching - All Areas	Ind. Instr. & Team Teach.	(407)	14	(41)	11	(448)	14
-	3. Technological Devices & Equipment	Curr. Change & Instr. Tech.	(248)	9	(34)	9	(282)	9
-	4. Human Relations Program	Administrative	(128)	5	(25)	7	(153)	5
8	5. In-Service Training & Workshops	Administrative	(131)	5	(14)	4	(145)	4
6	6. Planning, Research & Evaluation	Administrative	(122)	4	(19)	5	(141)	4
2	7. Special Instructional Programs	Programmatic Approaches	(109)	4	(14)	4	(123)	4
10	8. Teacher Aides, Tutors & Paraprofessionals	Programmatic Approaches	(114)	4	(8)	2	(122)	4
-	9. Media Centers	Curr. Change & Instr. Tech.	(97)	3	(10)	3	(107)	3
7	10. Unit Courses, Mini-Courses & Electives	Curr. Change & Instr. Tech.	(95)	3	(12)	3	(107)	3
	Total		(1955)	69	(237)	63	(2192)	68

In the left hand column is given the rank order of each innovation which was listed in the top ten showcase innovations. Seven innovations appear in both lists. Included in the 1970-71 list, but not ranking in the showcase top ten are "technological equipment and devices," "human relations programs," and "media centers". Top ten showcase innovations which do not rank in the 1970-71 top ten list are "individualized instruction and team teaching in specific curriculum areas," "grade and attendance unit," and "guidance, counseling and diagnosis."

The top ten 1970-71 innovations are drawn from only four of the five innovation description categories: no organizational innovations were mentioned frequently enough to be included in this list.

C. GRADE LEVEL OF THE INVENTORY INNOVATIONS

1. DISTRICTS WITH LESS THAN 80,000 STUDENTS

Out of the 2531 innovations reported by representative districts in the inventory, 1185, or 47% could be identified as applying to specific grade level categories. Table 3.9 presents the percent distribution of innovations in each of the five innovation categories across five grade levels.

TABLE 3.9
GRADE LEVEL OF THE INVENTORY INNOVATION CATEGORIES
PERCENT DISTRIBUTION
DISTRICTS < 80,000

Innovation Grade Level	Curr. Change & Instr. Facil. N=595	Administrative N=172	Ind. Instr. & Team. Teaching N=183	Prog. Approaches N=113	Organizational N=122	Combined N=1185
Elementary	35	45	56	40	28	40
Junior/Middle	16	16	21	9	34	18
Senior High	44	28	20	34	32	36
Elem-Sr. High	3	9	2	5	2	4
Other	2	2	-	12	4	3
Total	100	100	100	100	100	100
No Information	N=395	N=544	N=197	N=165	N=45	N=1346

As was the case for showcase innovations, more inventory innovations were introduced at the elementary level (40%) or senior high school level (36%) than were introduced for junior or middle school grades (18%). However, the figure for the middle grade level is higher than that found for the middle level showcase innovation (4%). Very few innovations (4%) applied to all grade levels, elementary through senior high, whereas this figure was 19% for the showcase innovation. The remaining 3% of innovations were intended for other groups of students, including pre-schoolers and adults.

Some variations may be noted among the innovation categories. The greatest percentage of organizational innovations (34%) were intended for the junior or middle school student, whereas no organizational showcase innovations applied to this grade level. About the same number of innovations in the category of "individualized instruction and team teaching" were designed for middle school students (21%) as for senior high students (20%), but by far the greatest percentage of innovations in this category were developed for the elementary student (56%).

2. DISTRICTS WITH 80,000 OR MORE STUDENTS

Of the 348 inventory innovations reported by superintendents of very large schools, 155, or 44% were specified as applying to a particular grade level. Table 3.10 gives the percent distribution of innovations in the five categories for these school districts.

(Insert Table 3.10 here)

As in the representative sample, very few inventory innovations in the very large districts could be identified as applying to all grade levels from elementary through senior high (5%), and again 3% of innovations were intended for other groups of students. Almost the same percentage of innovations in very large schools were designed for the junior or middle school level (19%) as in representative districts, but in very large schools somewhat more innovations were intended for the senior high student (41%) than for the elementary student (32%).

The innovation category of "individualized instruction and team teaching" is the only one which deviates significantly from the overall pattern; for this innovation type 75% of innovations were intended for the elementary student, with only 10% being designed for the senior high level. There were slightly more innovations in the administrative category which applied to all grade levels from elementary through senior high (12%) than was the case for the other innovation categories. Finally, the largest percentage of innovations for students outside the regular K-12 system was the category of "programmatic approaches", with 16%.

TABLE 3.10
GRADE LEVEL OF THE INVENTORY INNOVATION CATEGORY
PERCENT DISTRIBUTION
DISTRICTS ≥ 80,000

Innovation Grade Level	Innovation Category					Combined
	Curr. Rev. & Instr. Facil. N=76	Administrative N=16	Ind. Instr. & Team Teaching N=20	Prog. Approaches N=19	Organizational N=24	N=155
Elementary	24	38	75	32	21	32
Junior/Middle	21	12	10	21	21	19
Senior High	50	38	10	32	50	41
Elem.-Sr. High	5	12	5	-	4	5
Other	-	-	-	16	4	3
Total	100	100	100	100	100	100
No Information	N=51	N=99	N=21	N=13	N=9	N=193

D. SUMMARY

In this chapter an "inventory" of all innovations reported in the 1970-71 school year was examined and compared with the findings on the showcase innovation, described in Chapter Two. Superintendents listed between zero and 43 innovations on the inventory; a total of 2531 innovations were reported by representative districts and 348 by very large districts. Combining these figures with the number of showcase innovations reported, it was found that the mean number of innovations in the 1970-71 school year was 8.84 for representative districts and 12.22 for very large districts. When all districts were divided into seven size categories a very definite correlation (.27) was found between "innovativeness" and size of district. Regional differences were also found, with the New England states being the most innovative (a mean of 10.70 inventory innovations per district) and the Rocky Mountain states being the least innovative (a mean of 6.58 innovations per district). Districts in other regions of the country reported means of between 7.25 and 9.55 inventory innovations.

The pattern of the total innovative effort differed somewhat from that of the showcase innovation. The largest percentage of inventory innovations was in the category "curriculum change and instructional facilities"; since this ranked fourth out of the five showcase innovation categories, it may be concluded that when innovations were introduced in this area they were less likely to be considered as "most significant". On the other hand, smaller percentages of inventory innovations appeared in the categories of "individualized instruction and team teaching," "programmatic approaches," and "organizational innovations," indicating that when such innovations were adopted they were more likely to be considered as "most significant."

Table 3.8, which lists the ten most common innovations reported in the inventory, shows that a significant number of districts adopted new technological equipment and devices, even though these rarely appeared as showcase innovations. Similarly, human relations programs were adopted in many districts although here again few were reported as showcase innovations. Popular showcase innovations which appeared less frequently on the inventory included individualized instruction and team teaching in specific curriculum areas, and changes in the grade and attendance unit structure.

As was the case for the showcase innovations, the largest numbers of inventory innovations were designed for students at the elementary and senior high levels, although a larger percentage of inventory innovations than showcase innovations were intended for students at the junior or middle level. Fewer inventory innovations applied to all students from elementary grades through senior high school.

CHAPTER FOUR: INNOVATIONS PLANNED FOR 1972 AND AFTER

After superintendents had responded to a series of questions concerning the showcase innovation, they were asked if there was another major area or problem on which they were planning to make changes in the next school year (Question 4a). Out of the 322 representative districts 249, or 77%, already had plans in mind; for the very large districts 28, or 90%, had specific innovations planned for the 1971-72 school year. Some superintendents listed two or three major innovations which were planned; for representative districts a total of 366 innovations were reported, while in very large systems 47 innovations were mentioned.

A. CATEGORIES OF FUTURE INNOVATIONS

Table 4.1 gives the distribution of projected innovations across the five innovation description categories, and it also shows the total 1970-71 innovative effort for comparative purposes.

TABLE 4.1
COMPARISON OF FUTURE INNOVATIONS WITH TOTAL 1970-71 EFFORT
INNOVATION DESCRIPTION CATEGORIES

Rank Order of Total 1970-71 Effort	Innovation Category	Districts < 80,000				Districts ≥ 80,000			
		Future		1970-71		Future		1970-71	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
2.	1. Administrative	(110)	30	(783)	27	(23)	49	(126)	33
1.	2. Curr. Change & Instr. Facilities	(98)	27	(1052)	37	(8)	17	(128)	34
3.	3. Individualized Instr. & Team Teaching	(74)	20	(470)	16	(3)	6	(46)	12
5.	4. Organizational	(47)	13	(204)	7	(10)	21	(41)	11
4.	5. Programmatic Approaches	(37)	10	(337)	12	(3)	6	(38)	10
	Total	(366)	100	(2846)	100	(47)	100	(379)	100
	No Information	(73)				(3)			

In representative districts of less than 80,000 students only minor differences appear between the thrust of 1970-71 innovations and those planned for the future, with the biggest difference being a somewhat smaller emphasis planned for innovations in the area of curriculum change and instructional technology and facilities (27% in the future as opposed to 37% in 1970-71). In very large school districts the trend is the same but with somewhat larger differences; whereas 34% of innovations in 1970-71 were in the area of curriculum change and instructional facilities, only 17% are expected to be in this area in the future. On the other hand, more emphasis is planned for administrative innovations, with 49% of all planned innovations being in this category as opposed to 33% in the 1970-71 year. Somewhat more emphasis is also likely to be placed on organizational innovations in very large school systems (21% as opposed to 11% in the previous year).

Some superintendents indicated that the major innovation planned for the 1971-72 school year would be a continuation, revision or expansion of the 1970-71 showcase innovation. Tables 4.2 and 4.3 show the percentage of showcase innovations which will be continued in this way in the future in representative systems and very large systems respectively.

TABLE 4.2
FUTURE INNOVATIONS WHICH ARE A CONTINUATION
OF THE SHOWCASE INNOVATION
DISTRICTS < 80,000

Innovation Category	Future Continuation Innovations Freq.	Showcase Innovations Freq.	Percent of Showcase Continuing in Future %
Administrative	12	67	18
Curr. Change & Instr. Facilities	10	62	16
Ind. Instr. & Team Teaching	24	90	25
Organizational	7	37	19
Programmatic Approaches	11	59	19
Total	64	315	20%

TABLE 4.3
FUTURE INNOVATIONS WHICH ARE A CONTINUATION
OF THE SHOWCASE INNOVATION
DISTRICTS ≥ 80,000

Innovation Category	Future Continuation Innovations Freq.	Showcase Innovations Freq.	Percent of Showcase Continuing In Future %
Administrative	6	11	55
Curr. Change & Instr. Facilities	1	1	100
Ind. Instr. & Team Teaching	1	5	20
Organizational	4	8	50
Programmatic Approaches	-	6	-
Total	12	31	39%

For all innovation categories combined 20% of showcase innovations in representative districts will continue to constitute the major innovative effort in the future; among the innovation categories there is little variation, with slightly less continuing innovations in "curriculum change and instructional facilities" (16%) and slightly more continuing innovations in individualized instruction and team teaching (25%).

The frequencies in Table 4.3 are too small to provide a valid comparison of very large districts with representative districts across the innovation categories, but it is perhaps notable that 55% of showcase innovations in the administrative category will continue to be major innovations in the future. Half of the organizational showcase innovations will be continued in a major way in the future, and, overall, 39% of showcase innovations in the very large schools will continue to be the innovation for the future, a figure nearly double that for representative districts.

1. ADMINISTRATIVE INNOVATIONS

Table 4.4 presents the distribution of administrative innovations planned for the future across the innovation types within this category, again showing the total 1970-71 effort for comparative purposes. In all districts it is

(Insert Table 4.4 here)

expected that in the future an increased emphasis will be placed on innovations in the area of research, development and budget issues, and an increase in innovations is also planned in the area of building and physical plant issues.

Whereas in representative school systems there is a planned decrease in the amount of innovative effort in the areas of "relations with community, parents and students" and "staff-related issues", future plans in these areas as well as others in the very large school systems will remain roughly the same as in the 1970-71 school year. Thus we see that overall there will be a sizable increase in the number of administrative innovations attempted by very large schools (49% in 1971-72 as opposed to 33% in 1970-71), while innovations in this category in representative districts will remain fairly constant (30% in 1971-72; 27% in 1970-71).

2. CURRICULUM CHANGES AND INSTRUCTIONAL FACILITIES

Future innovations which the school districts had planned for the year 1971-72 in the area of curriculum revision and instructional technology and facilities are listed in Table 4.5. In representative schools the proportion

(Insert Table 4.5 here)

of changes planned in curriculum areas was expected to remain the same as in the previous year, but a drop was expected in the number of innovations planned in instructional technology and facilities, from 15% to 6%. The biggest single drop anticipated was in the amount of new technological devices and equipment which would be acquired.

In very large schools a decrease in the proportion of innovations both in curriculum and technology was expected, again with the largest decrease being expected in the area of technology and devices, a drop from 9% of all innovations to 2%.

TABLE 4.4
COMPARISON OF FUTURE INNOVATIONS WITH TOTAL 1970-71 EFFORT
ADMINISTRATIVE INNOVATIONS

Innovation	Districts < 80,000				Districts ≥ 80,000			
	Future		1970-71		Future		1970-71	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
a. Research, Development & Budget								
Planning, Research & Evaluation	(41)	11	(122)	4	(6)	13	(19)	5
Curriculum Development	(15)	4	(26)	1	(6)	13	(9)	2
Finance Allocation	(2)	1	(20)	1	(-)	-	(2)	1
Performance Contracting	(-)	-	(6)	*	(-)	-	(2)	1
b. Plant-Related Issues	(14)	4	(31)	1	(2)	4	(3)	1
c. Student-Related Issues								
Progress Reports	(4)	1	(44)	2	(-)	-	(5)	1
Other	(9)	2	(26)	1	(1)	2	(5)	1
d. Relations With Community, Parents & Students								
Human Relations Programs	(7)	2	(128)	5	(2)	4	(25)	6
Public Relations Programs	(2)	1	(41)	1	(-)	-	(7)	2
Counseling, Guidance & Diagnosis	(1)	*	(62)	2	(-)	-	(6)	2
Desegregation	(-)	-	(25)	1	(3)	6	(9)	2
Parent-Teacher Conferences	(-)	-	(13)	*	(-)	-	(-)	-
e. Staff-Related Issues								
In-Service Training	(8)	2	(131)	5	(2)	4	(14)	4
Other	(-)	-	(30)	1	(-)	-	(2)	1
f. Administrative Structure								
Decentralization	(5)	1	(38)	1	(1)	2	(10)	3
Staff Structure Changes	(2)	1	(38)	1	(-)	-	(8)	2
g. Administrative Philosophy	(-)	-	(2)	*	(-)	-	(-)	-
Total	(110)	30	(783)	27	(23)	49	(126)	33

* Less than 0.5%

TABLE 4.5
COMPARISON OF FUTURE INNOVATIONS WITH TOTAL 1970-71 EFFORT
CURRICULUM CHANGE AND INSTRUCTIONAL FACILITIES

Innovation	Districts < 80,000				Districts ≥ 80,000			
	Future Freq.	%	1970-71 Freq.	%	Future Freq.	%	1970-71 Freq.	%
a. Curriculum Changes								
Curriculum Revision	(62)	17	(504)	18	(7)	15	(60)	16
Unit Courses, Mini-Courses & Electives	(14)	4	(95)	3	(-)	-	(12)	3
Packaged Courses & Materials	(1)	*	(17)	1	(-)	-	(1)	*
b. Instructional Technology & Facilities								
Media Centers	(7)	2	(97)	3	(-)	-	(10)	3
Learning Centers	(6)	2	(23)	1	(-)	-	(2)	1
Technology & Devices	(5)	1	(248)	9	(1)	2	(34)	9
Laboratories & Other Facilities	(3)	1	(68)	2	(-)	-	(9)	2
Total	(98)	27	(1052)	37	(8)	17	(128)	34

3. INDIVIDUALIZED INSTRUCTION AND TEAM TEACHING

The third ranking innovation category both in the total 1970-71 school year and in plans for the 1971-72 period was "Individualized instruction and team teaching." Table 4.6 lists the frequency of mention of this innovation

(Insert Table 4.6 here)

both as it applies to all curriculum areas and as it applies to specific curriculum areas. Innovations in this area will increase very slightly in the future in representative school systems and will decrease very slightly in very large districts, but these differences are not large enough to be significant.

TABLE 4.6
COMPARISON OF FUTURE INNOVATIONS WITH TOTAL 1970-71 EFFORT
INDIVIDUALIZED INSTRUCTION & TEAM TEACHING

Innovation	Districts < 80,000				Districts ≥ 80,000			
	Future		1970-71		Future		1970-71	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
a. Applies to All Curriculum Areas	(70)	19	(407)	14	(3)	6	(41)	11
b. Applies to Specific Curriculum Areas	(4)	1	(63)	2	(-)	-	(5)	1
Total	(74)	20	(470)	16	(3)	6	(46)	12

4. ORGANIZATIONAL INNOVATIONS

The emphasis placed on innovations in the organizational category is expected to increase slightly in school districts in both size samples. Table 4.7 shows that in representative schools the overall increase from 7% to 13% is spread evenly through all innovation types within this category, with no significant increase in any one innovation type.

TABLE 4.7
COMPARISON OF FUTURE INNOVATIONS WITH TOTAL 1970-71 EFFORT
ORGANIZATIONAL INNOVATIONS

Innovation	Districts < 80,000				Districts ≥ 80,000			
	Future		1970-71		Future		1970-71	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
a. Operational Aspects								
Grade & Attendance Unit	(12)	3	(77)	3	(5)	11	(13)	3
Semester Structure	(10)	3	(16)	1	(2)	4	(5)	1
Open Campus	(3)	1	(7)	*	(-)	-	(1)	*
Summer Program, Camp & Outdoor Education	(1)	*	(11)	*	(-)	-	(2)	1
b. Instruction-Linked Aspects								
Flexible-Modular Scheduling	(8)	2	(47)	2	(1)	2	(8)	2
Departmentalization	(3)	1	(11)	*	(-)	-	(1)	*
c. Model Schools	(7)	2	(24)	1	(1)	2	(7)	2
d. Alternative Schools	(2)	1	(6)	*	(-)	-	(4)	1
e. School-Within-A-School	(1)	*	(5)	*	(1)	2	(-)	-
Total	(47)	13	(204)	7	(10)	21	(41)	11

* Less than 0.5%

In very large schools there will be an expected increase overall from 11% to 21%; for single innovation types, the largest increase is expected in the area of changes in the grade and attendance unit structure (an increase from 3% to 11%).

5. PROGRAMMATIC APPROACHES

Table 4.8 shows that in both representative school systems and very large districts a slight decrease is expected in the proportion of innovations in the category of programmatic approaches. Most notable is the fact that in

TABLE 4.8
COMPARISON OF FUTURE INNOVATIONS WITH TOTAL 1970-71 EFFORT
PROGRAMMATIC APPROACHES

Innovation	Districts < 80,000				Districts ≥ 80,000			
	Future		1970-71		Future		1970-71	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
a. Special Instructional Programs								
Special Education	(5)	1	(14)	1	(-)	-	(2)	1
Learning Disability	(4)	1	(27)	1	(-)	-	(2)	1
Compensatory	(4)	1	(23)	1	(-)	-	(3)	1
Gifted	(2)	1	(4)	*	(-)	-	(-)	-
Remedial	(1)	*	(21)	1	(-)	-	(3)	1
Bi-Lingual	(1)	*	(10)	*	(-)	-	(-)	-
Pre-School	(1)	*	(6)	*	(-)	-	(2)	1
Other	(2)	1	(4)	*	(-)	-	(2)	1
b. Teacher Aides, Tutors & Paraprofessionals								
Trained Aides	(1)	*	(77)	3	(-)	-	(5)	1
Paraprofessionals	(-)	-	(23)	1	(-)	-	(2)	1
Cross-Age Tutoring	(-)	-	(9)	*	(-)	-	(-)	-
Tutors (Unspecified)	(-)	-	(5)	*	(-)	-	(1)	*
c. Work-Study, Occupational Preparation	(4)	1	(56)	2	(1)	2	(6)	2
d. Other Programmatic Approaches	(12)	3	(58)	2	(2)	4	(10)	3
Total	(37)	10	(337)	12	(3)	6	(38)	10

* Less than 0.5%

very large districts no new special instructional programs were planned, and no new innovations were anticipated which would involve teacher aides, tutors or paraprofessionals. Only one representative district (less than 0.5% of future innovations) anticipated introducing the use of teacher aides in the next year.

B. THE TOP TEN FUTURE INNOVATIONS

The top ten future innovations include all those which received a total of 12 mentions from all school districts combined, or which represent 3% of all future innovations. Table 4.9 lists these top ten innovations in decreasing order of frequency of mention. In the left hand columns the rankings of these innovations in the top ten showcase list and the top ten innovations of the total 1970-71 effort are given.

TABLE 4.9
THE TOP TEN FUTURE INNOVATIONS

Rank in Top Ten Showcase	Rank in Top Ten 1970-71	Innovation	Category of Innovation	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%	Combined Freq.	%
1	2	1. Ind. Instr. & Team Teaching-All Curriculum Areas	Ind. Instr. Team Teach.	(70)	19	(3)	6	(73)	18
3	1	2. Curriculum Revision	Curr. Ch. & Inst. Facil.	(62)	17	(7)	15	(69)	17
6	6	3. Planning, Rev. & Eval.	Admin.	(41)	11	(6)	13	(47)	11
-	-	4. Curriculum Development	Admin.	(15)	4	(6)	13	(21)	5
2	7	5. Special Inst. Program	Prog. App.	(20)	5	(-)	-	(20)	5
5	-	6. Grade & Att. Unit	Organiza.	(12)	3	(5)	11	(17)	4
-	-	7. Plant-Related Issues	Admin.	(14)	4	(2)	4	(16)	4
7	10	8. Unit Courses, Electives	Curr. Ch. & Inst. Facil.	(14)	4	(-)	-	(14)	3
-	-	9. Various Prog. App.	Prog. App.	(12)	3	(2)	4	(14)	3
-	-	10. Semester/Day Structure	Organiza.	(10)	3	(2)	4	(12)	3
		Total		(270)	74	(33)	70	(303)	73

The innovations ranking first and second in the list of future innovations (individualized instruction and team teaching; curriculum revision) were also the top two in the 1970-71 list, although in reverse order. Somewhat surprising is the fact that only a total of five innovations are on both lists, with the third, fourth and fifth ranking innovations from the total 1970-71 effort not placing in the top ten of the future. These three innovations were "technological devices and equipment;" "human relations programs" and "in-service training and workshops."

The future top ten list resembles the top ten showcase innovation list more closely than it does the list for the total 1970-71 effort. While only six showcase innovations are also on the future list, these include all of the top seven showcase innovations with the exception of the fourth-ranking innovation, "individualized instruction and team teaching in specific curriculum areas."

The fact that the top ten future innovations list is more similar to the top ten showcase list than to the list for the total 1970-71 effort may be explained by the fact that the innovations planned a year in advance would tend to be the most significant of the innovations to be introduced in the future.

C. GRADE LEVEL OF THE FUTURE INNOVATIONS

Of the 366 future innovations predicted by representative districts, 176 or 48% were identified as applying to specific grade level categories. Table 4.10 gives the percent distribution of these innovations across five

(Insert Table 4.10 here)

grade levels. As was the case for the 1970-71 innovations, a higher proportion of future innovations were planned for the elementary grades and senior high students than for junior or middle school grades. Again, still fewer were planned for all grades elementary through senior high school (12%), although this figure is slightly higher than for the 1970-71 effort. The biggest contributor to innovations for all grade levels was the administrative innovation (23%).

As was true for the 1970-71 effort, the innovation most commonly planned for the elementary grades in the future was in the area of individualized instruction and team teaching, with 67%. The greatest percentage of innovations planned for students outside the regular grade levels ("other") were again in the area of programmatic approaches (25%); this represents an

TABLE 4.10
GRADE LEVEL OF FUTURE INNOVATION
DESCRIPTION CATEGORIES
< 80,000

Innovation Grade Level	Innovation Category					Combined N=176
	Administrative N=39	Curr. & Technology N=46	Ind. Instr.& Team Teaching N=43	Organizational N=28	Programmatic Approaches N=20	
Elementary	26	37	67	17	30	38
Junior/Middle	18	13	16	24	25	18
Senior High	31	35	12	42	20	28
Elem-Sr. High	23	11	5	17	-	12
Other	3	4	-	-	25	5
Total	100	100	100	100	100	100
No Information	N=71	N=52	N=31	N=19	N=17	N=190

increase from 12% for 1970-71. We can also note an increase for the future in the percentage of programmatic approaches planned for students in the junior and middle grades. Whereas in 1970-71 9% of programmatic approaches were designed for students at this grade level, 25% are planned for the future.

Table 4.11 shows that for all innovation categories combined the very large districts will be very similar to representative districts in the future in the percentages of innovations planned for each grade level. Within the innovation categories the frequencies are too small to allow a valid comparison.

(Insert Table 4.11 here)

TABLE 4.11
GRADE LEVEL OF THE FUTURE INNOVATION CATEGORIES
≥ 80,000

Innovation Grade Level	Innovation Category					Combined N=21
	Administrative N=6	Curr. & Technology N=4	Ind. Instr.& Team Teaching N=3	Organizational N=7	Programmatic Approaches N=1	
Elementary	17	25	33	57	-	33
Junior/Middle	33	-	33	14	-	19
Senior High	50	-	33	29	-	29
Elem-Sr. High	-	75	-	-	100	19
Other	-	-	-	-	-	-
Total	100	100	100	100	100	100
No Information	N=17	N=4	N=0	N=3	N=2	N=26

D. SUMMARY

In this chapter innovations planned for future implementation have been discussed and compared with the 1970-71 total innovative effort and the showcase innovation. For the future fewer innovations in the area of "curriculum change and instructional facilities" are planned, and in very large districts more emphasis is expected to be placed on administrative and organizational innovations. In many cases the future innovations were expected to be revisions or expansions of the showcase innovations. In representative districts 20% of showcase innovations were expected to be continued in this way, while in very large districts the figure was 39%.

The listing of the top ten innovations projected for the future resembles the top ten showcase innovation listing more closely than it does the listing of the top ten inventory innovations (Table 4.9). This may be explained by the fact that innovations planned well in advance are likely to be the more significant innovations.

In the future the largest percentage of innovations will again be designed for elementary students, and more will be designed for senior high students than for students in the junior or middle grades.

CHAPTER FIVE: CONSEQUENCES OF THE SHOWCASE INNOVATION

Respondents to our questionnaire were asked to describe the consequences, both positive and negative, of the showcase innovation (Question 1d). A few superintendents simply indicated that the results were "positive," "mixed," or "negative" without specifying the exact nature of the results. Other superintendents cautioned that the innovation was still being assessed or refined and that the results were thus still somewhat tentative. Therefore, we will first look at a summary of the current status of the innovation as reported.

A. CURRENT STATUS OF THE SHOWCASE INNOVATION

In Table 5.1 a listing is given of the status of the showcase innovation at the time the questionnaire was filled out. A majority of superintendents did not specify the status and we have assumed that in those cases the innovation was being retained in the form described previously.

TABLE 5.1
CURRENT STATUS OF THE SHOWCASE INNOVATION

Innovation Status	Districts < 80,000 Freq.	% of 315	Districts ≥ 80,000 Freq.	% of 31
Still assessing	(41)	13	(5)	16
Expanding to other grades or buildings	(23)	7	(4)	13
Development is continuing	(21)	7	(2)	6
Minor changes will be made	(4)	1	-	-
Innovation has been dropped	(7)	2	-	-
Retaining as is, or No Information	(219)	70	(20)	64
Total	(315)	100	(31)	100

Failures were reported by only 7 superintendents (2%) of representative districts, while no failures were reported in very large districts. In both size samples some innovations were still being assessed (13% in representative districts and 16% in very large districts), but the overwhelming majority of innovations were either being retained, expanded to include other grades or buildings, or were being retained with minor changes or further development.

Among the five innovation categories there were no significant differences in the status of reported innovations, and similarly there were no differences among the top ten innovations on this dimension.

B. GENERAL CONSEQUENCES OF THE SHOWCASE INNOVATION

In 300 out of the 315 questionnaires from representative districts which reported a showcase innovation it was possible to ascertain the general overall consequence (positive, mixed or negative) of the showcase innovation. This information was available on all 31 questionnaires returned by very large districts. In Tables 5.2 and 5.3 this data is presented for the two size samples for each of the innovation description categories.

TABLE 5.2
GENERAL CONSEQUENCES OF THE SHOWCASE INNOVATION
BY INNOVATION DESCRIPTION CATEGORY
PERCENT DISTRIBUTION*
DISTRICTS < 80,000

Consequence	Ind. Instr. & Team Teaching N=87	Administrative N=62	Curr. Ch. Instr. Fac. N=60	Prog. App. N=56	Organizational N=35	Combined N=300
Positive	81	77	87	98	86	85
Mixed	18	23	8	-	6	12
Negative	1	-	5	2	9	3
Total	100	100	100	100	100	100
No Information	N=3	N=5	N=5	N=2	N=9	N=15

*Percents are based on the number of respondents in each category who answered this question ("N" given at top of each column).

TABLE 5.3
GENERAL CONSEQUENCES OF THE SHOWCASE INNOVATION
BY INNOVATION DESCRIPTION CATEGORY
PERCENT DISTRIBUTION*
DISTRICTS $\geq$ 80,000

Consequence	Ind. Instr. & Team Teaching N=5	Administrative N=11	Curr. Ch. Instr. Fac. N=1	Prog. App. N=6	Organizational N=8	Combined N=31
Positive	80	73	-	83	50	68
Mixed	20	27	100	17	50	32
Negative	-	-	-	-	-	-
Total	100	100	100	100	100	100

*Percents are based on the number of innovations in each category. ("N" at top of each column).

In representative districts 85% of innovations were reported to have positive overall results; 12% had mixed results, and only 3% were considered to be negative on the whole. Among the innovation description categories there is little variation. Administrative innovations had the fewest positive consequences (77%) and the most mixed results (23%), while organizational innovations had the most negative consequences (9%). These differences, however, are not large enough to be significant.

Very large districts, while reporting no innovations which were judged to be generally negative, rated fewer of their innovations positive (68%) than did representative districts. While the frequencies in Table 5.3 are too small to provide adequate comparison among innovation categories, it may be noted that only four of the eight organizational innovations had generally positive results, and the only innovation in the area of curriculum change met with mixed results.

Among the top ten innovations no significant differences in overall success were found. For all of these innovations positive results were reported in between 75% and 100% of cases, with a combined positive rating of 85%.

C. SPECIFIC CONSEQUENCES OF THE SHOWCASE INNOVATION

The specific nature of the consequences of the showcase innovation was reported by superintendents of 262 representative districts and 30 very large districts. An enormous array of different consequences were reported, and these have been summarized in Table 5.4.

TABLE 5.4
SPECIFIC CONSEQUENCES OF THE SHOWCASE INNOVATION

Area of Consequence	Districts < 80,000**						Districts ≥ 80,000***					
	Positive		Mixed		Negative		Positive		Mixed		Negative	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Consequences for People												
Students	(232)	36	(8)	1	(5)	1	(16)	20	(2)	3	-	-
Teachers	(134)	21	(8)	1	(21)	3	(14)	18	(2)	3	(1)	1
Administrators	(30)	5	(2)	*	(9)	1	(9)	11	(1)	1	(3)	4
Community	(39)	6	(6)	1	(2)	*	(·7)	9	-	-	(1)	1
Parents	(39)	6	(1)	*	-	-	(4)	5	-	-	-	-
People (Unspecified)	(16)	2	(3)	*	(1)	*	-	-	(2)	3	-	-
Consequences for the School System as a Whole	(35)	5	(2)	*	(5)	1	(6)	8	(2)	3	-	-
Other Consequences	(42)	7	(2)	*	(1)	*	(8)	10	(1)	1	-	-
Total	(567)	88	(32)	5	(44)	7	(64)	81	(10)	13	(5)	6
	Freq.= 643; 100%						Freq.= 79; 100%					

* Less than 0.5%
** Percents are based on the 262 districts reporting.
*** Percents are based on the 30 districts reporting.

In this table the percent distributions have been computed in such a way that the sum of all consequences for each size sample totals 100%. The total frequency for each sample, which is given at the foot of the table, is larger than the number of districts reporting since in many cases two or more consequences were reported for the same innovation. While the total percentages of positive, mixed and negative results for representative districts closely resemble the totals for general consequences shown in Table 5.2, this is not the case for very large districts. It would appear that in many cases the innovations in very large districts which had overall mixed results had a larger portion of positive components than negative.

As might be expected, the largest number of consequences of showcase innovations in all districts affected the students, while teachers were the next group most often affected. Although parents and community members were affected roughly the same number of times as were administrators, it should be pointed out that these outside groups were most often only indirectly associated with the showcase innovation while administrators were more closely associated with it. All types of consequences listed in Table 5.4 will be examined in detail below.

It can be seen from Table 5.4 that 38% of all consequences in representative districts and 23% in very large systems affected students. The frequency distribution of specific consequences for students is presented in Table 5.5. An improvement in the student's attitude toward self and

(Insert Table 5.5 here)

school was reported to be the most common positive result of the showcase innovation for students; in only one case was a negative attitude reported. In representative districts an improvement in scholastic performance was almost as common, but this was also the area in which the most mixed and negative results were noted. In very large systems there were two cases each of positive and mixed results in this area. Other consequences listed in Table 5.5 cover a wide range of student-related issues and reflect a sensitivity on the part of the reporting superintendents to the concerns of students.

Table 5.4 showed that 25% of consequences in representative districts and 22% in very large districts affected the teacher. In Table 5.6 these specific consequences are listed in detail. The most common consequence for

(Insert Table 5.6 here)

TABLE 5.5
CONSEQUENCES FOR STUDENTS
FREQUENCY DISTRIBUTION

Consequence	Districts < 80,000			Districts ≥ 80,000		
	Positive	Mixed	Negative	Positive	Mixed	Negative
Attitude to self & school	54	-	1	4	-	-
Scholastic Performance	51	5	2	2	2	-
Reaction to Innovation	36	-	1	4	-	-
Behavior/Attendance	29	2	-	-	-	-
Individual Needs Met	23	1	-	1	-	-
Involvement in Learning	13	-	-	1	-	-
General Benefit	11	-	1	-	-	-
Preparation for Next Grade	5	-	-	2	-	-
New Experiences	5	-	-	1	-	-
Courses More Relevant	3	-	-	-	-	-
Other	2	-	-	1	-	-
Total	232	8	5	16	2	-

TABLE 5.6
CONSEQUENCES FOR TEACHERS
FREQUENCY DISTRIBUTION

Consequence	Districts < 80,000			Districts ≥ 80,000		
	Positive	Mixed	Negative	Positive	Mixed	Negative
Reaction to Innovation	54	3	5	7	-	1
Attitude towards teaching	27	2	2	3	-	-
Performance	18	1	-	1	-	-
Cooperation	7	-	2	-	-	-
Relations with students	5	-	-	-	-	-
Satisfaction	5	-	-	-	-	-
Work Load	4	1	9	-	1	-
Assistance/Support	4	-	-	1	1	-
Involvement	4	-	-	-	-	-
Awareness	2	-	-	-	-	-
General Benefit	2	1	-	1	-	-
Teacher Association reaction	-	-	3	-	-	-
Other	2	-	-	1	-	-
Total	134	8	21	14	2	1

teachers was expressed in terms of their reaction to the innovation, and for the most part this was positive. Improvements in attitude towards teaching was also commonly noted, and in a sizable number of cases the teacher's performance improved. The biggest problem for teachers was an increased work load; the negative and mixed consequences in this area far outweighed the positive consequences. Finally, it should be noted that in the only cases in which teachers' associations were mentioned (3 cases in representative districts) they were noted as having a negative reaction to the showcase innovation.

Proportionately, administrators as a group were reported as being affected most negatively by the showcase innovation. Over one quarter of the consequences for administrators were mixed or negative. Table 5.7 lists the frequencies of all specific consequences for this group.

TABLE 5.7
CONSEQUENCES FOR ADMINISTRATORS
FREQUENCY DISTRIBUTION

Consequence	Districts < 80,000			Districts ≥ 80,000		
	Positive	Mixed	Negative	Positive	Mixed	Negative
Reaction to Innovation	20	1	2	5	-	1
Cooperation	3	-	1	-	-	-
Attitude to Responsibilities	2	-	2	-	-	-
Scheduling Issues	2	-	2	-	-	1
Performance	1	1	-	-	-	-
Work Load	1	-	2	-	-	1
General Benefit	-	-	-	1	1	-
Assistance/Support	-	-	-	2	-	-
Relationship with Teachers	-	-	-	1	-	-
Other	1	-	-	-	-	-
Total	30	2	9	9	1	3

The problems for administrators were in the areas of increased work load, scheduling issues and attitude towards responsibilities. It is possible that superintendents, in filling out the questionnaire, would be most sensitive to problems encountered by the administrators in the system. However, the predominant consequence even for this group was a positive attitude towards the innovation.

The predominant consequence among community members was also generally expressed in terms of their general positive reaction to the showcase innovation (see Table 5.8). In a large number of cases it was also reported

TABLE 5.8
CONSEQUENCES FOR THE COMMUNITY
FREQUENCY DISTRIBUTION

Consequence	Districts < 80,000			Districts ≥ 80,000		
	Positive	Mixed	Negative	Positive	Mixed	Negative
Reaction to Innovation	18	6	2	4	-	1
Cooperation with School	16	-	-	1	-	-
Involvement with School	2	-	-	1	-	-
Problem Awareness	2	-	-	1	-	-
General Benefit	1	-	-	-	-	-
Total	39	6	2	7	-	1

that there was an increase in the cooperation of community members with the school system. A few more innovations resulted in increased awareness of school problems in the community or a general positive benefit to the community.

The reaction of parents was also overwhelmingly positive, and it is for this group that the smallest proportion of mixed or negative consequences was reported. In fact, there was only one mention of a mixed reaction on the part of parents, and no negative consequences were reported at all (see Table 5.9).

TABLE 5.9
CONSEQUENCES FOR PARENTS
FREQUENCY DISTRIBUTION

Consequence	Districts < 80,000			Districts ≥ 80,000		
	Positive	Mixed	Negative	Positive	Mixed	Negative
Reaction to Innovation	25	1	-	2	-	-
Involvement with School	8	-	-	-	-	-
Cooperation with School	3	-	-	1	-	-
Attitude Towards School	2	-	-	-	-	-
Assistance/Support	1	-	-	1	-	-
Total	39	1	-	4	-	-

In eight cases in representative school systems parents became more involved with school activities and programs and in a few other cases parents increased their cooperation with or their attitude towards the schools.

The most common consequence for the school system as a whole was the improvement of the social climate. Almost as common was a positive effect on

TABLE 5.10
CONSEQUENCES FOR THE SCHOOL SYSTEM AS A WHOLE
FREQUENCY DISTRIBUTION

Consequence	Districts < 80,000			Districts ≥ 80,000		
	Positive	Mixed	Negative	Positive	Mixed	Negative
Social Climate	13	-	-	3	-	-
Planning & Evaluation	12	-	-	1	1	-
Cost/Expense	5	1	5	1	-	-
Objectives Met	3	1	-	-	-	-
Racial Integration	2	-	-	-	1	-
Services	-	-	-	1	-	-
Total	35	2	5	6	2	-

planning and evaluation activities in representative districts; one positive and one mixed result were reported in very large systems in this area. In representative districts the most problematic area of the showcase innovation was in terms of its cost. While five of these districts reported positive cost benefits from the innovation, five others noted increased costs as a negative factor and one district viewed the cost issue with mixed feelings. Two representative districts reported positive consequences in the area of racial integration, but the one very large district mentioning this area reported mixed consequences.

Finally, Table 5.11 lists a variety of other consequences not directly affecting large groups of people or the school system as a whole. Among

TABLE 5.11
OTHER CONSEQUENCES
FREQUENCY DISTRIBUTION

Consequence	Districts < 80,000			Districts ≥ 80,000		
	Positive	Mixed	Negative	Positive	Mixed	Negative
Instructional Techniques	17	1	-	3	1	-
Programs/Materials Developed	7	-	-	3	-	-
Use of Facilities	6	-	1	-	-	-
Facilities Improved	4	-	-	-	-	-
Requests Received for Demonstrations	2	-	-	-	-	-
Budget/Accounting	-	1	-	-	-	-
Other	6	-	-	2	-	-
Total	42	2	1	8	1	-

these consequences the improvement of instructional techniques was the most commonly mentioned result of the showcase innovation. Table 5.11 shows very few mixed or negative consequences among this group.

On the whole the showcase innovations reported appear to have been highly successful with positive consequences in all spheres. To find out if this held true for all innovation types, the specific consequences were compared across the innovation description categories. This analysis showed that there were no significant differences in representative school systems. Positive consequences varied only between 84% and 95%, with 88% positive specific consequences for all categories combined. Mixed consequences ranged between 1% and 7% and negative consequences between 4% and 9%. No one specific consequence stood out as being more common for one innovation category than for another. Thus when all consequences are taken into account the picture is more even than when only the overall general consequences are considered (see again Table 5.2).

There was slightly more variation among innovation description categories for very large districts. In Table 5.12 all specific consequences have been summed into "positive," "mixed" and "negative" categories.

TABLE 5.12
SPECIFIC CONSEQUENCES OF THE SHOWCASE INNOVATION
BY INNOVATION DESCRIPTION CATEGORY
PERCENT DISTRIBUTION *
DISTRICTS $\geq$ 80,000 **

Consequence	Ind. Instr. & Team Teaching N=18	Administrative N=29	Curr. Ch. Instr. Fac. N=3	Program Approaches N=9	Organizational N=20	Combined N=79
Positive	94	69	100	89	80	81
Mixed	0	17	0	11	20	13
Negative	6	14	0	0	0	6
Total	100	100	100	100	100	100

* Percents are based on the number of consequences given in each category ("N" given at top of each column).
** 30 districts reporting.

In this table positive consequences comprise 81% of all specific consequences, in contrast with the 68% of general consequences as reported in Table 5.3. In Table 5.12 all innovation categories except that of administrative innovations report a higher percentage of specific consequences

than general consequences. The administrative category, however, reports a slightly lower percentage of positive consequences (69% as opposed to 73%), and here 14% of the consequences in this category are negative (no general negative consequences were reported in very large districts).

When the specific consequences were compared across the top ten showcase innovations two interesting findings emerged. It may be recalled that it was in the area of scholastic performance of students that the most negative and mixed specific consequences were reported. For the top ten innovations combined, 79% of the consequences for this item were positive, 11% were mixed and 4% were negative. *For the innovation "individualized instruction and team teaching in all curriculum areas" only 57% of consequences were positive, while 21% were mixed and 7% were negative* (14 consequences were reported for this innovation type). *For the innovation type "unit courses, mini-courses and electives" only 60% of consequences were positive, 20% were mixed and 20% negative* (5 consequences reported for this innovation). Using a chi square test, these findings were shown to be significant at the .05 level.

The innovation which caused the greatest work *overload* for teachers was "individualized instruction and team teaching in specific curriculum areas." Six of the nine reports of negative teacher workload occurred for this innovation, and one of the two reports of mixed reactions to workload also were reported for this innovation. To balance the picture, however, it should be added that two of the four cases of positive teacher reaction to workload also were for this innovation.

D. RECOMMENDATIONS TO OTHER DISTRICTS ON ADOPTION OF SHOWCASE INNOVATION

We were interested in finding out whether superintendents would recommend that other districts similar to their own should adopt the same innovation (Question 1f). Superintendents of 285 representative districts and 26 very large districts responded to this question, and these responses are given in Table 5.13.

(Insert Table 5.13 here)

Recommendations in representative districts follow very closely that group's assessment of the general positive or negative consequences of the innovation in their own experience (see again Table 5.2). In contrast, very large districts recommend adoption by other districts in 81% of cases, while only 68% of innovations were reported as having a general positive result. However, Table 5.13 may be misleading in this regard, since percentages are computed on the basis of the number of superintendents responding to the question.

TABLE 5.13
RECOMMENDATIONS TO OTHER DISTRICTS

Recommendation On Adoption by Others	Districts < 80,000 Freq.	% of 285	Districts ≥ 80,000 Freq.	% of 26
Yes	(239)	84	(21)	81
Maybe	(30)	10	(2)	8
No	(5)	2	(2)	8
Too Early to Tell Yet	(11)	4	(1)	4
Total	(285)	100	(26)	100
No Information	(30)		(5)	

In fact, the 21 who recommend adoption to others represent 68% of all 31 cases in very large districts - a figure identical with the percentage reporting general positive results. It may be that there was a reporting bias in this question; that is, many of those superintendents who experienced mixed results in their own system simply did not answer the question.

When the recommendations to other districts were compared across the five innovation description categories no significant differences emerged. When the comparison was made across the top ten innovations it was found that superintendents whose districts had innovated in the area of individualized instruction and team teaching were the most reserved. A "maybe" response was given in 24% of cases in which this innovation applied to specific curriculum areas and in 16% of cases in which it applied to the curriculum in general; for all top ten innovations combined the "maybe" response was given in 11% of cases. In 20% of the districts which had experimented with "guidance, counseling and diagnosis" the superintendents indicated that it was too early to tell yet whether or not they would recommend this innovation to other districts (for all top ten innovations this response was given in 4% of cases). Negative responses on recommendation were given in connection with only two innovations; 11% of those involving teacher aides, tutors or paraprofessionals, and 7% of innovations in the area of unit courses, mini-courses and electives. None of these differences are statistically significant, however.

Many superintendents, as well as simply stating whether or not they would recommend their innovations to other districts, also offered specific forms of advice for other districts considering adoption. This advice touched on many different issues and will be discussed in later chapters as we examine the procedures employed and the problems encountered in the innovation process as described by our sample districts.

E. SUMMARY

Out of all the showcase innovations described on the questionnaire, only seven were reported as having been dropped. These seven cases all occurred in representative districts, representing just 2% of all showcase innovations in these districts. While a few innovations were still being assessed, the bulk of showcase innovations were either being retained in their initial form or were being expanded or changed in minor ways.

In representative districts 85% of showcase innovations were reported to have generally positive results; in very large districts this figure was 68%. Students as a group were most commonly affected; an improvement in their attitudes toward themselves and school was most frequently noted, with an improvement in scholastic performance noted almost as often. Teachers were the next group most often affected; their overall reaction to the showcase innovation was generally noted as positive. An increase in teacher workload was noted as a problem in several cases, but in general this negative factor was outweighed by positive consequences in other areas. As a group, administrators suffered the most negative consequences; over a third of consequences reported for administrators were reported to be negative. Negative factors included increased workload, scheduling problems and resistance to increased responsibilities.

For the top ten innovations combined, 79% of consequences reported were positive in nature. However, for the innovation "individualized instruction and team teaching in all curriculum areas" only 57% of consequences were positive, and only 60% were positive for the innovation "unit courses, mini-courses and electives."

Superintendents recommended that other districts adopt showcase innovations similar to their own in about the same proportions as they experienced success or failure themselves. Innovations in the area of individualized instruction and team teaching, which resulted in the most teacher work overload, were given the most reserved recommendations.

SECTION II:

THE INNOVATION PROCESS

CHAPTER SIX: PARTICIPANTS AND RESOURCES USED IN THE SHOWCASE INNOVATION

Several items on the questionnaire were intended to draw out information as to which individuals and groups inside and outside the school system had been involved in some way in the planning and implementation of the showcase innovation. In some cases these persons were considered to have played key roles in the success (or failure) of the innovation, while in other cases they were described as cooperating in the process or were merely informed of it. In most cases participants were cited spontaneously, but in one additional question (Question 7) it was asked whether or not certain groups representing internal and external resources to the system had been used in choosing or implementing the showcase innovation.

In this chapter we will first present data on participation as spontaneously mentioned in response to the first set of questions; this will be followed by a discussion of the internal and external resources which were cited in response to Question 7. Next an examination will be made of descriptions which superintendents offered of a variety of attitudes and characteristics of participants which seemed to be of particular importance. Procedures employed in planning and implementation which were designed to gain the participation and cooperation of various groups will then be discussed, and finally a look will be taken at advice on these issues which superintendents thought would be useful to other school districts considering the adoption of a similar innovation.

A. EXTENT OF PARTICIPATION BY 21 GROUPS

In the course of describing how the showcase innovation was adopted and implemented, respondents named various persons and groups as being involved at one level or another. Table 6.1 summarizes these responses in terms of 21 position codes. The columns on the left hand side of the table represent the number of citations of each group as playing a key role.* The columns on the right hand half of the table show the total extent of involvement of persons in each group, including those who played key roles, those who participated in other ways and those who were only informed about the innovation process.** Percentages for representative districts are based on the 315 reported showcase innovations, and percentages for very large schools are based on the 31 districts in this sample, all of which reported a showcase innovation.

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* Included in this category are persons cited in response to Question 1e, which asked: "What seemed to be the key factor(s) in making the adoption and acceptance of this innovation successful or unsuccessful?"

** All participants named in response to Question 1e are again included here along with participants named in response to Question 1c ("What persons were primarily responsible for the innovation's introduction?") and Question 1b ("By what process was the innovation introduced and implemented?")

TABLE 6.1
PARTICIPANTS IN THE SHOWCASE INNOVATION

Participant	Participation Cited as Key Factor*				Total Participating or Informed			
	Districts < 80,000		Districts ≥ 80,000		Districts < 80,000		Districts ≥ 80,000	
	Freq.	% of 315**	Freq.	% of 31**	Freq.	% of 315**	Freq.	% of 31**
Teachers	(120)	38	(11)	36	(211)	67	(17)	55
Staff (Unspecified)	(85)	27	(13)	42	(143)	46	(15)	48
Community	(51)	16	(12)	39	(76)	24	(15)	48
Students	(46)	14	(2)	6	(73)	23	(4)	13
Administrators (Unspec.)	(34)	11	(7)	23	(82)	26	(10)	31
Principals	(32)	10	(3)	10	(154)	49	(8)	26
Parents	(32)	10	(3)	10	(62)	19	(5)	16
School Board	(20)	6	(5)	16	(70)	22	(10)	31
Asst. Superintendent	(13)	4	(8)	26	(167)	53	(28)	91
Supervisors/Specialists	(9)	3	(2)	6	(89)	28	(13)	42
Superintendents	(6)	2	-	-	(121)	38	(14)	45
Counselors, Psychologists	(6)	2	(1)	3	(40)	12	(1)	3
Teacher Aides	(6)	2	(3)	10	(30)	9	(7)	23
Outsiders (Unspec.)	(6)	2	(1)	3	(30)	9	(3)	10
Universities	(5)	2	(1)	3	(28)	9	(1)	3
State Educ. Agencies	(5)	2	-	-	(23)	7	(1)	3
Parent-Teacher Assoc.	(2)	1	-	-	(10)	3	(1)	3
Teachers Association	(2)	1	-	-	(8)	2	(1)	3
Total School (Unspec.)	(2)	1	-	-	(4)	1	(1)	3
Regional Educ. Labs	(1)	***	-	-	(2)	1	(1)	3
Private Companies	-	-	-	-	(6)	2	(2)	6

* In all but 14 cases participation was cited as key factor in success. Cases of participation or lack of participation cited as a key factor in failure are discussed in the text.

** Respondents could name more than one participant; therefore, total percents are greater than 100.

***Less than 0.5%.

Looking first at the right hand side of the table, we see that in representative districts teachers were most frequently involved in some way in the innovation process (67%), assistant superintendents (53%), principals (49%) and staff (exact positions unspecified on the questionnaire - 46%) were all involved in about half the showcase innovations. Superintendents, at 38%, are the group which ranks next, and further down the list are the supervisors and specialists (28%) and administrators in general (exact positions not specified - 26%). For these districts then it is clear that the school staff as a whole was deeply involved in the innovation process. Participating less often, though still to a healthy extent, were the community (24%), students (23%), the school board (22%) and parents (19%). Counselors (12%) and teachers' aides (9%) had a low degree of participation; and finally, parent-teacher associations and professional associations were listed, along with all outside groups, as participating in less than 10% of the showcase innovations.

In very large districts the pattern of total participation differs somewhat. Most outstanding is the fact that assistant superintendents lead the list, with participation in 91% of cases. Teachers (55%) and principals (26%) participate somewhat less than in the representative districts, while superintendents (45%) and supervisors (42%) participate to a somewhat greater degree. Community members also play a more extensive role in the very large districts, participating in 48% of all showcase innovations. Students, on the other hand, are involved slightly less often (13%). Again we find that outside groups play a role in 10% or less of cases.

Data on the left hand side of the table summarizes responses, relevant to participants, to the question: "What seemed to be the key factor in making the adoption and acceptance of this innovation successful or unsuccessful?" In almost all cases participation was cited as a key factor in *success*. In 14 cases, however, lack of involvement or negative involvement of specific groups was noted as being a key factor interfering with effective adoption. In six of these cases (one in a very large district) the community was named as a key negative factor; students and teachers were named in two cases each, and administrators, parents, the school board and the Teachers' Association were each named in one case.

Looking now at the first column of Table 6.1, we see that in representative districts teachers and staff head the list of key participants, but community members, students and parents seem to have special importance, especially in proportion to their total citations. The role of administrators, on the other hand, is considerably less salient. All outside sources are again abysmally low.

Participation as a key factor forms a similar pattern in the very large districts, but with assistant superintendents more important and community involvement of very great importance. Students, however, are rarely cited as a key factor in innovation.

What is especially noteworthy in Table 6.1 is the almost total absence of mentions of outside resource groups. Universities are spontaneously mentioned in only 29 out of the 346 cases in which showcase innovations were reported, and they are seen as a key factor in only six cases. State agencies fare even worse, while Regional Educational Laboratories and private companies are out of sight.

(Insert Table 6.2 here)

Table 6.2 shows the degree of involvement of participants who did not play a key role in the showcase innovation process. In this table frequencies of participants playing key roles are repeated from Table 6.1*, and participation of those playing less significant roles** is broken down into three categories: decision maker, active participant, and informed only. It can be seen that even when principals, superintendents and assistant superintendents are not viewed as being key factors, they are most likely to be in decision-making roles. Teachers, when not playing key roles, are nearly as likely to be decision makers as to be simply participants. Parents, students and community members, however, are unlikely to be in the decision-making roles and, in fact, are the groups which most frequently are simply informed of the innovation. The school board, though cast in the decision-making role more often than are the latter groups, is nevertheless more likely to be cited as a simple participant than as a decision maker.

1. EXTENT OF PARTICIPATION BY 21 GROUPS FOR EACH OF THE INNOVATION DESCRIPTION CATEGORIES

In Table 6.3 the percent distribution for representative districts is given for total participation and key participation of each of the 21 groups with respect to each of the five innovation description categories. Percents are based on the number of innovations in each of the categories. In most cases these percentages do not differ markedly from those for all categories combined (given in Table 6.1 and repeated at the right on Table 6.3).

(Insert Table 6.3 here)

Total participation of teachers, however, is considerably less in administrative innovations than in other innovation categories (48% as opposed to 65% - 74% in other categories). In administrative innovations the assistant superintendent is the most frequent participant (63%), and students, parents

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* Participants named in Question 1e.

** Participants named in Questions 1b or 1c, but not in 1e.

TABLE 6.2
PARTICIPANTS PLAYING KEY ROLES AND LESS SIGNIFICANT ROLES IN SHOWCASE INNOVATION

FREQUENCY DISTRIBUTION

	Districts < 80,000				Districts ≥ 80,000			
	Key Role	Less Significant Roles			Key Role	Less Significant Roles		
	Freq.	Decision Maker Freq.	Participant Freq.	Informed Only Freq.	Freq.	Decision Maker Freq.	Participant Freq.	Informed Only Freq.
Teachers	120	42	49	-	11	3	3	-
Staff (Unspecified)	85	8	48	2	13	-	2	-
Community	51	6	10	9	12	-	3	-
Students	46	2	15	10	2	1	1	-
Administrators (Unspecified)	34	8	39	1	7	2	1	-
Principals	32	109	13	-	3	4	1	-
Parents	32	3	17	10	3	1	1	-
School Board	20	14	31	5	5	1	4	-
Asst. Superintendent	13	150	4	-	8	20	-	-
Supervisors/ Specialists	9	69	11	-	2	9	2	-
Superintendent	6	109	5	1	-	14	-	-
Counselors, Psychologists	6	25	9	-	1	-	-	-
Teacher Aides	6	-	22	-	3	-	4	-
Outsiders (Unspecified)	6	7	17	-	1	1	1	-
Universities	5	6	17	-	1	-	-	-
State Educ. Agencies	5	11	7	-	-	-	2	-
Parent-Teacher Assoc.	2	5	1	2	-	-	1	-
Teachers Associations	2	4	1	-	-	-	1	-
Total School (Unspecified)	2	-	2	-	-	-	1	-
Regional Educ. Labs	1	-	1	-	-	-	1	-
Private Companies	-	3	3	-	-	1	1	-

TABLE 6.3
PARTICIPANTS IN EACH INNOVATION CATEGORY
DISTRICTS < 80,000

PERCENT DISTRIBUTION+

Participant	II & TT N=90		Admin. N=67		Curr.& Tech N=62		Prog. App. N=59		Organ. N=37		Combined N=315	
	Key	Total	Key	Total	Key	Total	Key	Total	Key	Total	Key	Total
Teachers	51	72	22	48	42*	74	37**	70	30	65	38	67
Staff (Unspecified)	24	48	30	51	26	39	27	41	30	49	27	46
Community	19	24	10	22	10**	13	22***	34	22***	30	16	24
Students	13	19	3	13	19***	23	22*	36	22	32	14	23
Administrators (Unspecified)	14	28	12*	30	5	21	5	22	13	30	11	26
Principals	11	63	15	34	8	40	8	41	5	68	10	49
Parents	16	29	4	10	3	8	15**	30	13	16	10	19
School Board	6	19	10	31	3	8	3*	17	11	46	6	22
Asst. Superintendent	1	49	12	63	2	53	5	58	-	38	4	53
Supervisors/ Specialists	2	29	3	18	3	32	3	34	3	30	3	28
Superintendent	-	39	6	47	-	26	2	36	3	49	2	38
Counselors, Psychologists	-	4	4	15	3	13	2	19	-	19	2	12
Teacher Aides	4	13	-	4	2	5	5	16	-	3	2	9
Outsiders' (Unspecified)	3	16	3	10	2	10	-	-	-	8	2	9
Universities	4	14	1	10	-	5	-	7	-	3	2	9
State Educ. Agencies	1	4	1	10	5	11	-	5	-	5	2	7
Parent-Teacher Assoc.	2	3	-	4	-	3	-	2	-	3	1	3
Teachers Associations	2**	3	-	6	-	-	-	-	3	3	1	2
Total School (Unspecified)	2	3	-	-	-	-	-	2	-	-	1	1
Regional Educ. Labs	-	-	1	1	-	2	-	-	-	-	++	1
Private Companies	-	2	-	1	-	5	-	-	-	-	-	2

* Includes one case in which lack of participation was a negative key factor.
** Includes one case in which participation was a negative key factor.
*** Includes one case in which lack of participation was a negative key factor and one case in which participation was a negative key factor.

\+ Percentages are based on the number of innovations in each category ("N" given at top of each column). Respondents could name more than one participant; therefore total percents are greater than 100.

++ Less than 0.5%.

and supervisors participate less frequently in these innovations than in others. Somewhat surprisingly, we find that the lowest participation of principals is also in administrative innovations. Principals are, however, more likely to be key factors in administrative innovations than in others.

In organizational innovations the principal is the most frequent participant (68%), though followed closely by teachers (65%). The school board also is more highly involved in organizational innovations (46%) than in others.

A table has not been prepared showing participant involvement in the five innovation categories for very large districts; the pattern for the five categories closely resembles the combined totals for these districts as shown in Table 6.1. We pointed out the high involvement of assistant superintendents in these districts earlier, and we found that their involvement was consistently high, ranging between 80% and 100% in the five categories. Community involvement was particularly great in organizational innovations; community members participated in 75% of innovations in this category and were key factors in 63% of these innovations.

2. EXTENT OF PARTICIPATION BY 21 GROUPS FOR EACH OF THE TOP TEN SHOWCASE INNOVATIONS

In Table 6.4 the percent distribution is given for the total participation of each of the 21 groups in each of the top ten showcase innovations.

(Insert Table 6.4 here)

Teachers rank first in total participation in six of the top ten innovations. The most outstanding deviation from this pattern is for the innovation type "planning, research and evaluation;" here teachers participate only 28% of the time, while assistant superintendents participate 72% of the time and staff, administration and the superintendent all participate in 50% of the innovations. In innovations in the area of guidance and counseling the most frequent participants are the counselors and the assistant superintendents (each 73%). For innovations involving a change in the grade and attendance unit structure of the school system the superintendent, the principals and the staff in general each participate 63% of the time, with the school board showing its greatest strength (58%). The assistant superintendent is the dominent figure in innovations in the area of special instructional programs and participates equally with teachers in the revision of curriculum. The assistant superintendent's total participation is, overall, second only to that of teachers, but in innovations involving unit courses, mini-courses and electives he participates in only 19% of cases. For these innovations, on the other hand,

TABLE 6.4
TOTAL PARTICIPATION IN THE
TOP TEN SHOWCASE INNOVATIONS
PERCENT DISTRIBUTION**

Participant	Ind. Instr. & Team Teaching -- All Areas N=72 %	Special Instructional Programs N=39 %	Curriculum Revision N=26 %	Ind. Instr. & Team Teaching-- Spec. Areas N=23 %	Grade & Attendance Unit N=19 %	Planning, Research & Evaluation N=18 %	Unit, Mini-Courses & Electives N=16 %	In-Service Training N=12 %	Guidance & Counseling N=11 %	Teacher Aides, Tutors & Paraprofessionals N=11 %	Combine N=247 %
Teachers	73	64	65	87	47	28	81	83	45	82	67
Staff (Unspecified)	51	41	39	43	63	50	56	50	36	36	47
Community	32	23	19	4	32	22	6	-	9	28	21
Students	21	18	12	9	10	17	50	-	-	45	18
Administrators (Unspecified)	29	15	23	17	32	50	12	25	18	28	25
Principals	60	31	46	78	63	28	37	41	36	36	49
Parents	32	36	12	17	10	6	-	-	9	18	20
School Board	18	15	8	17	58	44	6	-	9	9	19
Asst. Superintendent	50	72	65	52	47	72	19	58	73	36	56
Supervisors/ Specialists	29	38	39	39	47	17	12	25	27	45	32
Superintendents	39	31	27	35	63	50	19	17	45	36	36
Counselors, Psychologists	4	23	12	4	10	-	19	8	73	9	13
Teacher Aides	13	23	4	22	5	-	-	8	9	45	13
Outsiders (Unspecified)	18	-	15	13	5	-	6	17	18	-	11
Universities	15	10	8	9	-	6	-	25	9	-	10
State Educ. Agencies	6	5	15	-	5	17	6	17	9	-	7
Parent-Teacher Assoc.	4	3	4	-	-	6	-	-	-	-	2
Teachers Association	4	-	-	-	5	6	-	17	-	-	3
Total School (Unspecified)	4	5	-	-	-	-	-	-	-	-	2
Regional Educ. Labs	-	-	-	-	-	6	-	-	-	-	*
Private Companies	1	-	4	4	-	6	-	-	-	-	1

* Less than 0.5%

** Percents are based on the number of innovations of each type ("N" given at top of each column). Respondents could name more than one participant and thus percentages total over 100% for each column.

student participation is higher (50%) than for other innovations, although students are also frequently involved in innovations in which teacher aides are added to the staff (45%). Teacher aides, as might be expected, participate most frequently in the latter innovations (45%). Principals most frequently participate in innovations involving individualized instruction and team teaching in specific curriculum areas (78%); this is also the innovation in which teachers are most heavily involved (87%). Finally, the most significant participation of outsiders is for in-service training programs; here universities participate in 25% of cases.

For all the top ten innovations the key participants are the teachers or the staff, although assistant superintendents share this distinction with the staff in guidance and counseling innovations. Although teachers were the key factor most often in innovations in the area of unit courses, mini-courses and electives (50%), students were key participants in 44% of those innovations (in other innovations they were key factors in no more than 18% of cases). In two of these innovations the students were a key factor on the negative side: in one case their participation was cited as a problem and in another case their lack of participation was the problem. Lack of participation was also a problem in three cases involving the addition of teachers' aides; cited as key factors were lack of participation by teachers, parents and the school board in one case each.

B. USE OF RESOURCES IN THE SHOWCASE INNOVATION

Question # 6 of the back page of the questionnaire listed a number of resources both internal and external to the school system which we felt would be most relevant to innovation processes. In Question # 7, respondents were asked which of these resources, if any, had been utilized in the showcase innovation. In Table 6.5 the responses to Question # 7 are given for each of the five innovation categories. Frequencies or response are given, followed by the percentage each represents of the total number of showcase innovations in that category. Percentages in each column total more than 100 since respondents could name any number of these resources.

(Insert Table 6.5 here)

Internal resources were used more frequently than external resources, although this difference is not as outstanding as it was when participants were mentioned spontaneously. It may be, then, that although state education agencies and universities were utilized in over one fourth of showcase innovations in these schools, their contributions were not as memorable as were those of other participants. Private foundations and Regional Educational Laboratories are again at the bottom of the list of all participants and resources.

TABLE 6.5
USE OF RESOURCES IN SHOWCASE INNOVATION
IN THE INNOVATION DESCRIPTION CATEGORIES

DISTRICTS < 80,000

	II & TT N=90		Adminis. N=67		Curr.& Tech N=62		Prog. App. N=59		Organ. N=37		Combined N=315	
	Freq.	%*	Freq.	%*	Freq.	%*	Freq.	%*	Freq.	%*	Freq.	%*
INTERNAL RESOURCES												
Teacher Discussions	(47)	52	(29)	43	(27)	43	(21)	36	(25)	67	(149)	47
In-Service Training	(45)	50	(25)	37	(28)	45	(18)	30	(19)	51	(135)	43
Curriculum Supervisor	(31)	35	(14)	21	(21)	34	(16)	27	(18)	48	(100)	32
R&E Office & Staff	(29)	32	(17)	25	(16)	26	(15)	25	(19)	51	(96)	32
Library	(20)	22	(11)	16	(12)	19	(10)	17	(13)	35	(66)	21
Student Discussions	(17)	19	(8)	12	(15)	24	(11)	19	(12)	32	(63)	20
Media Centers & Staff	(18)	20	(8)	12	(15)	24	(10)	17	(9)	24	(60)	19
Other	(2)	2	(3)	4	(3)	5	(2)	3	(3)	8	(13)	4
SUBTOTAL	(209)	232	(115)	172	(137)	221	(103)	175	(118)	320	(682)	218
EXTERNAL RESOURCES												
State Educ. Agency	(30)	33	(15)	22	(19)	31	(18)	30	(12)	32	(94)	30
University	(21)	23	(18)	27	(19)	31	(12)	20	(12)	32	(82)	26
Title I Programs	(19)	21	(6)	9	(9)	15	(16)	27	(4)	11	(54)	17
Title III Programs	(14)	16	(8)	12	(7)	11	(8)	14	(4)	11	(41)	13
Other Federal Programs	(9)	10	(5)	8	(8)	13	(5)	8	(4)	11	(31)	10
Prof. Associations	(11)	12	(6)	9	(7)	11	(3)	5	(6)	16	(33)	10
ERIC	(9)	10	(8)	12	(4)	6	(1)	2	(6)	11	(28)	9
Private Foundations	(7)	8	(3)	4	(2)	3	(3)	5	(4)	11	(19)	6
Regional Educ. Labs	(5)	6	(5)	8	(2)	3	(2)	3	(1)	3	(15)	5
Other	(7)	8	(5)	8	(3)	5	(4)	7	(1)	3	(20)	6
SUBTOTAL	(132)	147	(79)	118	(80)	129	(72)	122	(54)	146	(417)	132
GRAND TOTAL	(341)	379	(194)	290	(217)	350	(175)	297	(172)	466	(1099)	350

* Percents are based on the number of innovations in each category ("N" given at top of each column). Percents total over 100 since respondent could list more than one resource.

Among internal resources teachers were most frequently mentioned, although not to the extent that they were when participants were mentioned spontaneously. The phrasing of Questions number 6 and 7 may have limited the response, since it referred to "teacher discussions and idea presentations;" no doubt teachers also participated in other ways. On the other hand, the use of "student discussions and idea presentations" as reported in Table 6.5 is almost identical with spontaneous mentions of student total participation as reported in Table 6.3. The only deviation is in the category of programmatic approaches; for this category students were reported as participating in 36% of innovations (Table 6.3), whereas the resource "student discussions" was utilized in only 19% of cases. The use of curriculum supervisors as reported in Table 6.5 is also very close to the spontaneous mentions of the participation of supervisors and specialists, again with deviation in only one category. Utilization of curriculum supervisors was reported to be 48% (Table 6.5), whereas supervisors were mentioned spontaneously as participants in only 30% of innovations in this category (Table 6.3).

Table 6.5 shows some consistent differences among the five categories in the utilization of internal resources. All internal resources are used considerably more frequently in organizational innovations than in innovations in other categories. They are used slightly less frequently in administrative innovations and programmatic approaches than in all categories combined. There are no consistent or significant differences among categories in the utilization of external resources.

In Table 6.6 responses of superintendents of very large districts on the utilization of resources in the showcase innovation are given. Use of all

(Insert Table 6.6 here)

resources, both internal and external, is greater overall in the very large districts than in representative districts for all categories except individualized instruction and team teaching. In general the use of resources in the different innovation categories does not follow the same pattern as in representative schools. Resources are used more often in administrative innovations in very large school systems than for innovations in general, and resources are used slightly less often in organizational innovations.

Table 6.7 reports the use of internal and external resources in each of the top ten showcase innovations. Internal resources are used more extensively in innovations in the areas of "individualized instruction and team teaching" and "grade and attendance unit changes" than they are for innovations in general. Internal resources are used least extensively in "in-service training programs," with "teacher discussions" and "in-service training" being the only internal resources utilized to any great degree in this innovation type.

TABLE 6.6
USE OF RESOURCES IN SHOWCASE INNOVATION
IN THE INNOVATION DESCRIPTION CATEGORIES

DISTRICTS $\geq$ 80,000

	II & TT N=5		Adminis. N=11		Curr.& Tech N=1		Prog. App. N=6		Organ. N=8		Combined N=31	
	Freq.	%*	Freq.	%*	Freq.	%*	Freq.	%*	Freq.	%*	Freq.	%*
INTERNAL RESOURCES												
Teacher Discussions	(2)	40	(9)	82	(1)	100	(2)	33	(3)	37	(17)	55
In-Service Training	(1)	20	(9)	82	(1)	100	(4)	67	(4)	50	(19)	61
Curriculum Supervisor	(2)	40	(9)	82	(1)	100	(3)	50	(4)	50	(19)	61
R&E Office & Staff	(1)	20	(8)	73	(1)	100	(4)	67	(5)	63	(19)	61
Library	(1)	20	(5)	45	(1)	100	(2)	33	(3)	37	(12)	39
Student Discussions	(1)	20	(6)	55	-	-	(1)	17	(2)	25	(10)	32
Media Centers & Staff	(2)	40	(4)	36	(1)	100	(2)	33	(4)	50	(13)	42
Other	-	-	(3)	27	-	-	-	-	(1)	13	(4)	13
SUBTOTAL	(10)	200	(53)	482	(6)	600	(18)	300	(26)	325	(113)	365
EXTERNAL RESOURCES												
State Educ. Agency	-	-	(6)	54	(1)	100	(2)	33	(2)	25	(11)	35
University	(2)	40	(7)	64	(1)	100	(2)	33	(2)	25	(14)	45
Title I Programs	-	-	(4)	36	-	-	(3)	50	(1)	13	(8)	26
Title III Programs	-	-	(3)	27	-	-	(1)	17	-	-	(4)	13
Other Federal Programs	-	-	(3)	27	(1)	100	(2)	33	(1)	13	(7)	23
Prof. Associations	(1)	20	(4)	36	-	-	(1)	17	(2)	25	(8)	26
ERIC	-	-	(3)	27	(1)	100	(1)	17	(2)	25	(7)	23
Private Foundations	-	-	(2)	18	-	-	(1)	17	(1)	13	(4)	13
Regional Educ. Labs	-	-	(3)	27	-	-	(1)	17	(2)	25	(6)	19
Other	(1)	20	(3)	27	-	-	-	-	-	-	(4)	13
SUBTOTAL	(4)	80	(38)	345	(4)	400	(14)	233	(13)	162	(73)	235
GRAND TOTAL	(14)	280	(91)	827	(10)	1000	(32)	533	(39)	487	(186)	600

* Percents are based on the number of innovations in each category ("N" given at top of each column). Percents total over 100 since respondents could list more than one resource.

TABLE 6.7
USE OF RESOURCES IN THE TOP TEN
SHOWCASE INNOVATIONS

PERCENT DISTRIBUTION*

	Ind. Instr. & Team Teaching -- All Areas N=72 %	Special Instructional Programs N=39 %	Curriculum Revision N=26 %	Ind. Instr. & Team Teaching -- Spec. Areas N=23 %	Grade & Attendance Unit N=19 %	Planning, Research & Evaluation N=18 %	Unit, Mini-Courses, & Electives N=16 %	In-Service Training N=12 %	Guidance & Counseling N=11 %	Teacher Aides, Tutors & Paraprofessionals N=11 %	Combined N=247 %
INTERNAL RESOURCES											
Teacher Discussions	45	31	58	74	69	44	44	42	55	27	48
In-Service Training	45	33	58	61	69	44	31	42	55	36	42
Curriculum Supervisor	33	26	50	39	58	50	25	8	18	36	35
R&E Office & Staff	31	28	31	35	63	50	25	8	45	36	34
Library	7	26	19	39	42	28	31	-	-	18	23
Student Discussions	17	13	27	26	21	22	31	8	18	18	19
Media Center & Staff	19	28	27	26	21	22	25	-	9	9	21
Other	3	3	4	83	16	6	-	-	-	9	4
SUBTOTAL	208	186	273	382	358	263	212	108	200	191	230
EXTERNAL RESOURCES											
State Educ. Agency	26	33	38	48	32	28	31	25	27	27	32
University	28	26	42	13	42	28	25	42	27	9	28
Title I Programs	17	39	19	30	16	6	-	17	18	27	20
Title III Programs	14	13	15	17	16	11	6	8	27	36	15
Other Federal Programs	10	8	19	9	16	-	6	8	27	9	11
Prof. Associations	11	5	12	17	21	22	19	-	9	9	12
ERIC	11	5	8	4	32	22	6	-	18	-	11
Private Foundations	8	8	4	4	16	11	6	8	9	-	8
Regional Educ. Labs	6	5	8	4	5	22	-	-	9	9	6
Other	8	8	4	9	-	6	-	8	-	-	6
SUBTOTAL	139	147	168	156	200	156	100	117	175	127	153
GRAND TOTAL	347	337	444	540	558	421	312	224	373	318	383

* Percents are based on the number of innovations of each type ("N" given at top of each column). Percents total over 100 since respondents could list more than one resource.

Teacher discussions are used to the greatest degree (74%) in the area of individualized instruction and team teaching in specific curriculum areas. Somewhat surprisingly they were used least frequently (27%) in the addition of teacher aides, tutors and paraprofessionals to the staff. The difference among innovations in the use of teacher discussions is significant at the .05 level. Use of the research and evaluation office and staff is mentioned most frequently in connection with changes in the grade and attendance unit (63%).

Finally, Title I programs and services are utilized most extensively in the innovation type "special instructional programs" (39%) and were not used at all in the introduction of unit courses, mini-courses and electives. The pattern of use of Title I among the ten top showcase innovations is significantly different from the pattern of use of other external resources ($p < .05$).

We felt it would be of particular interest to examine more closely the extent of use of federal resources, including ERIC, Title I, Title III, the Regional Educational Laboratories and other unspecified federal programs. Results of this examination are shown in Table 6.8. The total figures are

TABLE 6.8
USE OF FEDERAL RESOURCES**
IN THE SHOWCASE INNOVATION

Number of Resources Used	Districts < 80,000 Freq.	% of 315	Districts ≥ 80,000 Freq.	% of 31
1	(71)	23	(3)	10
2	(26)	8	(5)	16
3	(9)	3	(3)	10
4	(1)	*	-	-
5	(3)	1	(2)	6
TOTAL	(110)	35	(13)	42

* Less than 0.5%

**Federal resources include ERIC, Title I, Title III, U.S.O.E., Regional Labs, and other unspecified federal resources.

quite impressive, with 35% of representative districts and 42% of very large districts using one or more federal resources in their showcase innovations. It is evident that use of these resources is greater in very large districts than in representative districts, both in terms of the total percentage of districts using at least one federal resource and in terms of the percentage of districts using more than one resource.

An examination was also made of the nature of the showcase innovations in which ERIC and the Regional Laboratories were utilized. Tables 6.5, 6.6 and 6.7 give some indication of the types of innovations which made use of these resources; the listings below show exactly what these innovations were. Innovations adopted by very large districts are followed by the designation "(L)".

INNOVATIONS IN WHICH "ERIC" WAS USED

A. Individualized Instruction and Team Teaching

1. Individualized instruction and team teaching
2. Individualized instruction and team teaching; non-graded, continuous progress
3. Team teaching, open space, multi-age, non-graded
*4. Team teaching, open space - elementary
5. Open space - elementary
6. Individualized instruction
*7. Differentiated staffing
8. Non-graded, continuous progress
*9. Elementary reading; continuous progress, differentiated staffing

B. Administrative Innovations

1. Planning committee
*2. Needs assessment, evaluation
*3. Learning improvement fund
*4. Needs assessment (L)
5. Curriculum development in communications
6. Curriculum development in science and careers
7. Diagnosis of learning disabilities
8. Counseling accountability
*9. Desegregation (L)
10. Public relations
*11. Decentralization (L)

C. Programmatic Approaches to Instruction

1. Pre-school program
*2. Reading problems program (L)

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*Both ERIC and a Regional Laboratory were used

D. Curriculum Changes and Instructional Technology

1. Curriculum revision in humanities
2. Curriculum revision in occupational orientation, grades 7-9 (L)
3. Electives in Englihh
4. Computer programming materials
5. Math instructional objectives catalog

E. Organizational Innovations

1. - 3. Transitional grade
*4. - 6. Middle school
*7. Quinmester plan (L)
*8. Model Kindergarten (L)

INNOVATIONS IN WHICH REGIONAL LABORATORIES WERE USED

A. Individualized Instruction and Team Teaching

1. Team learning
*2. Team teaching, open space - elementary
3. Open elementary school
*4. Differentiated staffing
*5. Elementary reading; continuous progress, differentiated staffing

B. Administrative Innovations

*1. Needs assessment, evaluation
*2. Learning improvement fund
3. Systems approach to coordination and planning in Research and Evaluation Division
*4. Needs assessment (L)
5. Career orientation planning
*6. Desegregation (L)
7. Teacher corps
*8. Decentralization (L)

C. Programmatic Approaches to Instruction

1. Early childhood program
*2. Reading problems program (L)

D. Curriculum Changes and Instructional Technology

1. Cross-age tutoring
2. Curriculum revision in bilingual and bicultural
3. Curriculum revision in bilingual Kindergarten

E. Organizational Innovations

*1. Middle school
*2. Quinmester plan (L)
*3. Model Kindergarten (L)

These listings indicate that ERIC and the Regional Laboratories were found to be relevant to a wide variety of innovations. Proportionally, districts adopting administrative innovations made the greatest use of both resources, whereas districts adopting programmatic approaches made the least use of them. Out of the 35 districts making use of ERIC and the 21 districts using the Regional Laboratories, 11 districts utilized both resources.

C. PARTICIPANT ATTITUDES AND CHARACTERISTICS

As superintendents were naming the participants to the showcase innovation in response to Questions 1b, 1c and 1e, they frequently mentioned participant characteristics or attitudes which were salient. In Table 6.9 a summary of these traits and attitudes is given; for each size sample of school districts the total mentions are preceded by the mentions of these characteristics as key factors in the innovation process. Percentages are based on the total number of showcase innovations in each size sample.

TABLE 6.9
PARTICIPANT ATTITUDES AND CHARACTERISTICS
AS FACTORS IN SHOWCASE INNOVATION SUCCESS

Attitude or Characteristic	Districts < 80,000				Districts ≥ 80,000			
	Key Factor Freq.	% of 315	Total Factor Freq.	% of 315	Key Factor Freq.	% of 31	Total Factor Freq.	% of 31
Acceptance * of Innovation	(96)	30	(111)	35	(11)	35	(11)	35
Need/Benefit	(51)	16	(64)	20	(6)	19	(9)	29
Enthusiasm	(48)	15	(50)	16	(9)	29	(10)	32
Leadership	(27)	9	(34)	11	(5)	16	(6)	19
Innovativeness	(15)**	5	(17)	5	-	-	(1)	3
Interest in Innov.	(8)	3	(12)	4	(1)	3	(2)	6
Belief in Innov.	(8)	3	(8)	3	-	-	-	-

* In representative districts acceptance was a key factor in failure in four cases; absence of acceptance was a key factor in failure in seven cases, and in one case acceptance was a factor in failure but not a key factor.

** Absence of innovativeness was a key factor in failure in one case.

For both size samples acceptance of the innovation was most frequently mentioned both as a general factor and as a key factor in innovation success. A perceived need for the innovation or the benefits anticipated from it was the second ranking factor in representative school systems; in very large districts enthusiasm on the part of the participants was mentioned slightly more often and was considerably more important as a key factor. Enthusiasm and leadership by participants were both more frequently mentioned as general factors and key factors in very large districts than in representative districts. Innovativeness as a general characteristic of participants was rarely mentioned.

Table 6.10 shows which participants in representative districts possessed each of the above attitudes or characteristics. In this table percentages are based on the total number of mentions of each attitude or characteristic so that each column totals 100%.

TABLE 6.10
ATTITUDES AND CHARACTERISTICS OF PARTICIPANTS

DISTRICTS < 80,000
PERCENT DISTRIBUTION*

Participant	Acceptance N=111 %	Need/ Benefit N=64 %	Enthusiasm N=50 %	Leadership N=34 %	Innovativeness N=17 %	Interest in innov. N=12 %	Belief in innov. N=8 %	Combined N=296 %
Administrators	25	17	20	62	12	17	-	25
Teachers	23	5	38	21	41	25	50	23
Community (& Staff)	8	69	2	3	6	34	-	21
Students (& Staff)	19	2	30	15	35	17	25	18
Staff	13	3	-	-	-	8	12	6
Parents	4	5	4	-	-	-	12	4
Other, or not Specified	7	-	6	-	6	-	-	4
Total	100	100	100	100	100	100	100	100

* Percents are based on the number of responses in each attitude or characteristic group ("N" given at top of each column).

Administrators, teachers, the community, and students were the participants most often named in connection with specific attitudes and characteristics, with parents and others rarely being named. In a few cases the staff was mentioned along with the community, and in almost every case in which students were named the staff was also named. Thus the staff as a group was actually mentioned in more cases than any other group. Among groups there is considerable variation as to which factor was most prevalent. Leadership was most frequently mentioned as a salient trait of administrators (62%), while their belief in the innovation was never mentioned as a factor. In contrast, belief of teachers in the innovation was most commonly mentioned as an important factor (50%). Needs of teachers or benefits for teachers was rarely a factor (5%), and, surprisingly, it was even less often a factor for students (2%). Need and benefit were most often mentioned as being a factor for the community (69%).

There were no significant differences among the five innovation categories in terms of the frequency of mention of the various attitudes and characteristics. Only a few differences were noted when these factors were compared across the top ten innovations. Acceptance, which was the most commonly mentioned attitude for all top ten innovations combined (a factor in 34% of innovations) was never mentioned in connection with in-service training programs. The second most commonly named factor, need or benefit (23%), was mentioned for only 6% of innovations in the area of unit courses, mini-courses and electives and for 8% of innovations in the area of curriculum revision; in contrast, it was mentioned in 44% of special instructional programs and 42% of innovations in the area of grade and attendance unit change.

D. USE OF PROCEDURES TO GAIN PARTICIPATION AND COOPERATION

When superintendents were asked to describe the process by which the showcase innovation was introduced and implemented (Question # 1b), many procedures were cited. Among these were references to attempts to gain the participation and cooperation of various groups inside and outside the school system. These responses represent concerted efforts to gain participation, rather than actual participation, which was discussed previously. Table 6.11 lists the number of times respondents indicated that specific procedures were employed to gain the participation and cooperation of various groups.

TABLE 6.11
PROCEDURES CITED TO GAIN
PARTICIPATION AND COOPERATION

	Participation				Cooperation			
	Districts <80,000		Districts ≥80,000		Districts <80,000		Districts ≥80,000	
	Freq.	% of 315	Freq.	% of 31	Freq.	% of 315	Freq.	% of 31
Staff (unspecified)	(30)	10	(4)	13	(24)	8	(6)	19
Teachers	(24)	8	-	-	(12)	4	-	-
Students (& Staff)	(8)	3	-	-	(9)	3	(1)	3
Community (& Staff)	(7)	2	(6)	19	(4)	1	(1)	3
Parents	(2)	1	(1)	3	-	-	-	-
Administration	(2)	1	-	-	(3)	1	-	-
Others, or not Specified	(16)	5	-	-	(14)	4	(1)	3
Total	(89)	28	(11)	35	(66)	21	(9)	29
Key Factor	(78)	25	(11)	35	(35)	11	(8)	26

Participation was actively sought more frequently than was cooperation in both size samples. Both participation and cooperation were sought more often in very large districts than they were in representative districts, and in very large districts they were more likely to be key factors in the success of the innovation. In representative districts the participation and cooperation of a wider range of people was sought, however. In very large districts no mention was made of attempts to gain either the participation or the cooperation of teachers. On the other hand community participation was sought in 19% of cases in very large districts, a finding which is consistent with the high community involvement we noted earlier in these districts.

Perhaps the most notable feature pointed up by Table 6.11 is the fact that in representative districts the participation or cooperation of any one particular group was not sought in more than 10% of innovation processes. In very large districts all groups except the staff and community were virtually neglected.

No differences were evident among the five innovation categories in terms of the number of times procedures were specifically employed to secure participation or cooperation, but there were some variations among the top ten innovations.

Frequencies were too small to permit an analysis of the specific groups for whom these procedures were intended in the top ten innovations, but Table 6.12 presents a summary of procedures for each innovation type. Percentages are based on the number of innovations in each innovation type.

TABLE 6.12
PROCEDURES CITED TO GAIN
PARTICIPATION AND COOPERATION
IN TOP TEN SHOWCASE INNOVATIONS

Innovation	Participation				Cooperation			
	Key Factor		Total Factor		Key Factor		Total Factor	
	Freq.	%**	Freq.	%**	Freq.	%**	Freq.	%**
Ind. Instr. & Team Teaching --All Areas (N=72)	(22)*	31	(25)	35	(8)	11	(17)	24
Special Inst. Program (N=39)	(7)	18	(7)	18	(7)	18	(10)	26
Curriculum Rev. (N=26)	(8)*	31	(8)	31	(3)	12	(5)	19
Ind. Instr. & Team Teaching --Spec. Areas (N=23)	(7)	30	(9)	39	(3)	13	(6)	26
Grade & Att. Unit (N=19)	(4)	21	(4)	21	(1)	5	(1)	5
Planning, Res, & Eval. (N=18)	(7)	39	(7)	39	(2)	11	(5)	28
Unit, Mini-Courses (N=16)	(7)	44	(8)	50	(5)	31	(7)	44
In-Service Training (N=12)	(3)	25	(3)	25	(1)	8	(2)	17
Guidance & Counseling (N=11)	(4)	36	(4)	36	-	-	(1)	9
Teacher Aides (N=11)	(1)	9	(1)	9	(3)	27	(3)	27
Combined (N=247)	(70)	28	(76)	31	(33)	13	(57)	23

* Includes one case in which lack of participation was cited as a key factor in failure.

** Percents are based on the number of innovations of each type ("N" given after each innovation type at left).

Participation was sought most frequently in the introduction of unit courses, mini-courses and electives (50%) and least frequently when teacher aides were added to the staff (9%). Cooperation was also sought most frequently in the introduction of unit courses and electives (44%) and least often when changes were made in the grade and attendance unit (5%).

Table 6.12 points up one additional fact of interest: when procedures were used to gain *participation,* these were almost always considered to be key factors. On the other hand, procedures to secure *cooperation* were key factors in only slightly more than half the cases in which they were employed.

E. ADVICE ON PARTICIPATION OFFERED TO OTHER DISTRICTS

As was mentioned in the previous chapter, a number of superintendents felt that on the basis of their experience with their own showcase innovation they could offer some advice to other districts which were considering adopting the same or a similar innovation. Some of this advice* consisted of suggestions that various groups or individuals should be involved in the planning and decision-making of the adoption process or that the support of various groups should be sought. In Table 6.13 advice given in these areas is summarized for each size sample of school districts. Superintendents of representative districts

TABLE 6.13
ADVICE ON GAINING THE
INVOLVEMENT AND SUPPORT OF PARTICIPANTS

	Involvement				Support			
	Districts < 80,000		Districts ≥ 80,000		Districts < 80,000		Districts ≥ 80,000	
	Freq.	% of 315	Freq.	% of 31	Freq.	% of 315	Freq.	% of 31
Teachers & Admin.	(36)	11	-	-	(23)	7	-	-
Community	(16)	5	(1)	3	(12)	4	(1)	3
Others Outside	(15)	5	(1)	3	(4)	1	(1)	3
Students & Parents	(5)	2	(4)	13	(9)	3	-	-
Total	(72)	23	(6)	19	(48)	15	(2)	6

* Advice was given in response to Question 1f.

most frequently mentioned that teachers and administrators should be involved in planning and decision-making (11%) and that their support should be gained (7%). Community members were mentioned less frequently and parents and students very rarely. In contrast, superintendents of very large districts never suggested that teachers and administrators should be involved or their support sought. It was suggested in four cases (13%) that students and parents should be involved in planning and decision-making.

Since this advice was based on the superintendent's own experience, it is of interest to compare Table 6.13 with Table 6.11, which summarized the procedures cited in which participation and cooperation were sought in adopting the showcase innovation. Overall, representative districts advise others to involve and gain support of participants slightly less often than they did themselves, and very large districts give this advice considerably less often than they themselves used such procedures. In representative districts teacher, administrator, parent and student participation is urged less and community involvement is suggested more. These districts also suggest gaining community support more often than they themselves did, and staff involvement less often. Very large districts recommend staff and community involvement less and involvement of parents and students more. Staff support was recommended less often to other districts than it was actually sought by our respondents.

F. SUMMARY

Teachers and staff stand out as being frequent participants in showcase innovation planning and implementation. Assistant superintendents and principals are also heavily involved but are more rarely seen as key actors. In very large districts the community is also frequently cited as being involved as a key factor. Outside experts, on the other hand, were rarely mentioned as being participnnts in the innovation process.

When various groups inside and outside the school system are considered in terms of their usefulness as resources, teachers again are most often cited. Although internal resources on the whole are reported as utilized more frequently than are external resources, it was found that external experts were used more extensively as sources than as participants. In particular, 35% of representative districts and 42% of very large districts utilized at least one federal resource in adopting the showcase innovation. Very large districts tended to use both internal and external resources more frequently than did representative districts.

When attitudes and characteristics of participants were mentioned as being salient to the innovation process, acceptance of the innovation was the most commonly noted attitude. Needs of participants and benefits expected for them

were also commonly mentioned, but, surprisingly, needs of the community were referred to far more often than were needs of students or teachers. Special instructional programs and changes in the grade and attendance unit structure were the innovations most often adopted in response to a specifically perceived need. It is interesting to note that innovativeness as a characteristic of participants was very rarely mentioned as a factor of importance.

Over one quarter of the districts reported employing specific procedures to gain either the participation or the cooperation of participants, or both. Such procedures were utilized somewhat more frequently in very large districts than in representative districts, and when they were employed they were also more likely to be viewed as key factors in success in the very large districts.

Overall the data show that very large districts solicited and achieved greater participation in and support for their innovative efforts than did representative districts, and these factors were more often noted as being of key importance in very large districts. However, when superintendents were asked what advice they might offer to other districts, those from the very large districts were in general less likely to suggest that involvement and support should be sought from groups inside and outside the school. The notable exception to this is that very large districts recommended higher involvement of students and parents than did representative districts.

CHAPTER SEVEN: PROCEDURES AND BARRIERS

The purpose of the national survey was essentially twofold: one aim was to ascertain the extent, content and consequences of innovation attempts in our nation's schools, and part of this analysis has been presented in Chapters Two through Five. The second major aim was to understand the *process* through which these innovations were planned and implemented. Our understanding of this process will be derived primarily from respondents' written descriptions of how the showcase innovation was introduced and implemented. The analysis of process began in Chapter Six, with an accounting of patterns of participation. In the present chapter this analysis will be continued in broader scope; responses to both open-ended and closed-ended questions concerning procedures employed and barriers encountered in the showcase innovation will be presented.

A. PROCEDURES USED IN THE SHOWCASE INNOVATION

Questionnaire Item #2 elicited direct information on procedures utilized in the showcase innovation process. These "procedure" statements were carefully chosen to represent important actions in assuring success of an innovation attempt.* The 21 "procedures" listed in Question #2 are presented in Table 7.1 in rank order according to the degree of emphasis placed upon them in the introduction and installation of the showcase innovation. Mean scores are given for each item for representative and very large districts. These scores, based on the number of superintendents responding to each item, are computed according to the following scale: 5=extreme emphasis, 4=major, 3=moderate, 2=slight, and 1=none.

(Insert Table 7.1 here)

It can be seen that major emphasis was placed on 11 of the 21 procedures, while moderate emphasis was placed on the remaining ten items. In districts in both size samples "taking advantage of crisis situations" was the lowest ranking item, although for this item there was the widest discrepancy between representative and very large districts. Very large districts, which placed a greater emphasis on this procedure, also experienced a greater number of disruptive events which might be considered as "crises," as will be pointed out later in this chapter.

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* "Procedure" statements were derived from R.G. Havelock et.al., Planning for Innovation Through the Dissemination and Utilization of Knowledge, Ann Arbor, Michigan: Institute for Social Research, The University of Michigan, 1969, Chapter II. See subsequent chapters for fuller explanation.

TABLE 7.1
PROCEDURES USED IN SHOWCASE INNOVATION

Procedure	Districts < 80,000		Districts ≥ 80,000	
	Freq.	Mean*	Freq.	Mean*
1. Persistence by those who advocate the innovation	(307)	4.17	(30)	4.10
2. Systematic planning	(309)	4.12	(30)	4.30
3. Providing a climate conducive to sharing ideas	(309)	4.11	(30)	4.10
4. Selecting a competent staff to implement change	(304)	4.04	(30)	4.30
5. Creating awareness of the need for change	(308)	4.03	(30)	4.20
6. Adequate definition of objectives	(308)	4.00	(30)	4.27
7. Adequate diagnosis of the real educational need	(308)	3.98	(30)	4.23
8. Stressing self-help by the users of the innovation	(303)	3.67	(30)	3.50
9. Maximizing the chances of participation by many groups	(303)	3.65	(30)	3.70
10. Systematic evaluation	(308)	3.64	(30)	3.73
11. Providing a climate conducive to risk-taking	(306)	3.55	(30)	3.77
12. Involvement of informal leaders of opinion inside the schools	(304)	3.50	(30)	3.33
13. Finding shared values as a basis for working	(297)	3.45	(29)	3.28
14. Creating an awareness of alternative solutions	(306)	3.44	(30)	3.60
15. Starting out with adequate financial resources to do the job	(305)	3.42	(30)	3.47
16. Utilizing a number of different media to get the new ideas across	(307)	3.36	(30)	3.30
17. Confrontation of differences	(305)	3.31	(30)	3.23
18. Resolution of interpersonal conflicts	(300)	3.26	(28)	3.11
19. Solid research base	(302)	3.25	(29)	3.34
20. Participation by key community leaders	(305)	2.84	(30)	3.13
21. Taking advantage of crisis situations	(296)	2.59	(29)	2.93

*Means are computed according to degree of emphasis:
5=extreme; 4=major; 3=moderate; 2=slight; 1=none

Also low-ranking in all districts was "participation by key community leaders." Again, very large districts placed greater emphasis on this procedure than did representative districts, a finding consonant with responses concerning community participation as reported in Chapter Six.

Very large districts also placed greater emphasis on three related procedures: #5 - "creating awareness of the need for change;" #6 - "adequate definition of objectives;" and #7 - "adequate diagnosis of the real educational need." It may be conjectured that need assessment is more complex in larger systems and therefore requires greater emphasis; but it should be pointed out that even in the representative sample these procedures ranked high in importance.

1. RELATIONSHIP OF SHOWCASE INNOVATION PROCEDURES TO DISTRICT SIZE

When an analysis was made of the degree of emphasis placed on each of the 21 procedures by districts according to seven size categories, differences of statistical significance were found for only three of the procedures. These findings are presented in Table 7.2.

TABLE 7.2
SHOWCASE INNOVATION PROCEDURES BY DISTRICT SIZE

Size	(9) Maximizing Participation		(10) Climate for Risk-Taking		(13) Shared Values		Total for Items 9, 10 & 13	
	Freq.	Mean*	Freq.	Mean*	Freq.	Mean*	Freq.	Mean*
1 - 299	(5)	2.40	(6)	3.17	(6)	3.34	(17)	3.00
300 - 2,499	(66)	3.42	(67)	3.47	(64)	3.34	(197)	3.40
2,500 - 4,999	(51)	3.69	(52)	3.40	(51)	3.55	(154)	3.54
5,000 - 9,999	(54)	3.67	(54)	2.80	(51)	3.37	(159)	3.28
10,000 - 24,999	(74)	3.74	(73)	3.50	(72)	3.39	(219)	3.54
25,000 - 79,999	(53)	3.87	(54)	3.95	(53)	3.68	(160)	3.82
80,000 and over	(30)	3.71	(30)	3.78	(29)	3.28	(89)	3.58
Total	(333)	3.65	(336)	3.57	(326)	3.41	(3538)	3.56
Significance Level (chi-square test)	$p < .03$		$p < .04$		$p < .05$			

*Means are computed according to degree of emphasis:
5=extreme; 4=major; 3=moderate; 2=slight; 1=none

The greatest differences were found for the procedure "maximizing the chances of participation by many groups," with greater emphasis placed on this item by larger than by smaller districts. In particular, the smallest districts, of pupil size under 300, placed only slight emphasis on this procedure, while emphasis in other districts ranged from moderate to major.

The procedure "providing a climate conducive to risk-taking," was emphasized the least by systems with between 5,000 and 9,999 students. On both of these items, as well as on item #13, "finding shared values as a basis for working," the greatest emphasis was placed by systems of pupil size 25,000 to 79,999.

A comparison was also made between districts of more than 80,000 students and all representative districts combined for item #20, "participation by key community leaders." This analysis showed that the very large districts placed significantly more emphasis on this kind of participation ($P < .02$).

2. RELATIONSHIP OF SHOWCASE INNOVATION PROCEDURES TO REGION

When an analysis was made of regional difference in representative districts in the utilization of the procedures, only four items emerged as being significant. This data is presented in Table 7.3.

(Insert Table 7.3 here)

"Finding shared values as a basis for working" was emphasized in the Rocky Mountain and Mid East regions, while it received the least attention in the Far East and the Plains states. "Resolution of interpersonal conflicts" was emphasized significantly more in the Rocky Mountains region than in other areas of the country. The New England states ranked a distant second, but were still far ahead of the other six regions. In the South West and Rocky Mountain regions the procedure of involving community leaders was employed to the greatest extent, while it was emphasized the least in the Mid East states. Finally, although all regions emphasized "providing a climate conducive to sharing ideas" to a moderate extent, the Plains states placed the least emphasis on this item.

Overall, on the basis of these four items, it may be said that the Rocky Mountain region stands out as placing the greatest emphasis on procedures to insure successful innovation, and the New England states rank second. The least emphasis is placed on these procedures in the Plains states and in the Far West.

TABLE 7.3
SHOWCASE INNOVATION PROCEDURES BY REGION
DISTRICTS <80,000

Region	(3) Sharing Ideas		(13) Shared Values		(18) Conflict Resolution		(20) Involve Community Leaders		Total for Items 3,13,18 and 20	
	Freq.	Mean*	Freq.	Mean*	Freq.	Mean*	Freq.	Mean*	Freq.	Mean*
Rocky Mountains	(11)	4.09	(10)	3.80	(10)	4.20	(11)	3.18	(42)	3.81
New England	(24)	4.13	(24)	3.54	(24)	3.79	(24)	2.92	(96)	3.59
South West	(23)	4.30	(22)	3.55	(23)	3.17	(23)	3.30	(91)	3.58
Mid East	(51)	4.22	(48)	3.79	(49)	3.30	(50)	2.80	(198)	3.52
Great Lakes	(67)	4.40	(65)	3.51	(66)	3.30	(65)	2.66	(263)	3.43
South East	(65)	3.95	(61)	3.32	(62)	3.26	(64)	3.02	(252)	3.39
Far West	(42)	4.02	(41)	3.03	(41)	2.95	(42)	2.65	(166)	3.16
Plains	(26)	3.92	(26)	3.19	(25)	3.08	(26)	2.58	(103)	3.12
Total	(309)	4.11	(297)	3.45	(300)	3.26	(305)	2.84	(1211)	3.41
Significance Level (chi-sqare test)	$p < .03$		$p < .02$		$p < .06$		$p < .04$			

*Means are computed according to degree of emphasis:
5=extreme; 4=major; 3=moderate; 2=slight; 1=none

3. UTILIZATION OF PROCEDURES IN THE FIVE INNOVATION CATEGORIES

Table 7.4 presents the mean emphasis placed on each of the 21 procedures by representative systems which innovated in each of the five categories. The overall means for these systems, as presented in Table 7.1, is repeated here for comparative purposes.

(Insert Table 7.4 here)

Following the table a summary is given of the number of procedures used to a greater or lesser extent in each of the five categories, than in all categories combined. Administrative innovations stand out as making the most extensive utilization of the procedures: 19 were used to a greater extent than for all innovation combined. Innovations in the category of individualized instruction and team teaching were also far above average, making greater use of 16 of the procedures. On the other hand, when innova-

TABLE 7.4
PROCEDURES USE IN THE FIVE SHOWCASE INNOVATION CATEGORIES
MEAN SCORES*
DISTRICTS < 80,000

Procedure	Ind. Instr.+ Team Teach	Adminis-trative	Program-matic Approaches	Curriculum and Technology	Organiza-tional	Combined Mean	Sig. Level (x^2)
1. Persistence by those who advocate the innovation	4.25	4.25	3.98	4.10	4.25	4.17	
2. Systematic planning	4.18	4.14	4.09	4.02	4.14	4.12	
3. Providing a climate conducive to sharing ideas	4.34	4.20	3.79	4.00	4.11	4.11	p <.0
4. Selecting a competent staff to implement change	3.95	4.08	4.25	4.07	3.81	4.04	
5. Creating awareness of the need for change	4.17	4.23	3.70	3.87	4.08	4.03	p <.0
6. Adequate definition of objectives	3.93	4.14	4.02	3.93	3.97	4.00	
7. Adequate diagnosis of the real educational need	4.00	4.00	4.12	3.80	3.97	3.98	
8. Stressing self-help by the users of the innovation	3.77	3.84	3.61	3.46	3.56	3.67	
9. Maximizing the chances of participation by many groups	3.72	3.89	3.45	3.58	3.58	3.65	
10. Systematic evaluation	3.64	3.77	3.70	3.44	3.68	3.64	
11. Providing a climate conducive to risk-taking	3.72	3.86	3.21	3.31	3.51	3.55	p <.0
12. Involvement of informal leaders of opinion inside the schools	3.69	3.62	3.23	3.36	3.43	3.50	
13. Finding shared values as a basis for working	3.62	3.55	3.35	3.22	3.45	3.45	
14. Creating an awareness of alternative solutions	3.59	3.58	3.39	3.05	3.59	3.44	p <.0
15. Starting out with adequate financial resources to do the job	3.39	3.42	3.66	3.28	3.41	3.42	
16. Utilizing a number of different media to get the new ideas across	3.70	3.15	3.21	3.28	3.31	3.36	
17. Confrontation of differences	3.32	3.75	2.93	3.08	3.44	3.31	p <.0
18. Resolution of interpersonal conflicts	3.31	3.66	3.11	2.95	3.28	3.26	p <.0
19. Solid research base	3.39	3.27	3.16	3.10	3.26	3.25	
20. Participation by key community leaders	2.91	3.98	2.85	2.56	2.81	2.84	
21. Taking advantage of crisis situations	2.58	3.00	2.37	2.25	2.77	2.59	
Total	3.67	3.78	3.48	3.41	3.59	3.54	

Continuation of Table 7.4

	Ind. Instr. & Team Teaching	Administrative	Programmatic Approaches	Curriculum and Technology	Organizational
Comparison with Combined Mean	16 more 4 less 1 same	19 more 1 less 1 same	4 more 17 less 0 same	1 more 20 less 0 same	9 more 10 less 2 same

*Means are computed according to degree of emphasis:
5=extreme; 4=major; 3=moderate; 2=slight; 1=none

tions were introduced in the area of curriculum change and instructional technology and facilities, procedures were used much less than the average (20 out of the 21 items were used less). The procedures were also used less extensively when innovations in the category of programmatic approaches were introduced (17 procedures were used less than the average).

For six of the procedures, the differences in amount of emphasis placed on them by districts innovating in the five categories were statistically significant; the significance levels, based on chi-square tests, are noted at the right-hand side of the table. For each of these six items it may be noted that the procedure was either particularly emphasized in administrative innovations or was de-emphasized in curriculum changes or programmatic approaches. These outstanding mean scores are underlined in the table. One final outstanding score, which was not significant statistically, is also underlined. In this case the "utilization of a number of different media to get the new ideas across" is a procedure emphasized particularly for innovations in the area of Individualized instruction and team teaching.

No significant differences in degree of emphasis on procedures in the five innovation categories were found for very large districts.

4. UTILIZATION OF PROCEDURES IN THE TOP TEN INNOVATIONS

Significant differences were found in the degree of emphasis placed on four procedures by districts with innovations in the top ten. This data is presented in Table 7.5. The significance level for each of the four items is noted at the foot of the table.

TABLE 7.5
PROCEDURES USED IN THE TOP TEN SHOWCASE INNOVATIONS
MEAN SCORES*

Innovation	(3) Climate for Sharing Ideas	(5) Awareness of Need for Change	(9) Maximizing Participation	(13) Shared Values
Individual Instruction and Team Teaching - All curriculum areas	4.35	4.17	3.72	3.63
Special Instructional Programs	3.76	3.65	3.51	3.08
Curriculum Revision	3.85	3.93	3.53	3.24
Individual Instruction and Team Teaching - Specific Curriculum Areas	4.35	4.17	3.77	3.56
Grade and Attendance Unit	4.15	4.20	3.84	3.33
Planning, Research and Evaluation	4.00	4.05	4.27	3.55
Unit Courses, Mini-Courses and Electives	4.18	3.94	3.50	3.19
In-Service Training	4.50	4.32	4.07	3.72
Guidance and Counseling	4.36	4.08	3.27	3.09
Teacher Aides, Tutors and Paraprofessionals	3.45	3.18	2.82	3.00
Total	4.13	4.00	3.66	3.39
Significance Level (chi-square test)	$p < .02$	$p < .02$	$p < .03$	$p < .05$

*Means are computed according to degree of emphasis:
5=extreme; 4=major; 3=moderate; 2=slight; 1=none

Particularly outstanding is the fact that on all four items a significantly lower degree of emphasis was reported in the introduction of innovations in which teacher aides, tutors or paraprofessionals were employed. Usage of all four procedures was also below average in the adoption of special instructional programs; in two of the cases usage was significantly lower. Both of these innovation types are included in the category "programmatic approaches", which was noted above as being below average in the utilization of all procedures.

Table 7.4 also pointed to the fact that procedures were used to a greater than average extent in administrative innovations; in Table 7.5 two innovations from this category can be identified as contributing to this general finding. Districts adopting in-service training innovations make greater than average use of all four procedures; two of these (creating an awareness for the need for change; finding shared values as a basis for working) are used significantly more than the average. Districts adopting innovations in the area of "planning, research and evaluation" utilized three of the four procedures to a greater than average degree. One of these, "maximizing the chances of participation by many groups," was used significantly more than the average. Guidance and counselling innovations, which were also included in the administrative category, showed a more mixed utilization pattern. One procedure, "finding shared values as a basis for working," was used significantly less than the average.

On the basis of these four significant items, it may be said that individual innovations among the top ten reflect the utilization pattern of the innovation category from which they are drawn, whether the scores appear as statistically significant or simply indicative of a trend.

B. USE OF MEDIA TO EXPLAIN INNOVATIONS TO PARENTS AND THE COMMUNITY

In Question #8, five types of media were listed which might be utilized by a school system to explain innovations to parents and the community. Respondents were asked to indicate on a five-point scale how often each of these media were used in their systems. Responses to this question, in terms of mean scores, are presented in Table 7.6, with scores for representative and very large districts listed separately. The scoring key is given at the foot of the table.

(Insert Table 7.6 here)

Local newspapers are used most frequently (slightly more often than monthly) by districts in both size samples. The other four types of media are used much more extensively by very large districts than by representative districts, with the biggest difference being in usage of local television and local radio. Both of these media are used nearly on a monthly basis by very large districts, while representative districts use local radio on a quarterly basis and local television only once or twice a year.

TABLE 7.6
USE OF MEDIA TO EXPLAIN INNOVATIONS
TO PARENTS AND COMMUNITY

Medium	Districts < 80,000		Districts ≥ 80,000	
	Freq.	Mean*	Freq.	Mean*
1. Local Newspaper	(307)	4.25	(27)	4.22
2. Newsletters	(297)	3.25	(27)	3.59
3. Public Meetings	(301)	3.24	(28)	3.71
4. Local Radio	(293)	3.00	(27)	3.78
5. Local Television	(270)	2.07	(26)	3.77
Total	(1468)	3.19	(135)	3.82

*Means for extent of use are computed on the basis of:
5=weekly or more often; 4=monthly; 3=quarterly; 2=once or twice a year;
1=very rarely or never

1. USE OF MEDIA BY DISTRICTS IN DIFFERENT SIZE CATEGORIES

When the use of the five types of media were compared across district size, the differences were all statistically very significant. These data are presented in Table 7.7.

(Insert Table 7.7 here)

Although Table 7.6 showed no difference in usage of local newspapers by representative and very large districts, an interesting pattern emerges in Table 7.7. Use of local newspapers increases with system size until the district reaches 10,000 to 24,999 pupils; after that usage drops off somewhat. On the other hand, the use of local radio and local television increases consistently with school system size. There is also a direct relationship between system size and the use of newsletters and public meetings, with the notable exception that these media are used less often by districts of over 80,000 students than by districts with 25,000 to 79,999 students. The only other deviation from this pattern is that public meetings are held more often in districts of under 300 pupils than in districts with 300 to 2,499 pupils.

TABLE 7.7
USE OF MEDIA BY DISTRICT SIZE

Size	Local Newspapers Freq.	Mean*	News-letters Freq.	Mean*	Public Meetings Freq.	Mean*	Local Radio Freq.	Mean*	Local TV Freq.	Mean*	Total Freq.	Mean*
1 - 299	(6)	2.00	(6)	2.50	(6)	3.00	(6)	1.83	(6)	1.00	(30)	2.07
300 - 2,499	(68)	4.04	(64)	2.98	(65)	2.55	(62)	2.42	(58)	1.31	(317)	2.75
2,500 - 4,999	(54)	4.13	(52)	3.04	(54)	3.00	(50)	2.94	(43)	1.67	(253)	3.00
5,000 - 9,999	(53)	4.30	(53)	3.09	(52)	3.21	(49)	2.71	(45)	1.42	(252)	3.00
10,000 - 24,999	(75)	4.55	(70)	3.36	(74)	3.62	(74)	3.35	(67)	2.45	(36)	3.50
25,000 - 79,999	(51)	4.41	(52)	3.87	(50)	3.90	(52)	3.65	(51)	3.47	(256)	3.85
80,000 and over	(27)	4.22	(27)	3.59	(28)	3.71	(27)	3.78	(26)	3.77	(135)	3.80
Total	(334)	4.35	(324)	3.28	(329)	3.29	(320)	3.06	(296)	2.22	(1603)	3.23
Significance Level (chi-square test)	$p < .0005$		$p < .00001$		$p < .00005$		$p < .00001$		$p < .00005$			

*Means for extent of use are computed on the basis of:
5=weekly or more often; 4=monthly; 3=quarterly; 2=once or twice a year; 1=very rarely or never

2. USE OF MEDIA IN DIFFERENT REGIONS OF THE COUNTRY

Table 7.8 shows the frequency of use of the five types of media by representative districts divided into eight regions of the country. Regional differences are significant only for the use of local radio and local television.

(Insert Table 7.8 here)

The greatest usage of local television is in the South West region, where it is used nearly on a quarterly basis. In contrast, it is used less than once or twice a year in the Far West and the Mid East. The pattern is very similar for the use of local radio; in the South East it is used most frequently (between quarterly and monthly) and in the South West it is used more than quarterly. The Far West and the Mid East again are the lowest users, making use of this medium between two and three times a year.

TABLE 7.8
USE OF MEDIA BY REGION
DISTRICTS <80,000

Region	Local Newspapers Freq.	Mean*	News-letters Freq.	Mean*	Public Meetings Freq.	Mean*	Local Radio Freq.	Mean*	Local TV Freq.	Mean*	Total Freq.	Mean
South West	(25)	4.28	(23)	3.52	(24)	3.38	(25)	3.28	(22)	2.86	(119)	3.47
South East	(63)	4.33	(60)	3.27	(61)	3.18	(64)	3.59	(57)	2.53	(305)	3.40
Rocky Mountains	(11)	3.45	(11)	3.45	(11)	3.82	(10)	3.20	(10)	2.50	(53)	3.30
Great Lakes	(65)	4.38	(64)	3.39	(65)	3.12	(57)	3.04	(53)	1.98	(304)	3.23
New England	(24)	4.54	(20)	2.65	(23)	3.52	(23)	2.78	(23)	1.70	(113)	3.06
Plains	(27)	4.11	(26)	3.31	(26)	2.73	(26)	3.00	(25)	2.16	(131)	3.03
Mid East	(51)	4.22	(51)	3.08	(50)	3.30	(48)	2.56	(44)	1.61	(244)	2.99
Far West	(41)	4.05	(42)	3.33	(41)	3.39	(40)	2.43	(36)	1.61	(200)	2.98
Total	(307)	4.25	(297)	3.25	(301)	3.24	(293)	3.00	(270)	2.07	(1468)	3.19
Significance Level (chi-square test)	NS		NS		NS		p <.04		p <.03			

*Means for extent of use are computed on the basis of:
5=weekly or more often; 4=monthly; 3=quarterly; 2=once or twice a year; 1=very rarely or never

3. USE OF MEDIA IN THE FIVE INNOVATION CATEGORIES

It was not asked on the questionnaire whether or not the five types of media had been utilized in informing parents and the community about the showcase innovation in particular. This fact should be kept in mind as usage is compared across the five innovation categories. However, it is felt that this comparison is valid since districts which usually use these media in explaining new ideas would likely use them to inform the public about the innovation which was considered to be the most significant one introduced during the school year.

Superintendents of representative districts who reported showcase innovations in the administrative area also reported the highest usage of all five types of media to inform the public. The difference in the use of local television was statistically significant ($P < .04$), with districts reporting administrative innovations using television between two and three times a year (mean score 2.58) and other districts using it once or twice a year (mean scores from 1.80 to 2.09).

Frequencies of innovations in very large districts are too small to afford a reliable comparison across innovation categories, but superintendents who reported showcase innovations in the administrative area (the largest category, with 11 innovations) reported higher than average usage of all media except local radio. A higher than average usage of all five types of media was reported by districts with showcase innovations in the organizational category (8 innovations). Districts with innovations in these two categories (administrative and organizational) reported very frequent (weekly) usage of local newspapers to explain innovations to the public. Superintendents with innovations in the categories of programmatic approaches and individualized instruction and team teaching reported using newspapers on a quarterly basis. These differences were significant at the .01 level.*

4. USE OF MEDIA IN THE TOP TEN SHOWCASE INNOVATIONS

There were no significant differences among the top ten innovation types in specific media employed by the adopting districts. Some consistent patterns are apparent, however. Superintendents reporting "planning, research and evaluation" innovations also reported using all five types of media more often than the average (mean score for all media for this category was 3.71, or nearly monthly; mean score for all media for all top ten innovations combined was 3.13, or slightly more often than quarterly). Districts with showcase innovations in the areas of "teacher aides, tutors and paraprofessionals" and "individualized instruction and team teaching in specific curriculum areas" reported using all five types of media less often than the average (mean scores of 2.60 and 2.78 respectively - both less than quarterly).

C. BARRIERS ENCOUNTERED IN THE SHOWCASE INNOVATION PROCESS

Questionnaire item #3 was aimed directly at the subject of barriers encountered in the showcase innovation process: 18 "barriers" were listed which, based on past research, were inferred to have direct implications in

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* There was only one very large district reporting an innovation in the category of curriculum change and instructional technology; in this district newspapers were reported to be used weekly or more often. This category, with a frequency of one, would not affect the chi-square test for significance.

instances of innovation failure.* These 18 "barriers" are presented in Table 7.9 in rank order according to the importance respondents attached to them in their experience with their showcase innovations. Mean scores are given separately for representative and very large districts. These scores, based on the number of superintendents responding to each item (given in parentheses), were computed according to the following scale: 5=extreme importance; 4=major; 3=moderate; 2=slight; and 1=none.

(Insert Table 7.9 here)

This table shows that six barriers were considered in all districts to be of slight-to-moderate importance, while the remaining 12 were of slight importance. In very large districts "shortage of funds allocated for the innovation" stands out as being the most important barrier (mean of 2.86). This was also ranked third in importance in representative districts; however, the mean for representative districts is considerably lower (2.54) and it is on this item that there is the widest discrepancy between mean scores of the two size samples.

Other barriers which were of the greatest importance in both samples all concerned staff issues; confusion and lack of information about the innovation, unwillingness to change or listen to new ideas, frustration or difficulty in trying to adopt, and lack of communication among the staff all ranked among the six most important barriers.

In Chapter Six we noted the low level of contact with outside resources as reported by respondents. Table 7.9 indicates that the districts did not consider this to be a problem in adopting innovations. The two items ranking last in importance were "unwillingness of resource groups to help us revise or adapt," and "lack of contact with other school systems who had considered the same innovation." Also ranked well towards the bottom, the 14th out of 18 in representative districts and 15th in very large districts was, "lack of adequate contacts with outside resource groups."

1. RELATIONSHIP OF BARRIERS TO DISTRICT SIZE

When an analysis was made of the degree of importance attached to each of the 18 barriers by districts according to seven size categories, differences of statistical significance were found for only two barriers, "unwillingness of

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* "Barrier" statements were derived from R.G. Havelock, et. al., Planning for Innovation Through the Dissemination and Utilization of Knowledge, Ann Arbor, Michigan: Institute for Social Research, The University of Michigan, 1969, Chapter II. See subsequent chapters for fuller explanation.

TABLE 7.9
BARRIERS TO THE SHOWCASE INNOVATION PROCESS

Barrier	Districts < 80,000 Freq.	Districts < 80,000 Mean*	Districts ≥ 80,000 Freq.	Districts ≥ 80,000 Mean*
1. Confusion among staff about the purpose of the innovation	(308)	2.59	(29)	2.55
2. Unwillingness of teachers and school personnel to change or listen to new ideas	(306)	2.57	(29)	2.45
3. Shortage of funds allocated for the innovation	(304)	2.54	(29)	2.86
4. Staff's lack of precise information about the innovation	(307)	2.53	(29)	2.52
5. Frustration and difficulty encountered by teachers and/or relevant staff in trying to adopt	(302)	2.53	(29)	2.66
6. Lack of communication among the staff	(305)	2.44	(29)	2.66
7. Inadequacy of school plant, facilities, equipment or supplies	(304)	2.43	(29)	2.24
8. Shortage of qualified personnel	(303)	2.32	(29)	2.34
9. Feeling by teachers and staff that the innovation would have little benefit for them	(304)	2.31	(29)	2.21
10. Rigidity of school system structure and bureaucracy	(306)	2.25	(29)	2.31
11. Lack of communication between staff and students	(302)	2.22	(29)	2.17
12. Lack of coordination and teamwork within the school system	(303)	2.11	(29)	2.24
13. Disorganization of the planning and implementation efforts	(306)	2.07	(29)	2.21
14. Lack of adequate contacts with outside resource groups (e.g., universities, consultants, labs, etc.)	(305)	2.04	(29)	1.93
15. Absence of a concerted campaign to put the new ideas across	(304)	2.03	(29)	2.21
16. Frustration and difficulty encountered by the students during the adoption process	(301)	2.00	(28)	1.82
17. Lack of contact with other school systems who had considered the same innovation	(302)	1.94	(29)	1.90
18. Unwillingness of resource groups to help us revise or adapt	(303)	1.73	(29)	1.48

*Means are computed according to degree of importance:
extreme; 4=major; 3=moderate; 2=slight; 1=none

teachers and school personnel to change or listen to new ideas," and "lack of communication among the staff." A third barrier, "feeling by teachers and staff that the innovation would have little benefit for them" showed differences which were just short of statistical significance. Responses for these three items in each of the seven size categories are shown in Table 7.10

TABLE 7.10
INNOVATION PROCESS BARRIERS BY SYSTEM SIZE

Size	(2) Unwillingness to Change Freq.	Mean*	(6) Lack of Staff Communication Freq.	Mean*	(9) Feeling of Little Benefit Freq.	Mean*	Total of Items 2,6 & 9 Freq.	Mean*
1 - 299	(6)	1.50	(6)	2.34	(6)	1.50	(18)	1.78
300 - 2,499	(66)	2.38	(66)	2.23	(66)	2.23	(198)	2.28
2,500 - 4,999	(52)	2.39	(52)	2.46	(52)	2.22	(156)	2.38
5,000 - 9,999	(54)	2.61	(54)	2.30	(54)	2.32	(162)	2.38
10,000 - 24,999	(74)	2.91	(73)	2.78	(73)	2.58	(220)	2.77
25,000 - 79,999	(54)	2.58	(54)	2.37	(53)	2.21	(161)	2.40
80,000 and over	(29)	2.45	(29)	2.66	(29)	2.21	(87)	2.44
Total	(335)	2.45	(334)	2.46	(333)	2.30	(1002)	2.44
Significance Level (chi-square test)	$p < .04$		$p < .03$		$p < .06$			

*Means are computed according to degree of importance:
5=extreme; 4=major; 3=moderate; 2=slight; 1=none

For the barriers "unwillingness to change" and "feeling of little benefit," a progression in importance may be noticed as systems increase in size from under 300 students to those with 10,000 to 24,999 students; after reaching a peak, these barriers decline in importance for larger systems. For both barriers the importance reported by the smallest districts is extremely low (1.50). The relationship of district size to the importance of "lack of communication among staff" is not so clear, but again this barrier assumes its greatest importance in districts of 10,000 to 24,999 students.

There were no significant regional differences in the importance attached to the 18 barrier statements.

2. IMPORTANCE OF BARRIERS IN THE FIVE INNOVATION CATEGORIES

The first seven barriers listed in Table 7.9 were those which were rated by representative districts as being of the greatest importance. These same barriers also had the most divergent impacts on innovations introduced by these districts in the five innovation categories. Differences experienced in relation to five of these barriers were statistically significant. This data is presented in Table 7.11.

(Insert Table 7.11 here)

The lowest rating for each of these seven barriers is given in connection with innovations in the area of programmatic approaches. Particularly since it was noted above that procedural activities were emphasized to a lesser degree for these innovations than for the average, it may be concluded that innovations in this category are the easiest to implement.

For innovations in the category of individualized instruction and team teaching all seven of the barriers listed in Table 7.11 were rated as being more important than for all categories combined. In three instances out of the seven, barriers were judged to be most important for this innovation category. "Inadequacy of plant, facilities, equipment or supplies" was particularly important for this innovation type, which often required extensive plant alterations as well as an extensive array of new instructional materials. "Frustration encountered by teachers or staff in trying to adopt" was also most likely to be a problem when innovations were introduced in this area; this recalls our earlier finding in Chapter Five that the consequences for this innovation type were the most mixed, and that, in particular, the workload of teachers was most likely to be noted as a problem. "Shortage of funds allocated for the innovation" was also a problem for innovations in the area of individualized instruction, but it was equally a problem for innovations in curriculum revision and instructional facilities.

Although procedural activities were most consistently emphasized when administrative innovations were introduced, three of the most important barriers were most commonly encountered in connection with these innovations. "Confusion among the staff about the purpose of the innovation," "staff's lack of precise information about the innovation," and "lack of communication among the staff" were most important as problems for administrative innovations.

No significant differences in degree of importance of barriers in the five innovation categories were found for very large districts.

TABLE 7.11
BARRIERS TO INNOVATION PROCESS IN THE FIVE INNOVATION CATEGORIES
DISTRICTS <80,000

Barrier	Ind.Instr.+ Team Teach Freq.	Mean*	Adminis-trative Freq.	Mean*	Programmatic Approaches Freq.	Mean*	Curriculum and Technology Freq.	Mean*	Organizational Freq.	Mean*	Combine Freq.	Mea
1. Confusion among staff about purpose of innovation ($p < .01$)**	(89)	2.68	(65)	2.88	(56)	2.16	(61)	2.64	(37)	2.40	(308)	2.5
2. Unwillingness of teachers and personnel to change or listen to new ideas	(89)	2.64	(64)	2.65	(56)	2.29	(61)	2.43	(36)	2.92	(306)	2.5
3. Shortage of funds allocated for innovation ($p < .04$)**	(88)	2.75	(64)	2.35	(56)	2.16	(61)	2.74	(35)	2.63	(304)	2.5
4. Staff's lack of information about the innovation ($p < .01$)**	(88)	2.63	(65)	2.78	(56)	2.11	(61)	2.59	(37)	2.40	(307)	2.5
5. Frustration encountered by teachers or staff in trying to adopt ($p < .01$)**	(88)	2.78	(64)	2.58	(54)	2.02	(60)	2.53	(36)	2.58	(302)	2.5
6. Lack of communication among the staff ($p < .04$)**	(88)	2.49	(64)	2.61	(56)	2.18	(60)	2.57	(37)	2.21	(305)	2.4
7. Inadequacy of plant, facilities, equipment or supplies	(88)	2.72	(63)	2.18	(55)	2.15	(61)	2.44	(37)	2.62	(304)	2.4
Total	(618)	2.67	(449)	2.58	(389)	2.14	(425)	2.56	(255)	2.53	(2136)	2.5

*Means are computed according to degree of importance:
5=extreme; 4=major; 3=moderate; 2=slight; 1=none

**Chi-square test

3. IMPORTANCE OF BARRIERS IN THE TOP TEN INNOVATIONS

For four of the seven most important barriers, significant differences were found in their impact on innovations among the top ten. Table 7.12 shows that in the introduction of three of the top ten innovation types barriers

TABLE 7.12
BARRIERS TO THE INNOVATION PROCESS IN THE TOP TEN SHOWCASE INNOVATIONS

	Barrier									
Innovation	2. Unwilling to Change Freq.	Mean*	4. Lack of Information Freq.	Mean*	5. Teacher Frustration Freq.	Mean*	7. Inadequate Plant Freq.	Mean*	Barriers 2,4,5 & 7 Combined Freq.	Mean*
Individual instruction and team teaching - all curriculum areas	(70)	2.63	(69)	2.60	(69)	2.84	(69)	2.74	(277)	2.70
Special instructional programs	(36)	2.14	(36)	2.03	(35)	2.08	(35)	2.34	(142)	2.15
Curriculum revision	(26)	2.61	(26)	2.85	(26)	2.65	(26)	2.38	(104)	2.62
Individual instruction and team teaching - specific curriculum areas	(23)	2.65	(23)	2.65	(23)	2.57	(23)	2.61	(92)	2.62
Grade and attendance unit	(19)	3.26	(19)	2.58	(19)	2.68	(19)	2.52	(76)	2.76
Planning, research and evaluation	(17)	2.06	(17)	2.59	(17)	2.59	(17)	1.53	(68)	2.19
Unit courses, mini-courses and electives	(16)	2.50	(16)	2.62	(15)	2.53	(16)	2.25	(63)	2.48
In-service training	(12)	2.66	(12)	2.67	(11)	2.55	(11)	2.18	(46)	2.53
Guidance and counseling	(11)	2.64	(11)	2.45	(11)	2.18	(11)	2.54	(44)	2.45
Teacher aides, tutors and paraprofessionals	(11)	2.73	(11)	2.18	(11)	1.91	(11)	1.91	(44)	2.18
Total	(241)	2.56	(240)	2.52	(237)	2.54	(238)	2.42	(956)	2.51
Significance Level (chi-square test)	$p < .02$		$p < .01$		$p < .04$		$p < .04$			

*Means are computed according to degree of importance:
5=extreme; 4=major; 3=moderate; 2=slight; 1=none

were found to be of slight importance: In general, barriers were rated as being of low importance by superintendents introducing special instructional programs, teacher aides, and planning, research and evaluation innovations.

In the introduction of three other innovation types barriers were noted as important in particular areas. Teacher frustration and plant inadequacies were noted particularly when individualized instruction and team teaching innovations were introduced for the general curriculum. "Lack of information among the staff" was found to be a problem when curriculum revision was undertaken. Finally, when grade and attendance unit changes were adopted it was noted that there was an "unwillingness among teachers and school personnel to change or listen to new ideas."

D. FACTORS INFLUENCING THE SHOWCASE INNOVATION PROCESS

Three items on the last page of the questionnaire were also relevant to the innovation process: Question #11 asked whether the school system had experienced any difficulty in gaining citizen support for financing education during the 1970-71 school year; and Question #12 asked whether the school system had experienced any disruptive events in that year. These two issues, although not directly related to the showcase innovation effort, may be seen as having potentially profound effects on any major innovative attempt. Finally, the issue of per pupil expenditure, which was discussed in Chapter Two in connection with innovation types, may also be seen as a factor which may either facilitate or obstruct major innovative efforts.

1. GAINING CITIZEN SUPPORT FOR FINANCING EDUCATION

Proposals to citizens asking for financial support for local education are frequently divided into those which ask for continuing funds to maintain existing operations, and those which ask for increased funds to support new projects or programs. In Question #11, superintendents were asked to rate, on a five-point scale, the level of difficulty they had experienced in gaining citizen support for these two types of proposals. In Table 7.13 mean responses to this question are given for representative and very large districts.

(Insert Table 7.13 here)

Very large districts experienced more difficulty than did representative districts in gaining both types of citizen financial support; and districts in both size samples found it more difficult to gain support for new projects than for existing operations.

TABLE 7.13
DIFFICULTY IN GAINING CITIZEN SUPPORT
FOR FINANCING EDUCATION

Support Area	Districts <80,000 Freq.	Mean*	Districts ≥ 80,000 Freq.	Mean*
Support for maintenance of existing operations	(306)	2.31	(28)	2.64
Support for proposed new projects and programs	(294)	2.56	(27)	3.19
Total	(600)	2.43	(55)	2.91

*Mean scores are computed on basis of degree of difficulty:
1=no difficulty; 3=some difficulty; 5=great difficulty

This pattern held largely true when an examination was made of these issues for all districts divided into seven size categories. As can be seen from Table 7.14, difficulties in gaining support for existing operations

TABLE 7.14
DIFFICULTY IN GAINING FINANCIAL SUPPORT BY DISTRICT SIZE

District Size	Existing Operations Freq.	Mean*	New Programs Freq.	Mean*	Combined Freq.	Mean*
1 - 299	(6)	1.33	(6)	1.67	(12)	1.50
300 - 2,499	(66)	2.00	(60)	2.32	(126)	2.15
2,500 - 4,999	(53)	2.19	(52)	2.60	(105)	2.39
5,000 - 9,999	(53)	2.58	(52)	2.67	(105)	2.63
10,000 - 24,999	(76)	2.43	(74)	2.69	(150)	2.56
25,000 - 79,999	(52)	2.46	(50)	2.64	(102)	2.57
80,000 and over	(28)	2.64	(27)	3.19	(55)	2.91
Total	(334)	2.34	(321)	2.61	(655)	2.47

*Mean scores are computed on basis of degree of difficulty:
1=no difficulty; 3=some difficulty; 5=great difficulty

increased with district size, with the exception of districts of 5,000 to 9,999 students; these districts had more difficulty than all but those over 80,000 students.

The notable and consistent finding of this table, however, is the fact that districts of all sizes experienced more difficulty in gaining support for new programs than for existing operations. Theoretically, there should be a relationship between ease of gaining citizen support for new programs and the extent of use of various media in explaining these programs to the public. Referring again to the data in Table 7.7, it can be recalled that there was a general increase in overall use of media as districts increased in size; very large districts, though making the greatest use of local radio and television, made less use of local newspapers, newsletters and public meetings than did districts of 25,000 to 79,999 students. Comparing these findings with those of Table 7.14, one might infer that the greater use of media by larger districts was necessary to combat citizen resistance. The four sizes of districts between 2,500 and 79,999 students experienced equal difficulty in gaining support for new programs. Districts with over 80,000 students, however, encountered considerably more difficulty; we can only conjecture that had their use of local print media and meetings been greater, their difficulties in gaining support might have been held down to the level of other districts. It should also be pointed out that "shortage of funds allocated for the innovation" was the top-ranking (most important) barrier for these very large districts (Table 7.9).

Table 7.15 shows financing difficulties encountered by representative districts divided into eight regions of the country. Three districts (Mid East, Rocky Mountains and South West) experienced no more difficulty in

(Insert Table 7.15 here)

gaining support for new programs than for old programs. Two of these regions (South West and Rocky Mountains) had the least difficulty in gaining support both for existing and for new programs. This finding is very interesting when it is compared with the earlier discussion on regional differences in utilization of procedural actions and media. The South West ranked third in overall utilization of procedures and second in overall usage of media to explain new programs to the public. The Rocky Mountain States ranked first in use of procedures and third in the use of media. The South East, which ranks third in ease of obtaining citizen support, ranked fifth in use of procedures and first in use of media. It would appear, then, that at least in these regions of the country, a concerted effort in terms of procedural actions and the use of various media was rewarded by citizen support.

TABLE 7.15
DIFFICULTY IN GAINING CITIZEN SUPPORT BY REGION
DISTRICTS <80,000

Region	Existing Operations Freq.	Existing Operations Mean	New Programs Freq.	New Programs Mean	Combined Freq.	Combined Mean
South West	(25)	1.80	(23)	1.70	(48)	1.75
Rocky Mountains	(11)	2.00	(10)	2.00	(21)	2.00
Plains	(26)	2.00	(25)	2.84	(51)	2.41
South East	(66)	2.33	(66)	2.52	(132)	2.43
Great Lakes	(64)	2.36	(62)	2.63	(126)	2.49
Far West	(40)	2.35	(37)	2.81	(77)	2.57
Mid East	(50)	2.64	(47)	2.55	(97)	2.60
New England	(24)	2.33	(24)	2.96	(48)	2.65
Total	(306)	2.31	(294)	2.56	(600)	2.[illegible]
Significance Level (F-test)	N.S. (p < .06)		p < .04			

We can not draw a final conclusion that this type of approach is always successful, however, since the New England states, which ranked second in overall use of procedures, met the most citizen resistance in financing new programs. In this region it must be concluded that there are other factors operating to harden citizen resistance.

Question #11 did not ask whether difficulty had been experienced in gaining support for the showcase innovation in particular, but some degree of relationship may be assumed. Table 7.16 makes this comparison among the top ten showcase innovations.

TABLE 7.16
DIFFICULTY IN GAINING CITIZEN SUPPORT IN TOP TEN INNOVATIONS

Innovation	Existing Operations Freq.	Existing Operations Mean	New Programs Freq.	New Programs Mean	Combined Freq.	Combined Mean
Individual instruction and team teaching-all curriculum areas	(67)	2.33	(65)	2.71	(132)	2.51
Special instructional programs	(36)	2.53	(33)	2.51	(69)	2.52
Curriculum revision	(26)	2.46	(25)	2.68	(51)	2.57
Individual instruction and team teaching-specific curriculum areas	(23)	2.74	(22)	2.32	(45)	2.54
Grade and attendance unit	(19)	2.00	(19)	2.63	(38)	2.32
Planning, research and evaluation	(18)	2.16	(17)	2.53	(35)	2.34
Unit courses, mini-courses and electives	(16)	2.25	(14)	3.14	(30)	2.67
In-service training	(12)	1.91	(12)	2.33	(24)	2.12
Guidance and counseling	(10)	2.30	(10)	2.40	(20)	2.35
Teacher aides, tutors and para-professionals	(9)	2.22	(8)	2.50	(17)	2.35
Total	(236)	2.34	(225)	2.60	(461)	2.47
Significance Level (chi-square test)	$p < .03$					

Districts which adopted individualized instruction and team teaching *in specific curriculum areas* encountered less difficulty in gaining financial support for new programs than for existing programs. These districts, in fact, met the most resistance for maintaining existing operations, and this could partially explain why the innovation was not adopted on a more comprehensive scale. Districts which did adopt the innovation for all curriculum areas reported meeting considerable resistance in gaining support for new programs. Districts meeting the most resistance for new programs were those which introduced unit courses, mini-courses and electives as their showcase innovation; these districts experienced slightly less than average difficulty in gaining support for new programs. Districts which had the least trouble in gaining support for existing operations innovated in the areas of in-service training and grade and attendance unit changes. If the figures for new programs

bear a direct relationship to the showcase innovation, then it could be said that grade and attendance unit changes met with more resistance than did in-service training programs. Finally, it was noted above that special instructional programs were adopted without concerted efforts in taking procedural actions and without encountering undue barriers. From Table 7.16 it can be seen that districts which introduced such programs as their showcase innovations had no more difficulty in gaining support for new programs than for existing operations.

2. DISRUPTIVE EVENTS

Question #12 asked whether the school system had experienced teacher strikes, community group protests or student unrest during the 1970-71 school year. Table 7.17 shows that community protests and student unrest were more common in very large districts than in representative districts by a margin of one event of each type during the school year. Community group protests occurred at least once in 88% of very large districts, and in 40% of representative districts; the figures for student unrest are similar: 89% and 39% for the two size samples respectively. Teacher strikes and demonstrations occurred in only 10% of very large districts and 9% of representative districts.

TABLE 7.17
EXPERIENCE OF DISRUPTIVE EVENTS

Event	DISTRICTS < 80,000					DISTRICTS ≥ 80,000				
	Number Answering Question	Number of Events			Mean*	Number Answering Question	Number of Events			Mean*
		None %	One %	More than one %			None %	One %	More than one %	
Teacher strikes and demonstrations	(307)	91	8	1	1.10	(27)	89	4	7	1.19
Community group protests	(301)	60	18	22	1.63	(26)	12	15	73	2.62
Student unrest (protests, confrontations, etc.)	(303)	61	22	17	1.55	(26)	12	12	77	2.65
Total					1.40					2.14

*Means are computed on the basis of frequency of events during 1970-71 year: 1=never; 2=once; 3=more than once

The relationship of community protests and student unrest with district size becomes even more striking when all districts are divided into seven categories by size. As Table 7.18 shows, these disruptions increase steadily with system size; this relationship is significant at the .00005 level in both

TABLE 7.18
EXPERIENCE OF DISRUPTIVE EVENTS BY DISTRICT SIZE

Size	Teacher Strikes Freq.	Mean*	Community Protest Freq.	Mean*	Student Unrest Freq.	Mean*	Events Combined Freq.	Mean*
1 - 299	(6)	1.00	(6)	1.00	(6)	1.00	(18)	1.00
300 - 2,499	(67)	1.04	(67)	1.27	(67)	1.15	(201)	1.15
2,500 - 4,999	(54)	1.15	(53)	1.43	(53)	1.34	(160)	1.30
5,000 - 9,999	(54)	1.09	(52)	1.56	(54)	1.43	(160)	1.35
10,000 - 24,999	(74)	1.12	(71)	1.87	(72)	1.76	(217)	1.58
25,000 - 79,999	(52)	1.10	(52)	2.09	(51)	2.20	(155)	1.79
80,000 and over	(27)	1.19	(26)	2.62	(26)	2.65	(79)	2.14
Total	(334)	1.14	(327)	1.71	(329)	1.64	(990)	1.48
Significance Level (chi-square test)			p <.00005		p <.00005			

*Means are computed on the basis of frequency of events during 1970-71 year: 1=never; 2=once; 3=more than once

cases. It may be recalled that very large districts reported "taking advantage of crisis situations" more often than did representative districts (Table 7.1); it appears that the larger districts were more frequently faced with this option!

There were no regional differences in the frequency of community group protests or teacher strikes, but regional differences in the frequency of student unrest were significant at the .04 level. The New England states

experienced the greatest amount of student unrest (mean = 2.24, or just over one time during the year), while the Rocky Mountain states experienced the least (mean = 1.18, or almost never). This additional information may possibly contribute to an explanation of why the New England states encountered particular difficulty in gaining citizen support for new programs.

Question #12d asked whether any of these disruptions had influenced the innovations described earlier in the questionnaire (the showcase innovation and the innovation inventory). Table 7.19 presents a summary of responses of those districts which had experienced one or more disruptive events. While representative districts reported an influence in 29% of cases, 57% of very large districts reported an influence. This difference in effects felt by the two size samples is significant at the .01 level. Thus, disruptive events were not only more common in very large systems, but, when they occurred, they had a greater impact on new programs introduced by the systems.

TABLE 7.19
INFLUENCE OF DISRUPTIVE EVENTS ON INNOVATION

	Districts <80,000		Districts ≥80,000		Total	
	Freq.	%	Freq.	%	Freq.	%
Influence	(55)	29	(13)	57	(68)	32
No influence	(135)	71	(10)	43	(145)	68
Total	(190)	100	(23)	100	(213)	100
Significance Level (chi-square test): $p < .01$						

When disruptions experienced by a school system were compared with the category of showcase innovation for representative systems, it was found that systems innovating in the organizational category experienced the fewest of all types of disruptions. Table 7.20 shows that the difference across categories for community protests and student unrest are statistically significant.

TABLE 7.20
EXPERIENCE OF DISRUPTIVE EVENTS BY
SHOWCASE INNOVATION CATEGORY
DISTRICTS <80,000

Event	Ind. Instr. & Team Teach. Freq.	Mean*	Administrative Freq.	Mean*	Program App. Freq.	Mean*	Curriculum & Tech. Freq.	Mean*	Organizational Freq.	Mean*	Total Freq.	Mean*
Teacher strikes	(85)	1.12	(65)	1.09	(53)	1.08	(60)	1.33	(37)	1.95	(307)	1.10
Community protest (p <.05)**	(84)	1.77	(64)	1.72	(53)	1.43	(59)	1.68	(35)	1.37	(301)	1.63
Student unrest (p <.01)**	(84)	1.54	(64)	1.72	(53)	1.53	(60)	1.60	(36)	1.28	(303)	1.55
Total	(253)	1.48	(193)	1.51	(159)	1.35	(179)	1.54	(108)	1.23	(911)	1.40

*Means are computed on the basis of frequency of events during 1970-71 year: 1=never; 2=once; 3=more than once

**Chi-square test

3. PER PUPIL EXPENDITURE

In Chapter Two the district expenditure per pupil was examined in terms of its relationship to types of innovations adopted. In this chapter it will be discussed in terms of process factors. It was pointed out in Chapter Two that the mean expenditure of representative districts ($785.39) was almost identical with that of very large districts ($789.50). When per pupil expenditure for all districts divided into seven categories according to size is examined, the most outstanding finding is that districts in the two smallest size categories have a much higher rate of expenditure than do all other districts. These figures are given in Table 7.21.

(Insert Table 7.21 here)

It would thus appear that districts of under 2,500 students are blessed with remarkable assets for innovation. Although they use procedures far less than the average to assure successful innovation, and utilize media the least in explaining new programs to the public, they have the least difficulty in gaining citizen support for their outstandingly high per pupil expenditures. In addition they have the fewest disruptive events with which to cope.

TABLE 7.21
PER PUPIL EXPENDITURE BY DISTRICT SIZE

Size	Per Pupil Expenditure Freq.	Mean
1 - 299	(3)	$ 875.00
300 - 2,499	(60)	864.97
2,500 - 4,999	(52)	745.94
5,000 - 9,999	(48)	757.69
10,000 - 24,999	(67)	799.51
25,000 - 79,999	(48)	731.06
80,000 and over	(24)	789.50
Total	(302)	$ 785.72

A considerable range of expenditures was found in different regions of the country, from a high of $1011.90 per pupil in the Mid East to a low of $600.75 in the Rocky Mountain states. In Table 7.22 the figures for all regions are given for representative districts, very large districts, and all districts combined.

(Insert Table 7.22 here)

Table 7.22 also shows the rank of representative districts in each region in terms of overall use of media to explain new programs to the public (from Table 7.8) and in terms of difficulty encountered in gaining citizen financial support for educational programs (from Table 7.15). Roughly speaking, these rankings indicate that regions with higher per pupil expenditures used media less and experienced more difficulty in gaining financial support. These regions include most of the large urban population centers of the nation.

In Chapter Two the per pupil expenditure was compared with the top ten innovations; it was found (Table 2.9) that districts with lower expenditures tended to adopt special instructional programs. In this chapter it was pointed out that, when innovations of this type were adopted, procedural actions were taken less often than on the average and that barriers were of small importance. In addition it was found that districts innovating in this area experienced no more difficulty in gaining support for new programs than for existing operations.

TABLE 7.22
PER PUPIL EXPENDITURE BY REGION

Region	Districts <80,000 Freq.	Mean	Rank	Districts ≥80,000 Freq.	Mean	Rank	Combined Freq.	Mean	Use of Media Rank*	Difficul of Finance Rank**
Mid East	(47)	$1023.66	1	(5)	$ 901.40	2	(52)	$1011.90	7	2
Far West	(37)	849.49	2	(2)	861.00	3	(39)	850.08	8	3
New England	(18)	828.17	3	(1)	951.00	1	(19)	834.63	5	1
Great Lakes	(61)	783.10	5	(4)	808.00	4	(65)	784.63	4	4
Plains	(25)	783.60	4	(1)	720.00	6	(26)	781.15	6	6
South West	(21)	753.05	6	(2)	558.50	7	(23)	736.13	1	8
South East	(61)	588.77	8	(9)	744.33	5	(70)	608.77	2	5
Rocky Mountains	(8)	600.75	7	-	--	-	(8)	600.75	3	7
Total	(278)	$ 785.39		(24)	$ 789.50		(302)	$ 785.72		

*Ranked in order of greatest use of media; i.e., 1=greatest use, 8=least use.

**Ranked in order of greatest difficulty in gaining financial support; i.e., 1=greatest difficulty, 8=least difficulty.

E. DESCRIPTION OF THE SHOWCASE INNOVATION PROCESS

We have discussed above the responses given by superintendents to closed-ended questions concerning the showcase innovation process and related factors. Now a look will be taken at responses to Question #1b, which asked superintendents to describe by what process the showcase innovation had been introduced and implemented, and Question #1e, which asked superintendents to identify the key factors making the adoption and acceptance of the showcase innovation successful or unsuccessful.

The factors listed in response to these questions were generally related to procedures (including gaining participation and cooperation), media and funding issues. In Table 7.23 responses which were related to procedures and media are presented, along with several other factors which did not fall into

one of the other categories. First the citations of key factors are given (Question #1e) for both representative and very large districts, and then the total citations are listed (Questions #1b and #1e combined) for districts in each size sample. Percentages are based on the total number of showcase innovations reported in each size sample.

(Insert Table 7.23 here)

Procedures which were directed at gaining the participation and cooperation of individuals and groups inside and outside the school were discussed in detail in Chapter Six. Here we can see that these two types of procedures played a very significant role in influencing the success of the showcase innovation. In representative districts "participation" was mentioned most often as a key factor (25%), and in very large districts "participation" (31%) and "cooperation" (26%) were outranked only by "planning" (39%). "Planning" was the most frequently mention factor overall in both districts; however when it was used as a procedure it was only a key factor half the time in representative districts and two thirds of the time in very large districts. In contrast, when participation was mentioned it was almost always a key factor, and when cooperation was mentioned in very large districts it generally played a key role. Other procedures which, when used, tended to be key factors were the effective use of personnel (all districts) and public relations programs in representative districts. Both of these factors are related to participation and cooperation, and thus the outstanding import of this table is that the *involvement of various individuals and groups in the innovation process is viewed as the most significant procedure to employ in securing the success of an innovation.* Adding to the impact of this finding is the fact that training of school personnel is also highly rated by all districts as a key factor.

Assessment procedures such as evaluation, pilot projects, and surveys were rarely used and even more rarely regarded as key factors. Included under "other procedures" in Table 7.22 were a variety of factors which were almost always viewed as "key" by the districts which employed them. These include "intensity of effort," "permissive school stance," "integration with previous procedures," and "implementing without prior information to parents and students." Each of the procedures included here was mentioned by no more than one district.

Table 7.23 points out the fact that although a number of different media were often employed for various purposes in the innovation process, these were rarely regarded as being key factors. Meetings, consultations, task forces and site visits stand out in this regard. The use of mass media was rarely considered worth mentioning even though actual frequency of use to promote new innovations is reasonably high. Media were regarded as a key factor by only one district.

TABLE 7.23
DESCRIPTIONS OF FACTORS INFLUENCING SUCCESS OF THE SHOWCASE INNOVATION

Factor	Cited as Key Factor				Total Citations			
	Districts <80,000		Districts ≥80,000		Districts <80,000		Districts ≥80,000	
	Freq.	% of 315**	Freq.	% of 31**	Freq.	% of 315**	Freq.	% of 31**
Procedures								
1. Participation†	(78)	25	(11)	31	(89)	28	(11)	31
2. Planning†	(50)	16	(12)	39	(104)	33	(19)	61
3. Staff Training	(42)	13	(5)	16	(87)	28	(9)	29
4. Cooperation	(35)	11	(8)	26	(66)	21	(9)	29
5. Personnel Utilization†	(22)	7	(3)	10	(26)	8	(3)	10
6. Public Relations Program†	(23)	7	--	--	(31)	10	(3)	10
7. Evaluation	(15)	5	(1)	3	(29)	9	(3)	10
8. Course/Program Development	(12)	4	(1)	3	(47)	15	(8)	26
9. Pilot Projects	(8)	3	(2)	6	(36)	11	(5)	16
10. Survey	(3)	1	--	--	(10)	3	(1)	3
11. Other	(16)	5	(2)	6	(18)	6	(2)	6
Media								
1. Workshops	(9)	3	(1)	3	(44)	14	(3)	10
2. Communication (unspec.)†	(8)	3	(2)	6	(10)	3	(2)	6
3. Meetings	(8)	3	(1)	3	(72)	23	(5)	16
4. Task Force††	(4)	1	(3)	10	(40)	13	(13)	42
5. Consultation	(6)	2	--	--	(51)	16	--	--
6. Site Visits	(4)	1	(1)	3	(40)	13	(4)	13
7. Written Communication	(2)	1	--	--	(22)	7	(1)	3
8. Demonstrations	(2)	1	--	--	(7)	2	(2)	6
9. Mass Media	(1)	*	--	--	(5)	2	(1)	3
10. Audio/Visual Presentation	(1)	*	--	--	(5)	2	--	--
Other Factors								
1. Early Success/Failure***	(17)	5	--	--	(20)	6	--	--
2. Space, New Facility†	(8)	3	(3)	10	(17)	5	(6)	19
3. Intrinsic Value of Innovation	(11)	4	--	--	(12)	4	--	--
4. Materials, Equipment	(9)	3	(1)	3	(20)	6	(3)	10
5. Time Ripe for Innovation	(2)	1	(1)	3	(2)	1	(1)	3
6. Other	(2)	1	--	--	(2)	1	--	--

(Table continued on next page)

Continuation of Table 7.23

*Less than 0.5%.

**Respondents could name more than one factor; thus the total of percents are greater than 100.

***Early failure was a key factor in two cases; in the remaining 15 cases early success was a key factor.

†In some cases lack of this procedure was a key negative factor.

††In one case task force was a key negative factor.

Early success or failure of the innovation attempt, the intrinsic value of the innovation, and the fact that the "time was ripe" were other factors which, when mentioned, were generally keys to success (or failure). The availability of materials, equipment and plant facilities were mentioned by some districts; finally (included in "other factors") one district credited success to the maturity of seniors in the high school, and one district felt its innovation succeeded because "faculty in opposition left the system."

Funding factors which were given in response to Questions #1e and #1b are given in Table 2.24. Again those factors cited as the keys to success or failure are given first and are followed by total citations.

(Insert Table 7.24 here)

Although no one source of funds is frequently specified in districts from either size sample, the availability of funds overall was mentioned as a factor by 27% of representative districts and 45% of very large districts. Federal agencies were specified in over half the cases as being the primary source of funds. Although funding availability was rarely mentioned as a key factor (6% in each size sample) total citations place this issue second for very large districts and fourth for representative districts when the data in Table 7.22 and 7.23 are combined. Presumably funds were also necessary for the implementation of many other innovations, but this fact was not regarded as outstanding in terms of the total process. Only seven representative districts (2%) and one very large district (3%) specified that no extra funds were required for the showcase innovation. The issue of cost/benefit ratio was rarely mentioned, but when it was, it was mentioned as a negative factor.

Table 7.25 provides a comparison of all spontaneously mentioned factors (Questions #1e and #1b) with the emphasis placed on procedures (Question #2; rank order from Table 7.1), the extent of use of media (Question #8; rank order from Table 7.6) and the importance of the barriers (Question #3; rank order from Table 7.9).

(Insert Table 7.25 here)

TABLE 7.24
FUNDING FACTORS FOR THE SHOWCASE INNOVATION

Funding Factors	Cited as Key Factor				Total Citations			
	Districts <80,000 Freq.	% of 315	Districts ≥ 80,000 Freq.	% of 31	Districts <80,000 Freq.	% of 315	Districts ≥ 80,000 Freq.	% of 31
Federal Source								
ESEA Title III	(5)	2	(1)	3	(18)	6	(2)	6
ESEA Title I	(1)	*	--	--	(14)	4	(1)	3
ESEA - unspecified	--	--	--	--	(1)	*	(1)	3
EDDA	--	--	--	--	--	--	(1)	3
Federal unspecified	(3)	1	--	--	(12)	4	(1)	3
Total Federal	(9)	3	(1)	3	(45)	14	(6)	19
Other Sources								
Local only	(3)	1	--	--	(6)	2	(1)	3
Local Supplement	(1)	*	--	--	(4)	1	(1)	3
State	(1)	*	--	--	(9)	3	(2)	6
Private	--	--	--	--	(1)	*	--	--
Unspecified	(5)	2	(1)	3	(22)	9	(4)	13
Total Non-Federal	(10)	3	(1)	3	(42)	13	(8)	26
Other Funds Factors								
Cost/Benefit**	(1)	*	(1)	3	(2)	1	(1)	3
Required no funds	(1)	*	--	--	(7)	2	(1)	3
Total Mentions of Funding Factors	(21)	6	(3)	9	(96)	30	(16)	51

*Less than 0.5%.
**Cost/Benefit was mentioned only as key negative factor.

TABLE 7.25
COMPARISON OF SPONTANEOUSLY MENTIONED FACTORS
WITH PROCEDURES, MEDIA AND BARRIERS

Spontaneously Mentioned Factor	% Key Factor All Districts % of 346	% Total Mentions - All Districts % of 346	Related *Procedures:* Rank Order Among 21 Items (Question #2)	Related *Media:* Rank Order Out of 5 Items (Question #8)	Related *Barriers:* Rank Order Among 18 Items (Question #3)
Procedure					
Participation	26	29	9, 12, 20		12
Planning	18	36	2		13
Training	14	28	16		1, 2, 4
Cooperation	12	22	3, 8, 13, 18		12
Personnel Utilization	7	8	1, 4, 12		8
Public Relations	7	10	16, 20	1, 2, 3, 4, 5	15
Evaluation	5	9	10		
Course/Program Development	4	16			
Pilot Projects	3	12	5, 14		
Surveys	1	3	5, 6, 7		
Medium					
Workshops	6	14			1, 2, 4
Communication	3	3			2, 6, 11
Meetings	3	22		3	
Task Force	2	15			
Consultation	2	15	16		14, 18
Site Visits	1	13			17
Written Communication	1	7		1, 2	
Demonstrations	1	3			9
Mass Media	*	2		1, 4, 5	
Audio/Visual Presentation	*	1			
Other Factors					
Early Success/Failure	5	6			5, 16
Space, New Facility	3	7			7
Intrinsic Value of Innov.	3	3	19		9
Material/Equipment	3	7			7
Time Ripe	1	1	21		
Funding	6	32	15		3

* Less than 0.5%

In this table the total citations and citations as key factors of each spontaneously mentioned item are given as percentages of all districts combined; percentages are thus based on 346, the total number of showcase innovations reported by all districts. Only one factor, course or program development, is not related to a procedure or barrier statement, while many are related to more than one.

It would appear that the procedural statements listed in Question #2 were quite comprehensive, covering all but one procedural item mentioned spontaneously, as well as funding issues and media used. On the other hand, the rank order attached to these statements by respondents bears little resemblance to the rank order of spontaneously mentioned items. Only two of the 21 procedural statements from Question #2 are not listed in Table 7.24 as being related to a spontaneously mentioned item. These are "providing a climate conducive to risk-taking" (ranked 11th), and "confrontation of differences" (ranked 17th). The Question #2 list can thus be judged relevant as well as comprehensive.

The barrier statement list from Question #3 was intended to speak to potential trouble spots rather than to comprehensively cover lack of procedural actions. One or more of the listed barrier statements were relevant to each spontaneously mentioned item which was noted as a negative factor (see footnotes to Table 7.23), with the exception of "task force." The one failure of a task force noted by respondents could be considered to be related to the barrier "disorganization of the planning and implementation efforts," but we did not take the liberty of making this judgment. Only one listed barrier is not referred to in Table 7.25; this is "rigidity of school system structure and bureaucracy" (ranked 10th). Thus it may be said that the barriers list, as well as the procedures list, is relevant and speaks to the issues.

Respondents made a similar judgment. Question #4b asked whether items like those in Question #2 and #3 would be helpful as a checklist in planning or evaluating future changes. Eighty percent of superintendents of representative districts and 74% of superintendents of very large districts answered affirmatively (see Table 7.26). If only those superintendents who answered the question were considered, the results would be even more overwhelming (91% of representative districts and 85% of very large districts).

(Insert Table 7.26 here)

When the procedures listed in Question #1 were compared across the five innovation categories, it was found that most procedures (listed in Table 7.23) were mentioned more frequently in connection with *individualized instruction and team teaching* than they were for other categories. In particular, staff training was a more common factor in these innovations (mentioned in 45% of cases; key factor in 26% of cases) than on the average (mentioned in 28% of

TABLE 7.26
UTILITY OF PROCEDURES AND BARRIERS LISTS
AS CHECKLISTS IN FUTURE INNOVATIONS

Utility	Districts < 80,000 Freq.	% of 322	Districts ≥ 80,000 Freq.	% of 31
Useful	(257)	80	(23)	74
Not Useful	(25)	8	(4)	13
Total	(282)	88	(27)	87
No Information	(40)		(4)	

cases; key factor in 13% of cases). Procedures, overall, were used the least in administrative innovations, although differences were not statistically significant. For all categories except administrative innovations, findings were consonant with those of Question #2 procedural uses: use was above average in individualized instruction and team teaching; average in organizational innovations, and below average for programmatic approaches and for curriculum changes and instructional facilities.

F. ADVICE TO OTHER DISTRICTS

Question #1f asked superintendents what advice they would offer to districts like their own which might be adopting the same innovation. Advice relative to gaining the participation and commitment of individuals inside and outside the school has been discussed in detail in Chapter Six. This advice, along with all other advice, is listed in Table 7.27 in rank order according to the number of superintendents who offered each item of advice.

(Insert Table 7.27 here)

The top-ranking items in this table bear close resemblance to the spontaneously mentioned items given in response to Question #1e (key factors), as listed in Table 7.23 and 7.25. *Needs assessment*, however, is one item which was given scant attention in actual procedures employed but which is highly recommended to other districts.

TABLE 7.27
ADVICE TO OTHER DISTRICTS:
PROCEDURES TO GAIN SUCCESS AND OVERCOME BARRIERS

Advice	Districts <80,000		Districts ≥80,000		Combined		Procedure Rank	Barrier Rank
	Freq.	% of 315*	Freq.	% of 31*	Freq.	% of 346*		
1. Gain participation in decision-making and planning	(72)	23	(6)	19	(78)	23	9,12,20	1,4,5,
2. Adequate planning, preparation & coordination	(51)	16	(9)	29	(60)	17	2	12, 13
3. Gain commitment, support & acceptance	(48)	15	(2)	6	(50)	14	12, 16	1,2,4, 16
4. Needs assessment and diagnosis	(43)	14	(4)	13	(47)	14	5, 6, 7	
5. In-service training, workshops, staff development	(31)	10	(3)	10	(34)	10	3, 16	1, 4
6. Utilization of personnel; right person for the job.	(18)	6	(6)	19	(24)	7	4	8
7. Pilot projects; gradual implementation	(19)	6	(2)	6	(21)	6	7	
8. Adapt innovation to local needs	(17)	5	(3)	10	(20)	6	6,7,12,14	
9. Provide enough lead time, planning time	(17)	5	(3)	10	(20)	6	2	
10. Evaluate innovation, assess implications	(16)	5	-	-	(16)	5	10, 19	
11. Public relations; inform community	(14)	4	(2)	6	(16)	5	16, 20	15
12. Site visits	(13)	4	-	-	(13)	4		17
13. Assure adequate finances	(11)	4	(2)	6	(13)	4	15	3
14. Voluntary mode of introduction	(9)	3	-	-	(9)	3	8	
15. Flexibility; alternative plans	(8)	3	(1)	3	(9)	3	14	10
16. Good leadership	(6)	2	(3)	10	(9)	3	1	
17. Assess resources	(6)	2	(1)	3	(7)	2	15	3
18. Contact outside experts; use consultation services	(6)	2	-	-	(6)	2		14, 18
19. Adequate facilities, equipment	(6)	2	-	-	(6)	2		7
20. Change curriculum or instruction	(5)	2	(1)	3	(6)	2		
21. Materials & course development	(5)	2	(1)	3	(6)	2		
22. Encourage feedback & communication	(4)	1	(1)	3	(5)	1	3,17,18	6, 11
23. Willingness to devote extra time & work	(4)	1	-	-	(4)	1	8	
24. Continue traditional program	(3)	1	(1)	3	(4)	1	11	
25. Set criteria for admission to or dismissal from program	(2)	1	(1)	3	(3)	1	6, 7	
26. Contact affected personnel	(2)	1	-	-	(2)	1	4	
27. Take care in use of terminology	(2)	1	-	-	(2)	1		1
28. Reward innovativeness	(2)	1	-	-	(2)	1	11	2, 5, 9
29. Other	(23)	7	-	-	(23)	7		

* Respondents could name more than one item: therefore percents total more than 100.

At the right-hand side of Table 7.27 the rank order numbers of relevant Question #2 procedures and Question #3 barriers are listed for each item of advice. All but two advice items are related to one or more procedures or barriers; these are "change curriculum or instruction" (ranked 20th), and "materials and course development" (ranked 21st). Two of the procedures listed in Question #2 are not related to advice items: "finding shared values as a basis for working" (ranked 13th), and "taking advantage of crisis situations" (ranked 21st). All the barrier statements listed in Question #3 were judged to be related to advice items. It thus seems that the items in Question #2 and #3 are adequate to describe not only what the districts actually did, but also what they felt they should have done to assure successful innovation.

When advice was compared across the five innovation categories (for all districts combined), it was found that staff training was particularly recommended for individualized instruction and team teaching innovations. It was advised for these innovations in 21% of cases and in 10% of cases for all categories combined. This difference is significant at the .01 level. This finding is consistent with procedures actually carried out by districts adopting these innovations. In addition it was found that public relations programs were particularly recommended for organizational innovations (16% of cases for organizational, as opposed to 5% of all cases; significant at the .001 level).

A comparison of advice across the top ten showcase innovations showed that staff training was recommended for individualized instruction and team teaching both in the general curriculum (21%) and in specific curriculum areas (22%). Lead time was advised for individualized instruction in specific curriculum areas (22%) and for grade and attendance unit changes (21%); public relations programs were also advised for changes in grade and attendance unit (21%). These findings were all significant at the .05 level. One additional finding, significant at the .01 level, was that good leadership was advised for innovations in planning, research and evaluation (17%, as opposed to 3% for all top ten innovations combined).

G. SUMMARY

Respondents to the questionnaire were asked to rate a list of 21 procedural statements (Question #2) according to the degree of emphasis placed on each in planning and implementing the showcase innovation. The highest ranking items overall were those which theory and research have shown to be effective in the innovation process. These included persistence, planning, providing a climate conducive to sharing ideas, a competent staff, adequate recognition of needs, diagnosis and definition of objectives.

Those districts which adopted innovations in the administrative area indicated the greatest procedural effort, while districts innovating in the areas of curriculum and technology and programmatic approaches used the listed procedures the least. Districts adopting administrative innovations put relatively much greater emphasis on confronting differences and resolving conflicts.

Respondents were also asked to rate a list of 18 barriers (Question #3) according to the degree of importance which each assumed during the showcase innovation process. The most important barrier in very large districts was a shortage of funds allocated for the innovation: this barrier ranked third in importance in representative districts. Five other barriers, rated as being important in all districts, concerned staff issues: confusion and lack of information about the innovation, unwillingness to change or listen to new ideas, frustration or difficulty in trying to adopt, and lack of communication among the staff.

Districts innovating in individualized instruction and team teaching encountered the most barriers, while those adopting programmatic approaches experienced the least. District size was also a factor in the degree of importance of barriers; systems under 300 students encountered the fewest problems, and districts with 10,000 to 24,999 students rated the barriers as most important.

When superintendents were asked to state the procedures used in introducing the showcase innovation and the key factors involved in success or failure of the innovation, the *involvement* of various individuals and groups in the innovation process emerged as the key factor. Availability of funds was often a factor, but rarely a key factor. Federal agencies were mentioned as the primary source of funds in over half the cases.

When the lists of procedural and barrier items (from Questions #2 and #3) were compared with the spontaneously mentioned items, it was found that these lists were comprehensive in covering all procedural items. This significant finding is supported by the fact that the overwhelming majority of respondents agreed that these lists would be useful as checklists in planning and implementing future innovations.

When respondents were asked to offer advice to other districts planning innovations similar to their own, the advice offered differed little from the procedures they had actually employed themselves. The only notable exception was the recommendation that *needs assessment* procedures should be employed; this approach was seldom used to a significant degree in the showcase innovations reported. The procedure and barrier lists were found to be comprehensive in covering points of advice as well as procedures actually employed.

The utilization of media to explain innovations to the public was generally related to district size. Local newspapers were used a great deal by all districts except those with less than 300 students, but the use of local radio increased with district size. Television was used extensively only by districts of over 10,000 students, and it was used most commonly in the South West, the South East and the Rocky Mountain regions. Although the largest districts were the heaviest users of radio and television, their overall usage of the five types of media was slightly less than in districts with 25,000 to 79,999 students.

Districts of all sizes reported more difficulty in obtaining citizen financial support for new programs than for existing operations. There is some indirect evidence that difficulty in financing is inversely related to the use of media to explain new programs! In particular, while the use of local print media and meetings by very large districts fell off slightly, their difficulty with funding new programs rose sharply.

The South West and Rocky Mountain regions, which reported relatively high usage of media and strong emphasis on procedural effort, reported the least difficulty in gaining support for new and existing programs.

The occurrence of community group protests and student unrest increased directly with district size. Student unrest occurred most frequently in the New England states and least often in the Rocky Mountain region.

The smallest districts, with under 2,500 pupils, reported the most favorable combination of factors for innovation; while they had the highest per pupil expenditure, they had the least difficulty in gaining financial support from citizens. They also experienced the fewest disruptive events, used procedures far less than average and used media the least.

Regional differences in per pupil expenditure were striking: while the expenditure in the Mid East was over $1,000, it was only $600 in the Rocky Mountains. Regions with the highest per pupil expenditures reported less utilization of media and greater difficulty in gaining financial support.

CHAPTER EIGHT: MODELS AND DIMENSIONS OF CHANGE IN THEORY AND PRACTICE

The present national survey project grew out of an earlier project which sought to lay a foundation in theory for research on the process of innovation.* An exhaustive search uncovered over 4,000 items of literature relevant to the related topics of planned change, innovation diffusion, technology transfer and knowledge utilization. From a review and analysis of the 1,000 items of highest relevance there emerged two sets of conclusions, one thoretical and one empirical. Twenty five alternative theoretical statements formed in the literature were found to fall into three rather discrete categories which were identified as the "perspectives" of (1) "Research, Development, and Diffusion," (2) "Social Interaction," and (3) "Problem-solving." Each "perspective" represented a coherent set of concepts and to a large degree an ideology of change. Recognizing the merits of each point of view, Havelock further proposed a fourth "perspective" which he labelled "Linkage" to represent a synthesis of the others. Each of these four perspectives will be described in more detail subsequently.

The second set of conclusions from the literature review project represented an attempt to summarize the empirical research literature into seven major principles or "factors." They were labelled as "linkage," "structure," "openness," "capacity,", "reward," "proximity," and "synergy." In surveying the views of superintendents toward innovation, a major objective was to match up their perceptions with these previous conclusions. It was for this reason that the "procedures" and "barriers" questions were developed. The items in these questions represent the essential points in each of the "perspectives" and for each of the "factors" as the summary below indicates.

A. THEORETICAL PERSPECTIVES ON INNOVATION PROCESS**

1. RESEARCH, DEVELOPMENT, AND DIFFUSION (RD&D)

This perspective is guided by at least five assumptions. First, it assumes that there should be a *rational sequence* in the evolution and application of an innovation. This sequence should include research, development, and packaging before mass dissemination takes place. Second, it assumes that there had to be planning, usually on a massive scale over a long time span. Such planning and ordering of stages from initiation to the achievement of stated objectives allows for systematic budgeting, monitoring, and scientific evaluation at each stage. Third, it assumes that there has to be a *division and coordination of labor* to accord with the rational sequence and the planning. Fourth, it makes the assumption of a more-or-less *passive but rational consumer* who will accept and adopt the innovation if it is offered to him in the right place at the right time and in the right form. Fifth, the proponents of this

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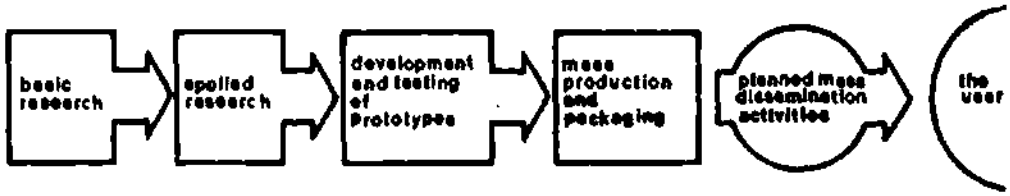
*Havelock, R.G., et al. (1969)

**Summarized from Havelock, et al., op cit, Chapter II.

viewpoint are willing to accept the fact of high initial development cost prior to any dissemination activity because of the anticipated long-term benefits in *efficacy* and *quality* of the innovation and its suitability for *mass audience dissemination*.

Prototypes of this RD&D model are presumed to exist in industry and agriculture. Figure 1 provides an outline of its major components. Within

FIGURE 8.1
THE RESEARCH, DEVELOPMENT, AND DIFFUSION PERSPECTIVE



the field of education major advocates of this viewpoint have been Henry M. Brickell (1961), Francis S. Chase (1968), and David L. Clark and Egon Guba (1965 a and b).

In the survey, four items were derived explicitly from the RD&D perspective. In Table 8.1 these items are shown together with mean response by superintendents.

TABLE 8.1
EMPHASIS ON THE RD&D PERSPECTIVE

Question #*	Item	Districts <80,000 Freq.	Districts <80,000 Mean**	Districts ≥80,000 Freq.	Districts ≥80,000 Mean**
2a	Systematic evaluation	(308)	3.64	(30)	3.73
2b	Solid research base	(302)	3.25	(29)	3.34
2c	Systematic planning	(309)	4.12	(30)	4.30
2d	Adequate definition of objectives	(308)	4.00	(30)	4.27
	Mean Rating of RD&D Items		3.75		3.91

*Question numbers in this chapter refer to those on the Questionnaire; see Appendix A.

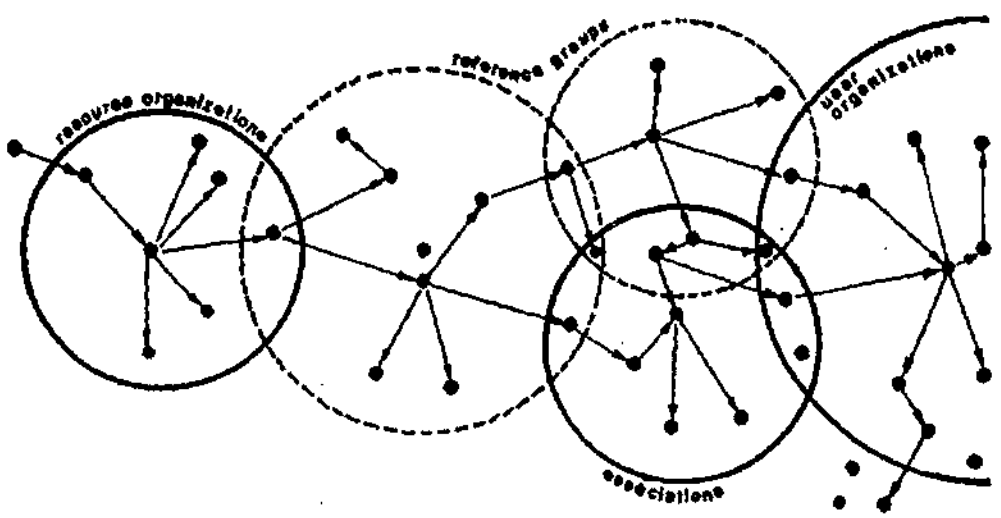
**Means based on 5=extreme, 4=major, 3=modest, 2=slight, 1=none.

It is evident that all these items are generally endorsed to at l... a moderate extent, and also that they receive somewhat greater empha...s in the largest districts. However, items a and b, which are most una...guously associated with this perspective, are also the least emphasized a...ong the form in both size categories

2. SOCIAL INTERACTION (S-I)

This perspective places emphasis on the patterns by which innovations diffuse through a social system. Five generalizations about the proces... are usually emphasized and are supported by empirical research from rural sociology and from the education sources cited earlier (Mort, etc.): (1) that the individual user or adopter belongs to a *network of social relations* which largely influences his adoption behavior; (2) that his *place in the network* (centrality, peripherality, isolation) is a good predictor of his rate of acceptance of new ideas; (3) that *informal personal contact* is a vital part of the influence and adoption process; (4) that *group membership and reference group identifications* are major predictors of individual adoption; (5) that the rate of diffusion through a social system follows a *predictable S-curve pattern* (very slow beginning followed by a period of very rapid diffusion, followed in turn by a long late adopter or "laggard" period).

FIGURE 8.2
THE SOCIAL INTERACTION PERSPECTIVE



Key:
- Individuals in the social system.
- Flow of new knowledge.
- Formal organizational structures
- Informal structures.

Major contributors to the S-I research tradition are Coleman, Katz and Menzel (1966), Ryan and Gross (1943), Lionberger (1960), and E. Rogers (1962, 1970). In education principal proponents have been Mort (1964) and Carlson (1965).

In the survey, four items were derived explicitly from the social interaction perspective. In Table 8.2 these items are shown together with mean responses by superintendents.

TABLE 8.2
EMPHASIS ON THE SOCIAL INTERACTION PERSPECTIVE

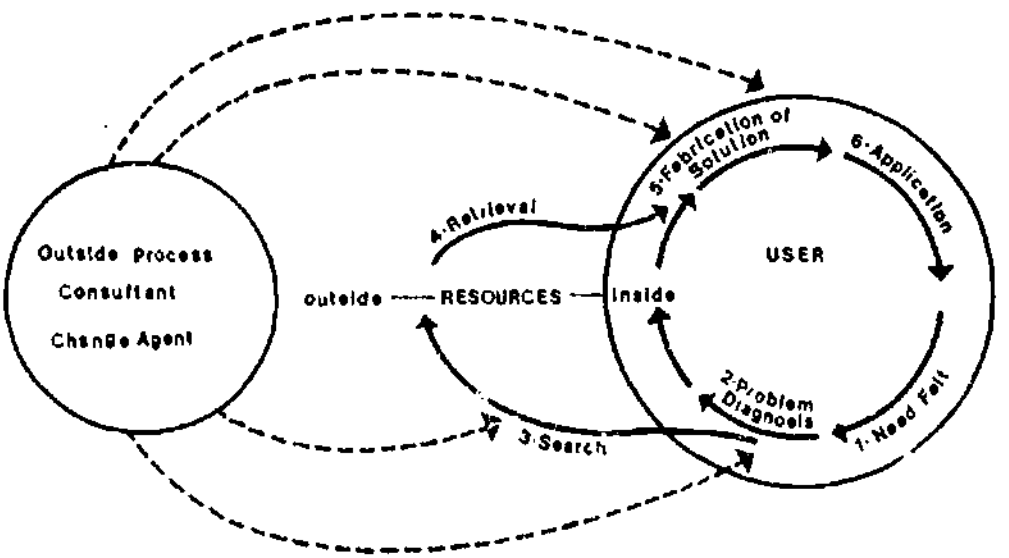
Question #	Item	Districts <80,000 Freq.	Mean	Districts ≥80,000 Freq.	Mean
2g	Utilizing a number of different media to get the new ideas across	(307)	3.36	(30)	3.30
2h	Persistence by those who advocate the innovation	(307)	4.17	(30)	4.10
2r	Involvement of informal leaders of opinion inside the schools	(304)	3.50	(30)	3.33
2s	Participation by key community leaders	(305)	2.84	(30)	3.13
	Mean Rating of Social Interaction Items		3.47		3.46

These four items are also emphasized to a moderate extent by most superintendents but there is little difference between the largest and the representative districts. Again the highest rated item, "persistence.," is the most ambiguous and could fairly be associated with any perspective. It is also interesting to note that the largest districts have somewhat more concern for influencing key persons outside the school system itself (item 2s) and somewhat less concern for influencing insiders (item 2r) relative to representative districts.

3. PROBLEM SOLVING (P-S)

This model rests on the primary assumption that innovation is a part of a problem-solving process which goes on inside the user. Problem-solving is usually seen as a patterned sequence of activities beginning with a *need*, sensed and articulated by the client, which is translated into a *problem* statement and *diagnosis*. When he has thus formulated a problem statement, the client-user is able to conduct a meaningful *search* and *retrieval* of ideas and information which can be used in formulating or selecting the *innovation*. Finally,

FIGURE 8.3
THE PROBLEM-SOLVER PERSPECTIVE



the user needs to concern himself with *adapting* the innovation, *trying out* and *evaluating* its effectiveness in *satisfying* his original need. The focus of this orientation is the user, himself, his needs and what he does about satisfying his needs. The role of outsider is therefore consultative or collaborative. The outside change agent may assist the user either by providing new ideas and innovations specific to the diagnosis or by providing guidance on the process of problem-solving at any or all of the indicated stages.

At least five points are generally stressed by advocates of this orientation: first, that *user need* is the paramount consideration and the only acceptable value-stance for the change agent; second that *diagnosis* of need always has to be an integral part of the total process; third that the outside change agent should be *nondirective*, rarely, if ever, violating the integrity of the user by placing himself in a directive or expert status; fourth that the *internal* resources, i.e., those resources already existing and easily accessible with the client system, itself, should always be fully utilized; and fifth that *self-initiated and self-applied innovation* will have the strongest user commitment and the best chances for long-term survival.

If the "user" is a group or an organization, the problem-solver consultant role also is likely to include training in group communication, the building of group or organizational self-awareness and cohesiveness, and emphasis on *collaboration* among the members of the user system in solving their problems with as wide a circle of participation as possible.

A few of the major advocates of this orientation are Lippitt, et al. (1958), Watson (1967), Jung (1970) and Thelen (1967). Most of those who belong to this school are social psychologists in the group dynamics-human relations tradition.

In the survey, five items were derived explicitly from the problem-solver perspective. In Table 8.3 they are listed with superintendents responses to each.

TABLE 8.3
EMPHASIS ON THE PROBLEM-SOLVER PERSPECTIVE

Question #	Item	Districts <80,000 Freq.	Mean	Districts ≥80,000 Freq.	Mean
2i	Maximizing chances of participation by many groups	(303)	3.65	(30)	3.70
2j	Stressing self-help by the users of the innovation	(303)	3.67	(30)	3.50
2k	Adequate diagnosis of the real educational need	(308)	3.98	(30)	4.23
2l	Providing a climate conducive to sharing ideas	(304)	4.11	(30)	4.10
2n	Creating awareness of the need for change	(308)	4.03	(30)	4.20
	Mean Rating of Problem-Solver Items		3.89		3.95

By a small margin, this set of items appears to be emphasized by the superintendents over those related to the RD&D and social interaction perspectives. There is no difference between large and representative districts.

4. LINKAGE: A UNIFYING CONCEPT

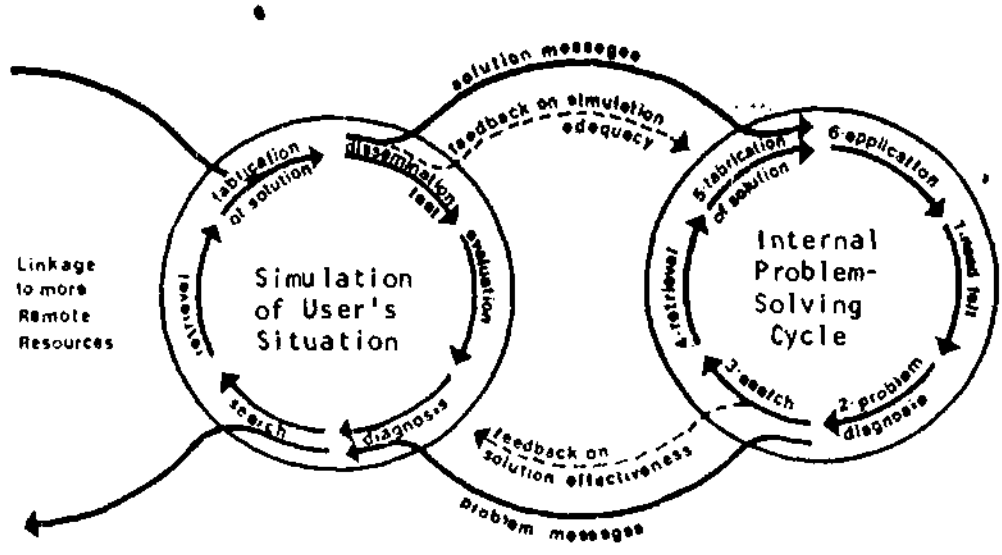
Although the above three models of D&U are espoused by different authors and represent different schools of thought, they can be seen as elucidating different but equally important aspects of a total process. In attempting to build a synthesis from these various schools, we have derived the concept of "linkage." (See Figure 8.4) According to this principle, the internal problem-solving process of the user is seen as the essential starting point, but the process of searching for and retrieving new outside knowledge relevant to the problem-solving cycle is spelled out in greater detail. To coordinate helping

activities with internal user problem-solving activities, the outside resource person (or system) must be able to recapitualte or simulate that internal process. Technically speaking, the resource person needs to develop a good "model" of the user system in order to "link" to him effectively. Clinically speaking, we would say that he needs to have empathy or understanding.

At the same time, the user must have an adequate appreciation of how the resource system operates. In other words he must be able to understand and partially simulate such resource system activities as research, development, and evaluation.

In order to build accurate models of each other, resource and user must provide reciprocal feedback and must provide signals to each other which are mutually reinforcing. It is proposed that this type of collaboration will not only make particular solutions more relevant and more effective but will also serve to build a lasting relationship of mutual trust, and a perception by the user that the resource person is a truly concerned and competent helper. In the long run initial collaborative relations build effective channels through which innovations can pass efficiently and effectively from researchers to developers, from developers to practitioners, and from practitioners to consumers. As the RD&D school holds, there must be an extensive and rational division of labor to accomplish the complex tasks of innovation building. However, each separate roleholder must have some idea of how other roles are performed and some idea of what the *linkage system as a whole* is trying to do.

FIGURE 8.4
THE LINKAGE PROCESS



No items were explicitly selected to represent the "linkage" perspective since this was seen primarily as a synthesis of the others. However, a few items suggest additional aspects of the concept. They are listed in Table 8.4.

TABLE 8.4
SOME ADDITIONAL ITEMS RELATED TO THE LINKAGE PERSPECTIVE

Question #	Item	Districts <80,000 Freq.	Districts <80,000 Mean	Districts ≥80,000 Freq.	Districts ≥80,000 Mean
2o	Creating an awareness of alternative solutions	(306)	3.44	(30)	3.60
2q	Resolution of interpersonal conflicts	(300)	3.26	(28)	3.11
2u	Finding shared values as a basis for working	(297)	3.45	(29)	3.28
	Mean Rating of Additional Linkage items		3.36		3.33

It is evident that these items by themselves receive less endorsement than those presented earlier with little distinction between very large and representative districts. However, Table 8.4 in no way represents the best set of items to represent the linkage concept. Items from each of Tables 8.1, 8.2, and 8.3 would need to be included to give an adequate picture of the cluster of elements involved.

5. THE CONFLICT MODEL OF CHANGE

A number of change agents and change researchers in recent years have emphasized the importance of conflict and crisis as necessary stimulants to change. Some have even proposed that crisis situations can be exploited and even manipulated to effect major positive changes.* Two items in Question 2 (Table 8.5) were intended to ascertain superintendents' reactions to this approach.

(Insert Table 8.5 here)

As indicated by Table 8.5, the crisis model was distinctly less popular than other perspectives.

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*See for example Chesler, M.A. et al., "Change-Through Crisis Model," pp. 150-155 in Havelock and Havelock (1973) or Chesler, M.A. and Lohman, J.E. (1971).

6. A GENERAL CAPACITY MODEL OF CHANGE

It has also been argued in various circles that change primarily requires financial material and staff resources in large quantity. Several items throughout the questionnaire tested this notion in different ways. For comparison purposes here we will only cite the two items on Question 2 that are most relevant.

TABLE 8.6
EMPHASIS ON A GENERAL CAPACITY MODEL OF CHANGE

Question #	Item	Districts <80,000 Freq.	Districts <80,000 Mean	Districts ≥80,000 Freq.	Districts ≥80,000 Mean
2e	Selecting a competent staff to implement the change	(304)	4.04	(30)	4.30
2f	Starting out with adequate financial resources to do the job	(305)	3.42	(30)	3.47
	Mean Rating of Capacity Items		3.73		3.88

It is evident, first of all, that more emphasis was placed on competent staff than on financial resources. However, we should be cautious in interpertation of item 2f since respondents were asked how much emphasis was given, not how much ought to have been given. Presumably, the financial resources available for innovation will not be a matter under the complete control of the superintendent or the prime innovator.

COMPARISON OF SIX PERSPECTIVES

Table 8.7 has been constructed to show an over-all comparison of the different perspectives as reflected in responses to Question 2.

TABLE 8.7
A COMPARISON OF CHANGE PERSPECTIVES
(based on means for item clusters from
Question 2, "Emphasis on Innovation Procedures")

Perspective	Districts <80,000	Districts ≥ 80,000
Problem Solving	3.89	3.95
RD&D	3.75	3.91
Capacity	3.73	3.88
Social Interaction	3.47	3.46
Linkage (Misc. items)	3.36	3.33
Conflict	2.95	3.08

From the table it is evident that the problem-solving perspective receives the most emphasis with RD&D a close second and the conflict model the least. It is also interesting that large and representative districts show in identical rank ordering of the different models and are otherwise also similar in their ratings.

B. BARRIERS TO INNOVATION IN SIX CONCEPTUAL CLUSTERS

A review of empirical studies of innovation diffusion and planned change pointed to seven primary concepts or "unifying themes" which explain most of the findings and serve as a useful set of predictors of innovation transfer success. The list of items in Question 3 under the heading "barriers" were carefully chosen to represent these concepts.

1. LINKAGE (AND PROXIMITY)

In barest essentials "linkage" signifies the degree of connection between people, groups, and organizations. The more linkages there are and the stronger these linkages, the more effective will be the day-to-day contact and exchange of information; hence the greater will be the opportunity to transfer knowledge and innovations.

There are some strong theoretical reasons for assuming that linkages between people are highly related to successful innovation. Most people begin to consider new things because they have become aware of these new things through communication from or with other people inside or outside their own group. Such communication cannot take place without contact of some sort, and significant behavioral change probably requires prior communication and contact which is intensive, multi-channelled and reciprocal. From research on the diffusion of innovations, we know that such communication depends on social networks within which there is some form of opinion leadership. Furthermore, innovations which are not home-grown will diffuse only if these opinion leaders travel widely and join into other cosmopolite networks. The more interconnected these various overlapping networks are, the more rapidly and frequently innovations can spread.

Psychological studies of problem-solving both in groups and organizations also suggest that clusters of individuals who are highly interactive will be more creative problem-solvers; furthermore, those who promote various changes will be more likely to succeed if they can develop a sense of participation through two-way communication and collaboration with the user group.

Finally, it would appear logical that continuous linkage and two-way communication between developers and advocates of innovations on the one hand and users on the other would be necessary for correcting errors in application and for understanding what changes are relevant and appropriate for particular users.

a. Dimensions of Linkage

Innovation can be aided by at least seven types of interpersonal and interorganizational linkage. First of all, *within user systems*, three kinds

of linkage are important; one we might call "vertical" linkage, i.e., the extent of contact and two-way communication between superiors and subordinates, leaders and followers, administrators and teachers, teachers and students. Without such linkage innovation decisions can be made at a higher level without lower levels either understanding them, accepting them, or sometimes even being aware of them. Sometimes "authority" carries the day but more often communication and participation in decision making by various levels is important for changing attitudes and gaining widespread acceptance. Another sort of internal linkage could be termed "horizontal" or "peer" linkage. Innovation diffusion researchers have shown that informal connections between people of more-or-less equal status is at least as important as hierarchical connections both for sharing locally invited innovations and adopting them from outside. Particularly in fields where individual professionals work in separate space and carry on their professional duties outside each other's view (as teachers in classrooms), lack of such peer linkage can be an important inhibitor of change. A third type of internal linkage concerns the maximum use of specialists and persons with defined ares of expert knowledge and talent within the system. These might include an R&D person, a counsellor, librarian, etc.

From the viewpoint of past research and theory, certain kinds of external linkages are also important. The smaller the user system and the more limited its own resources, the more crucial these external limits become. One important external source is the specialized center of expertise such as a laboratory or university. Particularly with increasing investment in educational R&D in the last decade, linkage of local school districts to such sources should be important for the spread of research-based and validated innovations.

Another important type of external linkage pertains to sources of financial support, including federal grants, state support, and private foundation grants. Usually some effort and initiative by the districts is necessary in order to reach out for this support and more often than not the "strings attached" include important consultative aid and guidance in planning and implementing changes.

A third type of external linkage is to what we might call the peer *system* network. There is some need for both schools and school districts to interact, exchange ideas on what each is doing including visits and demonstrations. There are undoubtedly innovator and opinion leader *districts* and *schools*, just as there are innovator and opinion leader individuals.

A seventh category which has both internal and external aspects is linkage to the community or the county social environment within which the user system exists. Such linkage would include relationships with established groups such as businesses, churches, government and voluntary organizations as well as with students, parents, and the general public. Such linkage presumably brings greater understanding and hence greater support, motivatively and financially, for new projects in the schools.

Because of our previous work in this field and for the reasons stated above, we had a special interest in this survey in exploring many aspects of linkage. If possible, we hoped to show the relative importance of linkage as a procedural element in the change process compared to such other variables as openness of user attitudes, strength of need, and financial resources avail-

able. We also wanted to distinguish among the various categories of internal and external linkage listed above. Evidence relevant to these assumptions comes from many questions in different parts of the survey. In Chapter Six they are discussed under the heading of "participation." In Chapter Seven they are discussed under several headings including "media," "procedures," "barriers," and "key factors." In this section we would like to restrict ourselves only to the subset of items on Question 3 which were intended to focus on this concept and give a comparative view of the relative power of "linkage" as a phenomena in innovation process. Table 8.8 displays this cluster of items.

TABLE 8.8
LINKAGE BARRIER ITEM CLUSTER

Question #	Item	Districts <80,000 Freq.	Districts <80,000 Mean*	Districts ≥80,000 Freq.	Districts ≥80,000 Mean*
3a	Lack of adequate contacts with outside resource groups (e.g., universities, labs, consultants, etc.	(305)	2.04	(29)	1.93
3b	Lack of communication among staff	(305)	2.44	(29)	2.66
3c	Lack of communication between staff and students	(302)	2.22	(29)	2.17
3o	Lack of contact with other school systems who had considered the innovation	(302)	1.94	(29)	1.90
	Mean Rating of Linkage Barrier Items		2.16		2.17

*1=none; 2=slight; 3=moderate.

It is evident from comparing this table with Table 7.9, showing all 18 barrier items together, that the linkage items are not seen as important impediments to change in the showcase innovation. Only "communication among staff" rates above the median (ranked sixth most important by representative districts and second among the largest districts). Communication downward to students is somewhat less important as a barrier, while communication with outsiders (3a and 3o) least problematic; both these items rank near the bottom in importance among both representative and large districts.

In the literature review we also found that "proximity" between users and resources was an important predictor of resource transfer, utilization, and innovation. However, we infer that the importance of this variable stems

from the fact that it increases the probability of contact and hence li ..ge. Therefore, a separate set of items was not prepared to measure "proximity" barriers on the assumption that the word "contact" in items 3a and ..b carried both ideas.

2. STRUCTURE

The degree of systematic and rational ordering and organizing of the innovation process should strongly affect success, particularly for complex innovations in larger systems. Three items in Question 3 were included to measure the absence of structure in the process of innovation as a barrier. They are listed in Table 8.9.

TABLE 8.9
LACK OF STRUCTURE AS A BARRIER

Question #	Item	Districts <80,000 Freq.	Mean	Districts ≥ 80,000 Freq.	Mean
3d	Confusion among staff about the purpose of the innovation	(308)	2.59	(29)	2.55
3e	Staff's lack of precise information about the innovation	(307)	2.53	(29)	2.52
3f	Disorganization of the planning and implementation efforts	(306)	2.07	(29)	2.21
	Mean Rating of Lack of Structure		2.40		2.43

As a set these barriers seem to be seen as more serious than linkage barriers to school superintendents. Item 3d was top-ranked of the 18 among representative districts while item 3e was fourth ranked. Both these items seem to focus more on the content of the innovation than the process, however. Item 3f, which focuses specifically on the process (planning and implementation), is rated as only a slight barrier.

3. OPENNESS

Closed systems and closed minds are be definition incapable of taking in important new messages from outside; if they cannot take in, they cannot utilize outside knowledge for internal change or innovation. For resource systems "openness" means a willingness to help and a willingness to be influenced by user needs. For the user, "openness" implies not only receptivity but an active reaching out for new ideas, new products, and new ways of doing things. In addition, it is a willingness to take risks and to make an effort to adapt innovations to one's own situation. Three items in Question 3 were targetted on this concept as indicated in Table 8.10.

TABLE 8.10
LACK OF "OPENNESS" AS A BARRIER

Question #	Item	Districts < 80,000		Districts ≥ 80,00	
		Freq.	Mean	Freq.	Mean
3g	Unwillingness of resource groups to help us revise and adopt	(303)	1.73	(29)	1.48
3h	Rigidity of school system structure and bureaucracy	(306)	2.25	(29)	2.31
3i	Unwillingness of teachers and other school personnel to change or listen to new ideas	(306)	2.57	(29)	2.45
	Mean Rating of Lack of Openness		2.18		2.08

Obviously these three items measure very different types of openness and there is a very great range of response to them. As noted in Chapter Seven, lack of openness by outside experts was rated as practically no problem at all. On the other hand, lack of openness by teachers was seen as a moderately important barrier by a majority of superintendents. Perhaps it is self-serving on their part as spokesmen for the established system to see the structure of the system as a lesser barrier. In any case, lack of structure (Table 8.9) seems more important to superintendents than lack of openness.

4. CAPACITY

The research literature is particularly convincing in suggesting a pervasive capacity factor affecting innovativeness in schools. The term is used here to signify a cluster of concepts including wealth, power, competence, education, socio-economic well-being, and some aspects of size. Table 8.11 reviews three items which are quite obviously related to this dimension.

TABLE 8.11
LACK OF CAPACITY AS A BARRIER

Question #	Item	Districts < 80,000		Districts ≥ 80,000	
		Freq.	Mean	Freq.	Mean
3j	Shortage of funds allocated for the innovation	(304)	2.54	(29)	2.86
3k	Shortage of qualified personnel	(303)	2.32	(29)	2.34
3r	Inadequacy of school plant, facilities, equipment or supplies	(304)	2.43	(29)	2.24
	Mean Rating of Lack of Capacity		2.43		2.48

The capacity factor seems relatively important to both representative and large districts; for the latter, as noted earlier, lack of funds was by far the most salient barrier (although, on the average, rated as only "moderate").

5. REWARD

Rewarded behavior tends to be repeated: this is the most well supported finding in the field of psychology. The sender will not continue to send nor the receiver continue to receive unless they each receive rewards appropriate to their needs and their efforts expended. "Appropriate" rewards might be in terms of financial return, security, esteem, status, public recognition, participation in a valued group, encouragement, or relief from stress or work. In Question 3, three items were concerned with reward issues. They are listed in Table 8.12

TABLE 8.12
LACK OF REWARDS AS A BARRIER

Question #	Item	Districts <80,000		Districts ≥ 80,000	
		Freq.	Mean	Freq.	Mean
31	Feeling by the teachers and staff that the innovation would have little benefit for them	(304)	2.31	(29)	2.??
3m	Frustration and difficulty encountered by teachers and/or relevant staff in trying to adopt	(302)	2.53	(29)	2.66
3n	Frustration and difficulty encountered by students during the adoption process	(301)	2.00	(28)	1.82
	Mean Rating of Lack of Reward		2.28		2.23

In contrast to the structure barrier, rewards intrinsic to the innovation itself (31) are less problematic than negative rewards encountered in the process of adoption and implementation. Least problematic, from the superintendent's point of view at least, are rewards for students (3n), this item being rated 16th and 17th in importance respectively by representative and very large districts.

6. SYNERGY

Dissemination and implementation activities in a complex system rarely have their effects in isolation of other variables and usually several factors have

to be operative in a positive direction before innovation takes place. We have used the term "synergy" to identify the simultaneous interaction of two or more effects either planned or unplanned. The concept includes the coming together of forces, orchestration, combining of diverse elements, synchronization of several media and several diverse or repeated messages to produce joint or additive effects. Two question items attempted to measure some aspects of "synergy" as a factor in innovation process. They are shown together in Table 8.13.

TABLE 8.13
LACK OF SYNERGY AS A BARRIER

Question #	Item	Districts <80,000		Districts ≥ 80,000	
		Freq.	Mean	Freq.	Mean
3p	Lack of coordination and team work within the school system	(303)	2.11	(29)	2.24
3q	Absence of a concerted campaign to put the new ideas across	(304)	2.03	(29)	2.21
	Mean Rating of Lack of Synergy		2.07		2.23

It is evident that synergy was seen only as a slight problem in implementing the showcase innovation, as measured by these items. It seems likely, however, that we have not adequately measured the concept here, if indeed it is measurable.

7. COMPARISON OF IMPORTANCE OF SIX BARRIER CLUSTERS

Table 8.14 has been constructed to show an over-all comparison of the six different barrier clusters discussed in the above section.

TABLE 8.14
A COMPARISON OF BARRIER CLUSTERS IN ORDER OF IMPORTANCE

Concept Cluster	Importance as a Barrier in the Showcase Innovation	
	Districts <80,000	Districts ≥ 80,000
(Lack of) Capacity	2.43	2.48
(" ") Structure	2.40	2.43
(" ") Reward	2.28	2.23
(" ") Openness	2.18	2.08
(" ") Linkage	2.16	2.17
(" ") Synergy	2.07	2/23

Lack of structure and lack of capacity clearly receive top-rating as barriers, while openness, linkage, and synergy (all related to communication) are viewed as less important. Reward items lie somewhere between.

The chief deficit of these data resides in the fact that showcase innovations reported were overwhelmingly claimed to be successful. Hence, no barrier was identified as being more than moderately important and most were seen as either slight or non-existent. Presumably for innovations that failed the barrier response would be much higher. It is more difficult to say whether the pattern of responses would have been different.

C. A FACTOR ANALYSIS OF BARRIERS AND PROCEDURES: Empirical vs. Theoretical Clustering

There is no one "right" way to select items for a questionnaire or to group items for analysis and summarization. Up to this point, we have used past theoretical frameworks summarized in an extensive literature review as a guide for both selection and analysis. In the conclusion of Chapter Seven, we also showed that the set of items selected under "procedures" and "barriers" for this questionnaire was reasonably comprehensive in representing superintendents' spontaneous statements on process factors and that they were overwhelmingly judged to be a good checklist for future innovation adoption and implementation.

In the first two sections of this chapter, we resummarized procedure and barrier data in terms of theoretical constructs derived from theory. It is also possible to cluster these items empirically, using predetermined objective criteria without regard to theory. The most commonly used statistical procedures to achieve clustering fall under the heading of "factor analysis."

Factor analysis has two principal purposes, both of which are germane to this survey project. The first and most common purpose is *data reduction*, i.e., the simplification of data presentation by reducing a large and complex set of item responses to a few key dimensions. In a sense, the previous two sections have attempted this reduction using the theory from which the items were originally derived, reducing 21 "procedure" items and 18 "barrier" items to six "perspectives" and six "barrier clusters." A principle components factor analysis does the same job using a matrix of correlations of all the items together and creating new artificial variables which represent the most highly intercorrelated sets of items. Each of these artificial variables or "factors" has two statistical properties which are important in data reduction. First, each factor is "orthogonal" to every other factor; hence they are uncorrelated and should therefore have distinct and non-overlapping meaning; this conceptual purity of orthogonality is offset by the problem of enterpretation, if a number of items of seemingly devise content are represented in a factor it will be very hard either to label or to comprehend as a unitary phenomenon. The other statistical property of principle component factors is the maximization of variance accounted for by successive factors: the first factor represents the linear combination of variables which represents the most variance; the second factor represents the linear combination of variables which represents the most variance after all the variance

accounted for by the first factor is extracted from the correlation matrix; the third factor represents the next most variance and so forth. This fact is very important for data reduction since it means that an investigation can report as few or as many factors as he wishes with the assurance that the factors chosen represent the maximum explanatory power using that number of concepts.

Because of the difficulty of labelling and interpreting factors from a principal components solution most investigators rotate the factor matrix to find more easily interpretable dimensions or to achieve what is often called "simple structure." For this analysis we have chosen the "varimax" method developed by Kaiser.* As summarized by Nunnally, this method "maximizes the sum of variances of squared loadings in the columns of the factor matrix. In each column of the matrix, this tends to produce some high loadings and some loadings near zero, which is one aspect of simple structure...The varimax method has proved very successful as an analytic approach to obtaining orthogonal rotation of factors."**

It is also possible to use factor analysis to test previously derived theories about the underlying structure of a set of items. Part of our intention in this project was to test the generalizations from our literature review against a freshly drawn set of data. Therefore, as we consider the results of the varimax factor matrix we will be referring back, when possible, to the fit or similarity between these clusters and the theoretical clusters reported in Parts A and B of this chapter.

Recognizing that our dysfunction between "procedures" and "barriers" might be artificial and that "overcoming barrier X" might be equivalent operationally to "following procedure X," we decided to analyze both sets of items together in one 39 x 39 item correlation matrix. In fact, however, most procedures and barriers were not highly intercorrelated and, with one exception, the resulting factors generally represented either barrier dimensions or procedure dimensions but not both. Nine factors were extracted in all, four representing procedures and five representing barriers.

1. PROCEDURE FACTORS

(Insert Table 8.15 here)

It is gratifying to find a set of items which represent such a coherent cluster both statistically and conceptually as items i, u, l, and j. Moreover, the cluster corresponds closely to the "problem solver" perspective described earlier and predicted from theory. Only two of the items (u and l) have any substantial relationship to any other factors. Sharing, participation,

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*Kaiser (1958).

**Nunnally (1967), pp. 332-333.

TABLE 8.15
FACTOR I: PARTICIPATIVE PROBLEM-SOLVING

	Question #	Item	Loading	Loadings on Other Factors >.20
Core Items	2l	Maximizing chances of participation by many groups	.64	
	2u	Finding shared values as a basis for working	.61	(P IV -.23)
	2i	Providing a climate conducive to sharing ideas	.60	(P IV -.28)
	2j	Stressing self-help by the users of the innovation	.58	
Related Items	2r	Involvement of informal leaders of opinion inside the schools	.39	(P III -.36, P IV -.20)
	2m	Providing a climate conducive to risk-taking	.37	(P IV -.46)
	2q	Resolution of interpersonal conflicts	.32	(P IV -.55)
	2e	Selecting a competent staff to implement change	.31	(P II .32)

and self-help are the core ideas. Less strongly related are informal leader involvement, risk-taking and conflict resolution. We would guess that "competence" on this factor (item "e") means competence in human relations above all.

(Insert Table 8.16 here)

Once again it is gratifying to observe a very coherent cluster of variables, highly related to each other statistically, highly independent of other factors, and all conforming to our prediction of an "RD&D" perspective. It is fairly clear that there is a subgroup of superintendents who follow the RD&D philosophy as distinct from the problem solver philosophy. Points of agreement between the two schools of thought center on the need for diagnosis and for generating an awareness of the need for change. We would expect, however, that the locus of need identification is seen somewhat differently by the two groups, the problem solvers emphasizing need awareness and diagnosis

TABLE 8.16
PROCEDURE FACTOR II: RD&D EMPHASIS

	Question #	Item	Loading	Loadings on Other Factors > .20
Core Items	2a	Systematic evaluation	.64	
	2b	Solid research base	.64	
	2c	Systematic planning	.64	(P I .22)
	2d	Adequate definition of objectives	.60	(P I .22)
Related Items	2k	Adequate diagnosis of the real educational need	.43	(P I .28)
	2g	Utilizing a number of different media to get the new ideas across	.34	(P I .24)
	2e	Selecting a competent staff to implement change	.32	(P I .31, B IV -.28)
	2n	Creating awareness of the need for change	.31	(P IV -.50, P I .29)

by users and RD&D advocates emphasizing need determination by experts. Again for the "competence" item we would guess that a very different type of competence is stressed here, namely competence in research, evaluation, and systematic planning.

(Insert Table 8.17 here)

Procedure Factor III is less clearly tied to our prior theoretical expectations but shows an interesting pattern. Evidently some superintendents view participation by key persons more as a strategic necessity for getting things done than as an aspect of human relations philosophy. The association of item 2t, "taking advantage of crisis," almost suggests a Machiavellian orientation. Clearly P III superintendents believe strongly in "social interaction" and utilizing opinion leadership; it may also be that they are somewhat distrustful of outside expertise or at least the willingness of outsiders to help (note that item 3g is a "barrier" item).

P III may also represent political awareness and concern for handling school district decision making within the larger socio-political arena of

TABLE 8.17
PROCEOURE FACTOR III: STRATEGIC MANIPULATION (OF SOCIAL INTERACTION)

	Question #	Item	Loading	Loadings on Other Factors > .20
Core items	2s	Participation by key community leaders	-.71	(P II .23)
	2t	Taking advantage of crisis situations	-.47	(P IV -.35)
	2r	Involvement of informal leaders of opinion inside the schools	-.36	(P I .39, P IV -.20)
Weakly Related Items	3g	Unwillingness of resource groups to help us revise or adapt	-.26	(B I .49, B III .24)
	2g	Utilizing a number of different media to get the new ideas across	-.19	(P II .34, P I .24)
	2l	Maximizing chances of participation by many groups	-.18	(P I .64)
	2p	Confrontation of differences	-.18	(P IV -.69, P I .21)

of the community as a whole. It would be interesting to see if P III superintendents have a higher survival rate than their colleagues.

(Insert Table 8.18 here)

The fourth procedure factor appears to represent the most radical view of the change process among those identified, emphasizing both conflict and openness. It is more closely aligned with the "conflict" model previously described and with the approaches to innovation which might be associated with the "new politics" of education. There is implicit in this cluster the notion that fundamental change is needed and that such change is likely to involve a lot of conflict and risk. It is also implied, however, that differences can be resolved in a spirit of openness through a common recognition of need and shared values.

Summing up Tables 8.15 through 8.18 we see four clear clusters of variables that are closely aligned to our earlier theoretical clusterings (Tables 8.1 through 8.5). The Problem Solver and RD&D perspectives are nearly identical empirically and theoretically and they are the two strongest and clearest procedural factors. "Social Interaction" emerges empirically in a cluster

TABLE 8.18
PROCEDURE FACTOR IV: CONFLICT-LINKAGE (OPEN ADVOCACY AND HUMAN REVOLUTION)

	Question #	Item	Loading	Loadings on Other Factors ≥.20
Core Items	2p	Confrontation of differences	-.69	(B I .24, P I .21)
	2q	Resolution of interpersonal conflicts	-.55	(P I .32)
	2n	Creating awareness of the need for change	-.50	(P II .31, P I .29
	2o	Creating an awareness of alternative solutions	-.47	(P I .28, P II .26
	2m	Providing a climate conducive to risk-taking	-.46	(P I .37
Related Items	2t	Taking advantage of crisis situations	-.35	(P III -.47)
	2l	Providing a climate conducive to sharing ideas	-.29	(P I .60)
	2u	Finding shared values as a basis for working	-.23	(P I .61)
	2h	Persistence by those who advocate the innovation	-.22	(P I .26, P II .23
	2r	Involvement of informal leaders of opinion inside the schools	-.20	(P I .39, P III -.36)

including "taking advantage of crisis," suggesting that a better label might be "manipulative of communication and social forces." The one word "Machiavellian" could fit this cluster nicely, provided that no derogative is implied thereby. A fourth cluster, appearing to combine aspects of both linkage and conflict models, may represent the emergent radical-liberal approach to change of the late 1960's.

2. BARRIER FACTORS

Unfortunately barrier factors did not emerge from the analysis as discrete and describable clusters nearly to the extent that procedure factors did. This may be due to the much higher inter-item variance for procedures. Most respondents checked either "none" or "slight" for all barrier items, a fact which may be related to the claimed "success" of the showcase innovation. Nevertheless, we will present the findings which emerged and attempt some interpretations.

TABLE 8.19
BARRIER FACTOR I: GENERAL CONFUSION

	Question #	Item	Loading	Loadings on Other Factors > .20
re ems	3e	Steff's lack of precise information about the innovation	.81	
	3d	Confusion among staff about the purpose of the innovation	.79	
	3l	Unwillingness of teachers and other school personnel to change or listen to new ideas	.77	(B IV .26)
	3b	Lack of communication among the staff	.77	
	3l	Feeling by teachers and staff that the innovation would have little benefit for them	.72	
ghly lated ems	3p	Lack of coordination and teamwork within the school system	.69	(B III .23)
	3m	Frustration and difficulty encountered by teachers and/or relevant staff in trying to adopt	.66	(B IV .38)
	3f	Disorganization of the planning and implementation efforts	.66	(B III .21)
	3q	Absence of a concerted campaign to put the new ideas across	.61	(B III .30)
	3h	Rigidity of school system structure and bureaucracy	.56	(B V .27)
	3c	Lack of communication between staff and students	.56	(B III .30, B V -.23)
eakly elated tems	3r	Inadequacy of school plant, facilities, equipment, or supplies	.32	(B V .38, B II .28, B III .21)
	3n	Frustration and difficulty encountered by students during the adoption process	.30	(B III .57)
	3j	Shortage of funds allocated for the innovation	.28	(B II .57, B III .20)
	2p	Confrontation of differences	.24	(P IV -.69, P I .21)
oder- ately Related tems	3g	Unwillingness of resource groups to help us revise or adapt	.49	(P III -.26, B III .24)
	3k	Shortage of qualified personnel	.47	(B II .41)
	3a	Lack of adequate contacts with outside resource groups (e.g., universities, labs, consultants, etc.)	.39	(B III .26, B II .25)
	3o	Lack of contact with other school systems who had considered the same innovation	.37	(B III .51)

Table 8.19 shows the first rotated factor in our analysis which is also clearly a barrier factor. All barrier items had appreciable loadings on this factor while only one "procedure" item even came close (2p, "confrontation of differences"). Therefore, it is also clearly a "general" factor, suggesting that those respondents who checked barriers as important had a tendency to check all of them as important. Further insight into the interpretation of BI comes from the four "pure" items with the highest loadings, 3e, 3d, 3b, and 3l. The common theme among these seems to be lack of information or confusion about what the innovation is all about. We might have expected such a conceptual cluster to emerge from our data as a "lack of structure" factor (see again Table 8.9 and items 3e, 3d, and 3f. What is surprising is that lack of information is so highly related to so many other things including linkage (3b, 3c), openness (3l, 3h, 3g), reward (3l, 3m), and synergy (3p, 3q). The only items weakly related to BI concern "capacity."

However, "capacity" emerges very clearly as the appropriate label for Barrier Factor II (Table 8.20). In fact, this factor includes a strong and relatively pure item from the "procedure" list which fits logically as well as statistically into this cluster.

TABLE 8.20
BARRIER FACTOR II: CAPACITY

	Question #	Item	Loading	Loadings on Other Factors>.20
Core Items	3j	Shortage of funds allocated for the innovation	.57	(B I .28, B III .2
	2f	Starting out with adequate financial resources to do the job	-.55	
	3k	Shortage of qualified personnel	.41	(B I .47)
Related Items	3r	Inadequacy of school plant, facilities, equipment, or supplies	.28	(B V .38, B I .32, B III .21)
	3d	Lack of adequate contacts with outside resource groups (e.g., universities, labs, consultants, etc.)	.25	(B I .39, B III .26
Logically but not empirically related item:				
	2e	Selecting a competent staff to implement change	-.13	(P II .32, P I .31 B IV -.28)

The other "capacity" item from the procedure list (2e) evidently measures a different concept. Financial shortages and their consequences are clearly what is being measured here.

TABLE 8.21
BARRIER FACTOR III: LINKAGE DOWN AND OUT

Question #	Item	Loading	Loadings on Other Factors ≥ .20
3n	Frustration end difficulty encountered by students during the adoption process	.57	(B I .30)
3o	Lack of contact with other school systems who had considered the same innovation	.51	(B I .37)
3q	Absence of a concerted campaign to put the new ideas across	.30	(B I .61)
3c	Lack of communication between staff and students	.31	(B I .56, B V -.23)
3a	Lack of adequate contacts with outside resource groups (e.g., universities, labs, consultants, etc.)	.26	(B I .39, B II .25)
3g	Unwillingness of resource groups to help us revise or adapt the innovation	.24	(B I .49, P III -.26)
3p	Lack of coordination and teamwork within the school system	.23	(B I .69)
3r	Inadequacy of school plant, facilities, equipment, or supplies	.21	(B V .38, B I .32, B II .28)
3f	Disorganization of the planning and implementation efforts	.21	(B I .66)
3j	Shortage of funds allocated for the innovation	.20	(B II .57, B I .28)

The remaining three barrier factors are interesting but puzzling and difficult both to label and to interpret. B III seems to show a fusion of two logically separate ideas, contact with and utilization of outsiders, and concern for students. Items 3n and 3c suggest a student-centered concern. Apparently those who express this concern most strongly are also likely to be concerned with outsiders, especially other systems. The item does not clearly correspond to any of the six conceptual clusters derived from the literature survey.

TABLE 8.22
BARRIER FACTOR IV: TEACHER-BLAME

	Question #	Item	Loading	Loadings on Other Factors > .20
Core Items	3m	Frustration and difficulty encountered by teachers and/or relevant staff in trying to adopt	.38	(B I .66)
	2e	Selecting a competent staff to implement change	-.28	(P II .32, P I .31
	31	Unwillingness of teachers and other school personnel to change their behavior or listen to new ideas	.26	(B I .77)
Weakly Related Items	31	Feeling by teachers and staff that the innovation would have little benefit for them to their work	.19	(B I .72)
	2k	Adequate diagnosis of the real educational need	-.18	(P II .43, P I .28
	2g	Utilizing a number of different media to get the new ideas across	.17	(P II .34, P I .24
	3a	Lack of adequate contacts with outside resource groups (e.g., universities, labs, consultants, etc.)	-.16	(B I .39, B III .2 B II .25)
	3n	Frustration and difficulty encountered by students during the adoption process	.16	(B III .57, B I .3
	2r	Involvement of informal leaders of opinion inside the schools	.15	(P I .39, P III -. P IV -.20) -.36

Factor BIV (Table 8.22) is clearly focused on teacher skills and perceived characteristics, and seems to reflect the judgment of some superintendents that their problems with the innovation reflected teacher shortcomings of one sort or another. However, the item is not a strong one and contains no pure items. (This was the eighth of nine factors extracted from the matrix. BV is the ninth.)

(Insert Table 8.23 here)

The last and weakest of the factors in our analysis is shown in Table 8.23. It seems to be focused primarily on the one item related to facilities and

TABLE 8.23
BARRIER FACTOR V: STRUCTURAL OPENNESS

Question #	Item	Loading	Loadings on Other Factors > .20
3r	Inadequacy of school plant, facilities, equipment, or supplies	.38	(B I .32, B II .28, B III .21)
3h	Rigidity of school system structure and bureaucracy	.27	(B I .53)
3c	Lack of communication between staff and students	-.23	(B I .56, B III .30)
3j	Shortage of funds allocated for the innovation	.19	(B II .57, B I .29, B III .20)
2n	Creating awareness of the need for change	.19	(P IV -.50, P II .31, P I .29)
2q	Resolution of interpersonal conflicts	-.19	(P IV -.55, P I .32)
3e	Staff's lack of precise information about the innovation	-.19	(B I .81)
3g	Unwillingness of resource groups to help us revise or adapt the innovation	.18	(B I .49, P III -.. B III .24)

measures not the quantity or size (a financial matter in part) but the quality and shape. We would guess that this factor is related to the difficulties encountered by some districts which tried out innovations in flexible scheduling, individualization, and open school-open classroom, and they found their existing school plant physically too limiting. This point also emerges strongly in the case study of Troy, Michigan, reported elsewhere in this report.

In sum, we find in the factor analysis of barriers little of what we expected to find. There is one *strong and pervasive factor related to information about the innovation which suggests strongly the need for improved information dissemination and utilization mechanisms.* There is a second clear factor related to financial support which is mostly independent of the first. There is a third and weaker factor reflecting a concern for better linkage to both students and their needs and to outsiders. And finally, there are two rather feeble and impure factors concerned with teacher behaviors and school structured openness which might have been left uninterpreted.

CHAPTER NINE: SCHOOL DISTRICT RESOURCES - UTILIZATION AND POLICY

U.S. school districts vary widely in the amount of resources they can bring to bear on behalf of innovation. This chapter reports on a number of such resources: monetary, human, informational and material.

Table 9.1 lists responses to 16 "resource" items rank ordered by amount of use for representative districts. They are divided into the two categories of "internal" and "external," to contrast those items which can be generated from within the district from those which represent or require involvement of outside personnel or outside (state, federal, and private) funding sources.

(Insert Table 9.1 here)

The distinction is somewhat artificial in that use of "internal" human resources may require "external" financial resources and vice versa; furthermore multiple configurations of "internal" and "external" resources are often required to innovate successfully.

Nevertheless the table generates some interesting comparisons. First of all, very large districts are consistently higher users of external resources of all kinds. Secondly, almost all internal resources with the exception of "student discussions and idea presentations" are used more frequently than external. Among the external items, those associated with expert personnel, information, and materials rank well below the financial.

Table 9.2 shows a further break-down of representative districts by size. Scanning the rows of this table we can see that few of these resource items are related in a simple linear fashion to district size. Exceptions could be "curriculum supervisors," "unspecified federal programs," and "ERIC." However several other items are clearly associated with size to a significant degree.

(Insert Table 9.2 here)

Convincing as these size data are, they do not tell us about resource utilization per pupil. It might well be that if we could correct for size, the proportional utilization of resources would be exactly reversed with smallest districts providing most and the largest least! There is no direct method for us to make such a calculation with the data in hand.

Table 9.3 shows five resource items on which we found significant regional differences. We note that the Great Lakes states fare particularly poorly in the use of external resources, ranking lowest in ESEA Title I, SEA's and ERIC, and second lowest on Regional Labs. The fact that New England and the Great Lakes ranked lowest on use of Labs may be related to the absence

TABLE 9.1
USE OF INTERNAL AND EXTERNAL RESOURCES

Resource	Districts <80,000			Districts ≥80,000		
	Not Available Freq.	Available Freq.	Mean* Use where Available	Not Available Freq.	Available Freq.	Mean* Use where Available
Internal Resources						
1. Teacher discussions and idea presentations	(2)	(305)	4.28	--	(29)	4.07
2. In-service training	--	(308)	4.17	--	(28)	4.43
3. Curriculum supervisors	(32)	(269)	4.05	--	(28)	4.57
4. Library facilities	(1)	(300)	3.82	--	(28)	3.82
5. Research-evaluation office and staff	(48)	(251)	3.68	--	(28)	4.11
6. Media specialists and centers	(14)	(288)	3.68	--	(28)	3.89
7. Student discussions and idea presentations	--	(303)	3.25	--	(28)	3.29
External Resources						
1. ESEA Title I programs and services	(5)	(297)	3.84	--	(26)	4.15
2. State education agency	(1)	(299)	3.55	--	(28)	3.64
3. ESEA Title III programs and services	(11)	(283)	3.42	--	(27)	4.00
4. Federal programs (unspecified)	(6)	(279)	3.31	--	(26)	4.00
5. Universities and colleges	(3)	(296)	3.16	--	(27)	3.78
6. Professional associations	(4)	(292)	2.72	--	(27)	3.15
7. ERIC	(17)	(249)	2.39	--	(26)	3.27
8. USOE regional educational laboratories	(19)	(264)	2.19	(2)	(24)	2.75
9. Foundations and other private programs	(19)	(271)	1.95	(2)	(23)	2.57

*Means are computed according to the following scale:
1=never; 2=very infrequently; 3=occasionally; 4=frequently; 5=very frequently

TABLE 9.2
USE OF INTERNAL AND EXTERNAL RESOURCES BY DISTRICT SIZE
MEAN SCORES*

Resource	SIZE CATEGORIES 1-299 N=6 Mean	300-2,499 N=71 Mean	2,500-4,999 N=55 Mean	5,000-9,999 N=57 Mean	10,000-24,999 N=77 Mean	25,000-79,999 N=56 Mean	80,000 & over N=31 Mean	Sig. Level (x^2)
Internal Resources								
1. Teacher discussions and idea presentations	4.33	4.31	4.31	4.19	4.24	4.38	4.07	NS
2. In-service training	3.00	3.90	4.15	3.97	4.41	4.42	4.43	.00005
3. Curriculum supervisors	2.25	3.30	3.98	4.18	4.30	4.55	4.57	.00005
4. Library facilities	3.34	3.72	3.15	3.16	4.11	3.97	3.82	NS
5. Research-evaluation office and staff	2.75	3.43	3.50	3.31	4.11	4.04	4.11	.01
6. Media specialists and centers	2.00	3.42	3.47	3.75	3.88	3.95	3.89	NS
7. Student discussions and idea presentations	2.50	3.27	3.29	3.15	3.19	3.50	3.29	.001
External Resources								
1. ESEA Title I programs and services	4.00	3.43	3.89	3.94	3.92	4.06	4.15	.0[illegible]
2. State education agency	2.17	3.43	3.77	3.54	3.62	3.54	3.64	.00[illegible]
3. ESEA Title III programs and services	3.40	3.07	3.40	3.33	3.43	3.90	4.00	.05
4. Federal programs (unspecified)	2.25	2.70	3.37	3.38	3.47	3.78	4.00	.00005
5. Universities and colleges	1.20	2.76	3.20	3.07	3.45	3.47	3.78	.00005
6. Professional associations	1.83	2.36	2.75	2.70	3.02	2.84	3.15	.05
7. ERIC	1.00	1.82	2.24	2.28	2.79	2.85	3.27	.0001
8. USOE regional educational laboratories	1.25	1.61	2.13	2.19	2.56	2.52	2.75	.0001
9. Foundations and other private programs	1.00	1.63	1.93	1.84	2.14	2.25	2.57	.001

*Mean scores are computed on the basis of the number of districts responding to each item; may be less than or equal to the "N" given for each size category.
Scoring scale: 1=never; 2=very infrequently; 3=occasionally; 4=frequently; 5=very frequently

TABLE 9.3
USE OF SELECTED INTERNAL AND EXTERNAL RESOURCES BY REGION
DISTRICTS < 80,000
(Significant Differences Only)
MEAN SCORES

Region	Curriculum Supervisors Mean	ESEA Title I Mean	State Ed. Agency Mean	ERIC Mean	Regional Ed. Labs Mean
	Resource				
New England	3.70	3.90	3.79	2.55	1.53
Mid East	4.25	3.94	3.64	2.43	2.50
Great Lakes	4.04	3.51	3.33	1.88	1.72
South East	4.30	4.11	3.95	2.38	2.26
Plains	3.59	3.64	3.43	2.36	2.04
Rocky Mountains	3.11	3.91	3.63	2.67	2.50
South West	4.18	4.00	3.92	2.39	2.39
Far West	4.03	3.78	3.86	2.95	2.60
Total	4.05	3.84	3.55	2.39	2.19
Significance Level (chi-square test)	$p < .02$	$p < .05$	$p < .002$	$p < .02$	$p < .02$

of Labs in both regions. One New England Lab and two Great Lakes Labs were terminated in the late 1960's. The Far West which is currently served by three large and highly reputed labs (Northwest in Portland, Far West in San Francisco, and South West in Los Angeles) also rates highest in lab utilization.

We also elicited information on a few administrative and personnel practices which we suspected might relate to school district capacity and readiness to innovate. Table 9.4 presents a summary of this data rank ordered by frequency of practice for representative districts. Staff travel is usually paid by most districts; lay advisory groups are usual policy for nearly half of all districts and used in special cases for most others. "Sabbatical leaves" seems to be an all or none matter.

(Insert Table 9.4 here)

Table 9.5 shows a break-down on policies by size including the very large districts. Three items show significant differences but the relationship is

TABLE 9.4
POLICIES PRACTICED
"To what extent does your system utilize the following policies and procedures?"
(Representative Districts)

	Freq.	Never (1) %	Very Rarely (2) %	In Special Cases (3) %	Usual Policy (4) %	Total %	$\bar{x}$
Pay staff travel	(309)	1	3	13	83	100	3.7864
Lay advisory groups (community, minority, parents)	(304)	4	7	42	47	100	3.3224
Sabbatical leaves	(301)	38	10	12	40	100	2.5349
Staff tuition-paid courses	(303)	28	24	26	21	100	2.3993
Service awards	(296)	51	23	19	7	100	1.8209

only linear for "sabbatical leaves." Lay advisory groups are used equally frequently in the three largest size categories; payment of staff travel is usual policy for all but the tiniest, perhaps for understandable reasons.

TABLE 9.5
POLICIES PRACTICED BY DISTRICT SIZE
MEAN SCORES*

	District Size							
Policy	1-299 N=6 Mean	300-2,499 N=71 Mean	2,500-4,999 N=55 Mean	5,000-9,999 N=57 Mean	10,000-24,999 N=77 Mean	25,000-79,999 N=56 Mean	80,000 & over N=31 Mean	Sig. Level (x^2)
Pay staff travel	2.33	3.74	3.81	3.89	3.83	3.83	3.75	.00005
Lay advisory groups	2.83	2.94	3.28	3.27	3.52	3.67	3.54	.0003
Sabbatical leaves	1.00	2.12	2.00	2.65	2.96	3.06	3.26	.00005
Staff tuition-paid courses	2.17	2.30	2.42	2.47	2.41	2.45	2.54	NS
Service awards	1.17	1.80	1.92	1.74	1.83	1.88	2.28	NS

*Mean scores are computed on the basis of the number of districts responding to each item; these may be less than or equal to the "N" given for each size category.
Scoring scale: 1=never; 2=very rarely; 3=in special cases; 4=usual policy

Significant regional differences are indicated in Table 9.6. Tuition paid courses and sabbaticals are apparently a luxury primarily enjoyed in the Northeast, perhaps related to the high per pupil expenditures in these regions.

TABLE 9.6
POLICIES PRACTICED BY REGION
DISTRICTS < 80,000
MEAN SCORES*

	Policy				
Region	Pay Staff Travel Mean	Lay Advisory Groups Mean	Sabbatical Leaves Mean	Tuition-Paid Courses Mean	Service Awards Mean
New England (N=24)	3.88	3.30	3.33	2.79	2.09
Mid East (N=52)	3.82	3.30	3.31	2.88	1.81
Great Lakes (N=68)	3.86	3.23	2.37	2.33	1.68
South East (N=67)	3.80	3.49	1.93	2.16	1.66
Plains (N=32)	3.64	2.93	2.18	1.93	1.75
Rocky Mountains (N=12)	3.45	2.91	2.36	2.18	1.91
South West (N=25)	3.80	3.35	2.08	2.24	2.56
Far West (N=42)	3.74	3.60	2.85	2.55	1.70
Significance Level (chi-square test)	NS	p <.01	p <.0001	p <.00005	p <.01

* 1=never; 2=very rarely; 3=in special cases; 4=usual policy

In summary, it appears that a large variety of resource and policy options can be more easily exercised by larger districts than smaller ones. However, such inequities might disappear if resource availability and use were computed on a per pupil basis. While there are also a number of regional differences, they do not follow any one consistent pattern suggesting that one region has more of everything than another region. We also note a greater use of internal than external resources of all kinds, and this is a pattern we have seen repeated from earlier chapters in which resource utilization was discussed in the context of the showcase innovation exclusively. We will reserve for the next chapter a consideration of how resource utilization variables relate to a general measure of district innovativeness.

CHAPTER TEN: THE CORRELATES OF INNOVATIVENESS

Up to this point, we have avoided any presentation which sets up some districts as being superior to others on any qualitative dimension. In this chapter, with some trepidation, we will depart from that practice by constructing a variable labelled "Innovativeness" and using it as a kind of outcome criterion. However, before presenting this analysis, several limitations on interpretation must be firmly understood. First, we are dealing here exclusively with voluntary self-report from one individual representing his district. Hence, there are multiple opportunities for error from at least the following potential sources:

(1) the respondent exaggerates the true number of "innovations" to make his district look good.

(2) the respondent forgets some of the innovations that took place.

(3) the respondent lists separately two or more items which are really aspects of one innovation.

(4) the respondent is not aware of or has no access to all the innovations that have taken place.

(5) the respondent includes innovations from more than one year.

(6) the questions as stated do not elicit appropriate responses.

(7) records on innovations which reach the central office give a false picture of what <u>really</u> happened.

Secondly, regardless of the validity of the self-report measure, a score of "Innovativeness" cannot be equated with either "productivity" or "improvement" in school district well-being or the well-being of students.

A third limitation which should be placed on interpretation of this analysis stems from the indirectness of the measure. The questionnaire's prime emphasis was on <u>one</u> innovation and the processes and outcomes surrounding it. No indication was given that a score of "innovativeness" would be derived from any question. The question which we ended up using for this purpose was headed, "Other areas in which the school district has been innovating in the last school year (1970-71)." Indeed, we were very uncertain, ourselves, about the utility of this instrument to get at such a measure.

Nevertheless, it was deemed desirable to explore a number of approaches to measure outcomes and to make tentative comparisons with a number of presumably relevant school district characteristics. We have gone through this excercise partly out of curiosity, partly to gain further insight into the theoretical and empirical dimensions discussed in Chapter Eight, and partly to provide for the National Institute of Education some indication of the potential value of future studies using "Innovativeness" measures.

A. HOW THE MEASURE OF INNOVATIVENESS WAS DERIVED

In Chapter Three we reported at length on the findings from questions of the survey which asked respondents to identify their "most significant innovations" of the 1970-71 school year in six open-ended categories. The question yielded an overwhelming response far beyond our expectations. The mean number of innovations reported was 9.0, with a substantial variance. The pattern of responses is illustrated in Figure 1. As the figure shows, the distribution is skewed with a long tail stretching out at the upper end.

Since our intent was to develop an index based on total number of innovations, this distribution represents a composite of responses to Question 5 and Question 1* (the "showcase" innovation). We chose to exclude from our analysis five cases in which no innovation was reported in response to either question, reasoning that respondents may have either misinterpreted the question or have rejected that aspect of the questionnaire. We did not feel justified in scoring this as a legitimate "none" response without further supporting evidence.

Because of the skew in the distribution, we further chose to transform the scores using a logarithmic transformation formula. This had the effect of stretching the lower end of the distribution and contracting the higher end; the greater symmetry thus achieved did not change the relative position of any of the scores but made them more suitable for the analysis of linear relationships to other variables (via product moment correlations). This transformation also seemed appropriate on logical grounds; i.e., differences at the low end of the distribution (e.g., between one innovation reported and five) would seem to indicate more significant inter-district discrepancies on an underlying dimension of innovativeness than differences at the high end (e.g., between 31 innovations reported and 35).

B. HOW STATISTICS SHOULD BE INTERPRETED

The statistic used in all cases is the Pearson product-moment correlation which measures the strength of a linear relationship between two variables on a scale from +1.00 (perfect positive relationship-differences on one variable are completely accountable from differences on the other) to -1.00 (perfect inverse relationship). In all cases, significance tests using parametric methods were made only of the null hypothesis, i.e., that the true relationship in the population from which we were sampling was 0.00. Because of the relatively large sample size this meant that a correlation of very low magnitude (e.g., .11) could be described as "significant" at the .05 probability level. In layman's terms what this means is that there is some relationship between the two variables, and even though it appears to be very weak, there is only one chance in twenty that the true relationship in the

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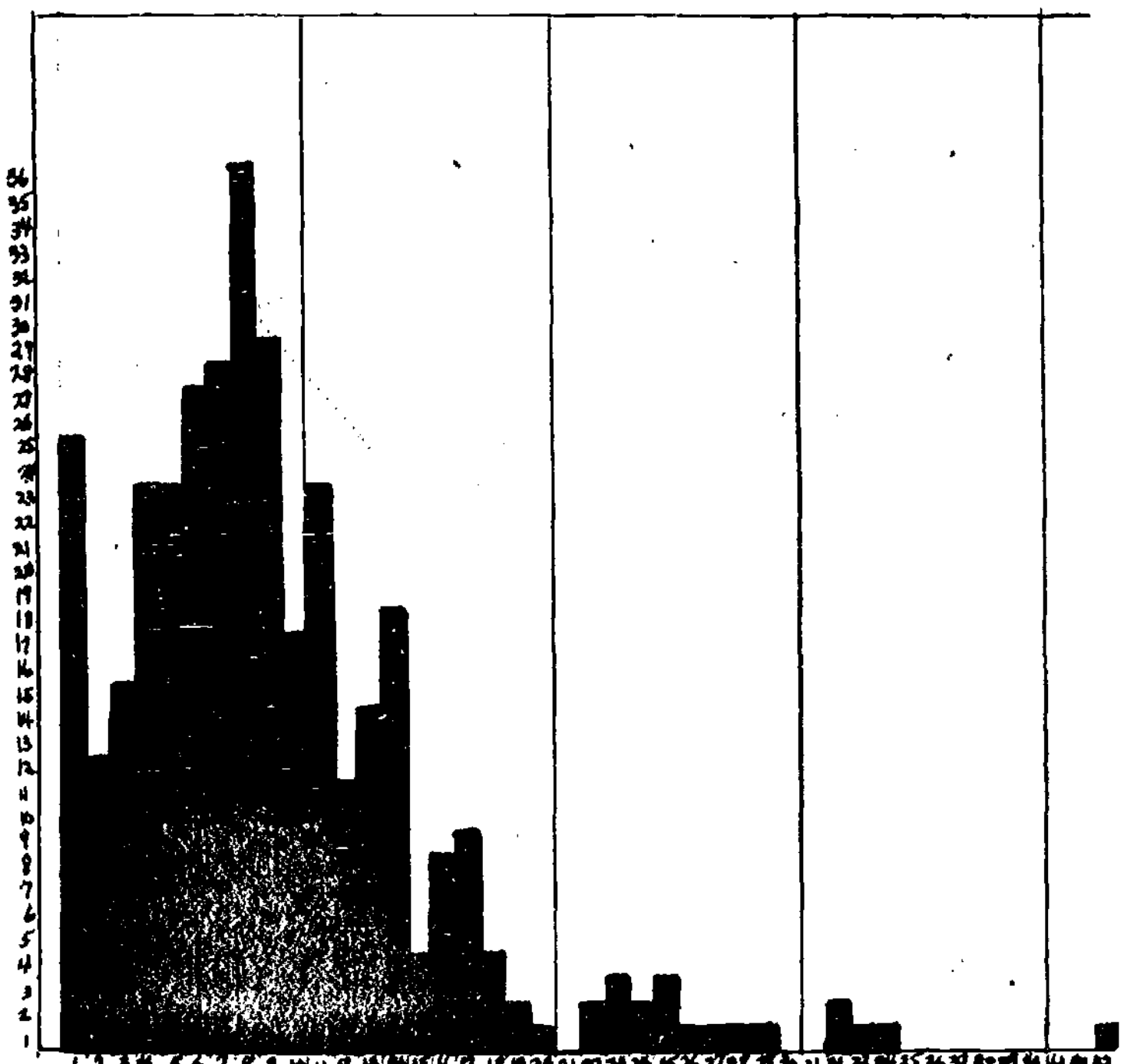
*In the few cases where respondents repeated the "showcase" innovation in their inventory listing, we were careful not to count it twice.

FIGURE 10.1
INNOVATIVENESS

(Raw Sum of Responses to Question #5 by Each District plus One for Every Non-Redundant Response to Question #1)



Number of Innovations Reported in Each District 1970-71

population is non-existent. A correlation of this magnitude signifies that only a little more than one percent of the variance in one variable can be explained by its relationship to the others.

C. CORRELATIONS WITH BASIC SCHOOL DISTRICT CHARACTERISTICS

It is evident from Table 10.1 that there are some significant relationships between our innovativeness score and other variables. The strongest

TABLE 10.1
INNOVATIVENESS X SCHOOL DISTRICT CHARACTERISTICS

		Correlation with Innovativeness			
		Zero Order		Size Controlled	
Characteristic	N*	r	(Sig.Level)	r	(Sig.Leve
Number of pupils (size)	348	.27	(.001)	--	--
Per pupil expenditure	298	.14	(.02)	.18	(.01)
Pupil-teacher ratio	299	.00	NS	-.10	(.08)
Pupil-administrator ratio	275	.08	NS	.03	NS
Percent of grads in 4 year college	264	.08	NS	.09	(.10)
Percent of grads in non-degree vocational/technical training	233	-.08	NS	-.02	NS
Five year enrollment change	332	-.07	NS	-.02	NS
Five year change in per pupil expenditure	327	.04	NS	.05	NS

*Each correlation is computed on the basis of actual responses to that item and only when a complete response is available for both variables. In all cases maximum N for innovativeness is 348.

relationship of all is to the ubiquitous "size" factor: the larger the districts, the more items they listed as "innovations" in response to our survey. Interestingly, of course, as noted in earlier chapters, we do not know whether there are more innovations on a per pupil basis in the larger districts. In any case, this factor is so pervasive that we chose to reckon its influence

more carefully in interpreting other relationships. Hence for all o ner variables two correlations were computed, one which ignored the eff cts of size ("zero order") and a second in which size effects were adjus.ed for and statistically held constant (partial correlation controlling on size).

The adjustment reveals few dramatic changes in Table 10.1, however. Per pupil expenditure becomes more salient, suggesting that this factor affects innovativeness relatively independently of size, and "pupil-teacher ratio" emerges as a very slight possible correlate (i.e., the more pupils per teacher, the fewer innovations).

We had expected that the percentage of graduates going on to four year colleges would be some index of both affluence and academic excellence, suggesting a high capacity for innovativeness, but the relationship, if any, is tenuous.

Finally, we had expected that enrollment or financial changes would affect innovativeness, either as unfreezing or stabilizing influences. Whatever the real relationship, none emerged in our analysis.*

D. CORRELATIONS WITH RESOURCES AND POLICIES

Several interesting and important relationships emerged when the variables considered in Chapter Nine were compared with "innovativeness." Table 10.2 tells the story.

(Insert Table 10.2 here)

Among inside resources, in-service training seems to stand out as most related to innovativeness, followed by media centers and curriculum specialists, resources which may be functionally related to in-service training capacity. Student involvement seems to have no relationship, nor does it appear that the existence of a school research office does much to spur innovations. This latter finding confirms a report by Mosher which had noted the inadequacy of such offices as stimulators of educational reform (Mosher, 1968).

Among outside sources, those providing information (rather than financial or other types of support) seem to stand out, e.g., universities, ERIC, and the Regional Educational Laboratories. Such findings would happily confirm theoretical assumptions about information resource linkage and innovating.

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*These variables were measured on a 3 point scale of: decrease (1) - no change (2) - increase (3).

TABLE 10.2
INNOVATIVENESS X RESOURCES AND POLICIES

Item	N	Mean Utili-zation*	Correlation with Innovativeness: Zero Order r	Zero Order (Sig.Level)	Size Controlled r	Size Controlled (Sig.Lev
INTERNAL RESOURCES						
Teacher discussions & idea presentations	331	4.27	.06	NS	-.01	NS
In-service training program	333	4.19	.25	(.001)	.13	(.03)
Curriculum supervisors	295	4.10	.19	(.001)	.13	(.03)
Library facilities	325	3.83	.13	(.03)	.05	NS
Research and evaluation office or staff	278	3.73	.08	NS	.03	NS
Media specialists or centers	315	3.70	.20	(.001)	.17	(.01)
Student discussions & idea presentations	328	3.26	.04	NS	-.04	NS
All inside resources	240	3.31	.19	(.004)	.14	(.02)
EXTERNAL RESOURCES						
ESEA Title I projects or services	320	3.86	.08	NS	-.08	NS
State Education Agency services	324	3.55	.06	NS	.00	NS
ESEA Title III projects or services	308	3.45	.13	(.03)	-.02	NS
Other federally funded programs and services	303	3.36	.13	(.03)	.04	NS
Universities and colleges	321	3.21	.19	(.001)	.10	(.08)
Professional associations	317	2.75	.09	NS	-.03	NS
ERIC	273	2.47	.19	(.002)	.08	NS
USOE supported regional educational laboratories	286	2.23	.19	(.002)	.10	(.08)
Foundations and other private programs	293	2.00	.14	(.02)	.12	(.03)
All external resources	240	2.04	.06	NS	.01	NS
All resources combined	240	--	.15	(.02)	.10	(.08)
POLICIES						
Pay staff travel	333	3.79	.10	(.07)	.06	NS
Lay advisory groups (community, minority, parents)	328	3.34	.19	(.001)	.12	(.03)
Sabbatical leaves	324	2.60	.14	(.02)	.05	NS
Staff tuition-paid courses	325	2.42	.01	NS	.02	NS
Service awards	317	1.85	-.01	NS	-.03	NS

*For resources: 1=never; 5=very frequently.
For policies: 1=never; 4=usual policy.

However, our enthusiasm for these findings has to be tempered by another fact emerging from the study: namely, that many of these resource utilization proclivites could be associated with the size of the district. Sadly, all relationships of innovativeness to outside resource utilization seem to be conditioned by district size. In fact, a combined score on all outside resources shows a nearly zero correlation. On the other hand, some inside resources hold up, notably "media specialists and centers"; the combined index of inside resources also appears to have a weak but statistically significant relationship to the innovativeness measure.

Policy items suffer the same fate. Staff travel and sabbatical leaves are presumably supported by school districts for the very purpose of self-renewal and allowing contact with new ideas; these are also luxuries which larger districts can afford more often. Controlling for size, however, no relationship is apparent. On the other hand, the use of lay advisory groups does seem to make a difference regardless of size, a fact supportive of community linkage as a factor in innovation (see again discussion of linkage in Chapter Eight).

E. CORRELATIONS WITH MEDIA USE

In Chapter Seven, we proposed a number of relationships between media use, district size, and the difficulty of financing new programs; but we did not consider the variable of innovativeness as such. Presumably, a district which innovates a great deal has an equally great need to communicate among themselves and to their community about what they are doing. The zero order correlations of Table 10.3 confirm this reasoning. The use of three of five media types are significantly related to innovativeness and the other two are at least directionally suggestive.

TABLE 10.3
INNOVATIVENESS X MEDIA USE

Medium	N	Mean* Utilization	Correlation with Innovativeness: Zero Order r	Zero Order (Sig.Level)	Size Controlled r	Size Controlled (Sig.Level)
Local Newspaper	330	4.24	.15	(.01)	.08	NS
Public Meetings	326	3.28	.14	(.02)	.00	NS
Newsletters	322	3.27	.09	(.10)	.01	NS
Local Radio	317	3.05	.07	NS	-.03	NS
Local Television	293	2.20	.16	(.005)	-.01	NS

*1=very rarely or never; 2=once or twice a year; 3=quarterly; 4=monthly; 5=weekly or more often

However, all these items are evidently intertwined with district size. Only use of the "local newspaper" has even the suggestion of an independent relationship to the criterion.

F. CORRELATIONS WITH MEASURES OF DISCONTENT

Various change theorists have proposed the need for unrest, crisis, conflict, or disequilibrium as the necessary precondition for change, and we have observed in Chapter Eight that a number of school district superintendents are sympathetic to this view (Procedure Factor IV: "Conflict-Linkage"). If they are right there should be a relationship between various "discontent" measures and innovativeness.

TABLE 10.4
INNOVATIVENESS X DISCONTENT

Item	N	Mean Level*	Correlation with Innovativeness: Zero Order r	Zero Order (Sig.Level)	Size Controlled r	Size Controlled (Sig.Level)
Citizen support for financing new programs	317	2.61	.03	NS	.01	NS
Citizen support for financing existing operations	329	2.33	.01	NS	.04	NS
Community group protests	323	1.70	.17	(.002)	.05	NS
Student unrest	325	1.64	.13	(.03)	-.03	NS
Teacher strikes and demonstrations	329	1.10	.12	(.03)	.11	(.05)

*For financing items: 1=no difficulty; 5=great difficulty.
For other events: 1=never; 2=once (in last year); 3=more than once.

Table 10.4 gives only minimal support to the hypothesis. Community and student protests are significantly correlated with innovativeness, but once again size of the district is implicated. Teacher strikes and demonstrations, on the other hand, do seem to promote some amount of innovation regardless of district size.

G. THE SHOWCASE INNOVATION PROCESS AS A PREDICTOR OF GENERAL INNOVATIVENESS

We suspected that districts which showed a propensity for one or another strategy of innovation would also show differing frequencies of innovativeness. Similarly, we guessed that complaints about one type of barrier over another might predict to differing levels of general innovativeness. We did not, however, approach this data with specific directional hypotheses in mind. In fact, we might have suspected that any procedure reported would have fostered general innovativeness while almost any barrier reported would have inhibited innovativeness. The results can therefore be allowed to speak for themselves.

To make comparisons with our earlier presentation clearer, the correlations will be offered for these items clustered according to the empirical factors which emerged and were discussed in Chapter Eight.

TABLE 10.5
INNOVATIVENESS X PARTICIPATIVE PROBLEM SOLVING
(Procedure Factor I)

Item	N	Factor Loading on PI	Correlation with Innovativeness			
			Zero Order		Size Controlled	
			r	(Sig.Level)	r	(Sig.Level)
Maximizing chances of participation by many groups	332	.64	.17	(.005)	.16	(.005)
Finding shared values as a basis for working	325	.61	.06	NS	.07	NS
Providing a climate conducive to sharing ideas	338	.60	.15	(.005)	.10	(.10)
Stressing self help by the users of the innovation	332	.58	.16	(.005)	.15	(.005)
Mean r for PI			.14		.12	

Three of the four items on PI seem to be related to innovativeness while one is not. All these relationships are slightly weakened when size is controlled but the general pattern remains clear and consistent: a superintendent's ideology towards change as a participative problem solving process seems to be conducive to innovation.

TABLE 10.6
INNOVATIVENESS X RD&D EMPHASIS
(Procedure Factor II)

Item	N	Factor PII Loading	Correlation with Innovativeness: Zero Order r	Zero Order (Sig.Level)	Size Controlled r	Size Controlled (Sig,Leve
Systematic evaluation	337	.64	-.07	NS	-.13	(.03)
Solid research base	330	.64	.07	NS	.06	NS
Systematic planning	338	.64	.07	NS	.04	NS
Adequate definition of objectives	337	.60	.04	NS	-.03	NS
Mean r for PII			.03		-.02	

Procedure Factor II tells a quite different story. Stress on an RD&D approach seems to do nothing to foster high innovation frequency. In fact, emphasis on evaluation appears to have a dampening effect. Hindsight allows us to speculate on why this might be so: evaluations can be seen as a kind of police function and the tougher it is the more likely it is to speak out on the negative side; hence, there may be a tendency to take fewer risks on new things. On the other hand, innovations undertaken may be of higher quality under these circumstances and could have more impact and more long term benefit. Our data don't extend far enough to give any evidence on these propositions, pro or con.

TABLE 10.7
INNOVATIVENESS X STRATEGIC MANIPULATION
(Procedure Factor III)

Item	N	Factor PIII Loading	Correlation with Innovativeness: Zero Order r	Zero Order (Sig.Level)	Size Controlled r	Size Controlled (Sig.Level)
Participation by key community leaders	334	-.71	.09	(.09)	.08	NS
Taking advantage of crisis situations	324	-.47	.12	(.04)	.09	(.09)
Involvement of informal leaders of opinion inside the schools	333	-.36	.10	(.07)	.10	(.07)
Mean r for PIII			.10		.09	

Strategic manipulation is apparently a pattern of superintendent response which does something to promote innovations but not much.

TABLE 10.8
INNOVATIVENESS X CONFLICT-LINKAGE
(Procedure Factor IV)

Item	N	Factor PIV Loading	Correlation with Innovativeness			
			Zero Order		Size Controlled	
			r	(Sig.Level)	r	(Sig.Level)
Confrontation of differences	334	-.69	.14	(.01)	.11	(.05)
Resolution of interpersonal conflicts	327	-.55	.21	(.001)	.19	(.001)
Creating awareness of the need for change	337	-.50	.21	(.001)	.18	(.002)
Creating awareness of alternative solutions	335	-.47	.12	(.03)	.10	(.0[illegible])
Providing a climate conducive to risk-taking	335	-.46	.16	(.005)	.13	(.02)
Mean r for PIV			.17		.14	

Factor PIV seems to have the strongest and most consistent relationship to innovativeness of any of the factors: once again hindsight reasoning can serve us well here. Superintendents advocating this cluster of strategies seem to be change catalysts; they like to stir things up, to maximize involvement and stimulation, creating some kind of blossoming buzzing confusion. Evidently as a result a host of innovations pour out.

The pattern of correlates within and among the procedure factor items is very consistent and makes logical sense. "Conflict-Linkage" is the most strongly related, followed closely by "participative problem solving" and then by "strategic manipulation." All these perspectives seem to do something to encourage innovation, whether or not size is controlled. Most interestingly the RD&D seems to have no stimulating effect on the number of innovations and indeed a strong emphasis on evaluation may be an inhibitor.

The pattern of findings for "barriers" is not nearly as clear cut. The correlates to innovativeness are about as difficult to explain as the factors themselves. Most surprising is the fact that respondents' tendencies to report barriers as important was *positively* related to innovativeness in 17 out of the 18 items! Hence, apparently there is an honesty or social desirability factor operating here: the high innovators are more likely to own up to the fact that barriers were encountered. The sole exception was the item "Lack of contact with other school systems" ($r = -.09$; $p < .10$).

All barrier items correlates are displayed in Table 10.9 grouped according to their clustering on the factor analysis.

(Insert Table 10.9 here)

Seemingly the large general barrier factor (B1) bears some relationship to innovativeness. The eleven highest loading items all have a positive correlation with innovativeness and six of these are significant at least at the .05 level. Controlling on size reduces this only slightly. Factor B11 - "Capacity"-also seems to have a modest bearing on innovativeness as measured by the barrier items only. However these findings are also the reverse of what one might logically expect, i.e., those who complained more about lack of finances were slightly more likely to report many innovations. No other dramatic findings are revealed in this table either from the other B Factors or from the residual items from the procedures list.

H. SUMMARY

In this chapter an "Innovativeness" index composed of a count of all innovations spontaneously reported by each respondent was compared with 82 other variables generated from the questionnaire, using product moment correlations.

To assist in the summary of the many findings reported in this chapter, we have constructed Table 10.10.

(Insert Table 10.10 here)

The strongest correlate to innovativeness was found to be "number of pupils" (our measure of district size), for which $r = .27$. Thirty-seven other variables also had low but statistically significant (minimum $p < .05$, two-tailed test) correlations with the innovativeness measure. However, when size was controlled statistically and the partial correlations computed, almost all other correlations were reduced in magnitude and only 15 remained significant at the .05 level.

TABLE 10.9
INNOVATIVENESS X BARRIERS AND RESIDUAL PROCEDURES

Item	N	Core Items on Factor	Correlation with Innovativeness: Zero Order r	(Sig.Level)	Size Controlled r	(Sig.Level)
Staff's lack of precise information about the innovation	335	I.81	.10	(.08)	.08	NS
Confusion among staff about the purpose of the innovation	336	I.79	.07	NS	.05	NS
Unwillingness of teachers & other school personnel to change or listen to new ideas	334	I.77, IV.26	.13	(.02)	.10	(.07)
Lack of communication among staff	333	I.77	.13	(.02)	.08	NS
Feeling by teachers & staff that the innovation would have little benefit for them	332	I.72	.15	(.01)	.12	(.03)
Lack of coordination & teamwork within the school system	331	I.69	.06	NS	.04	NS
Frustration & difficulty encountered by teachers and/or relevant staff in trying to adopt	330	I.66, IV.38	.18	(.001)	.16	[illegible]
Disorganization of the planning and implementation efforts	334	I.66	.08	NS	.06	NS
Absence of a concerted campaign to put the new ideas across	332	I.61	.01	NS	.00	NS
Rigidity of school system structure & bureaucracy	334	I.56	.03	NS	.00	NS
Lack of communication between staff & students	330	I.56	.13	(.02)	.12	(.03)
Unwillingness of resource groups to help us revise or adapt	331	I.49	.00	NS	-.04	NS
Lack of adequate contacts with outside resource groups (e.g., universities, labs, consultants, etc.)	333	I.39, III.26	.02	NS	.04	NS
Shortage of funds allocated for the innovation	332	II.57	.14	(.01)	.12	(.03)
Starting out with adequate financial resources to do the job	334	II-.57	.06	NS	.03	NS
Shortage of qualified personnel	331	II.41	.11	(.05)	.09	(.10)

(Table continued on next page)

Continuation of Table 10.9

Item	N	Core Items on Factor	Correlation with Innovativeness: Zero Order r	(Sig.Level)	Size Controlled r	(Sig.Leve
Frustration and difficulty encountered by students during the adoption process	328	III.57	.06	NS	.07	NS
Lack of contact with other school systems who had considered the same innovation	330	III.51	-.09	(.10)	-.07	NS
Inadequacy of school plant, facilities, equipment, or supplies	332	V.38	.05	NS	.03	NS
Selecting a competent staff to implement change	333	IV-.28	-.01	NS	-.06	NS
Utilizing a number of different media to get the new ideas across	336	{PII.34, PI.24	.08	NS	.10	(.07)
Persistence by those who advocate the innovation	336	{PI.26, PII.23	.12	(.03)	.08	NS
Adequate diagnosis of the real educational need	337	{PII.43, PI.28	.05	NS	.03	NS

TABLE 10.10
NOTABLE CORRELATES AND NON-CORRELATES OF INNOVATIVENESS IN A NATIONAL SAMPLE OF 353 SCHOOL DISTRICTS: 1970-71

VARIABLE	CORRELATIONS WITH INNOVATIVENESS SCORES OF EACH DISTRICT: Zero Order r	Zero Order sig.lev.	District Size Controlled r	District Size Controlled sig.	
Number of pupils (size)	.27	(.001)	-	-	Correlates Independent of Size
Per pupil expenditure	.14	(.02)	.18	(.01)	
Utilize media specialists & centers	.20	(.001)	.17	(.01)	
Utilize in-service training	.25	(.001)	.13	(.02)	
Utilize lay advisory groups (community, minority, parents)	.19	(.001)	.12	(.05)	
Teacher strikes (frequency)	.12	(.05)	.11	(.05)	
Community group protests (freq.)	.17	(.005)	.05	NS	Correlates apparently not Independent of size
Student unrest (protests, confrontations, etc.)	.13	(.05)	-.03	NS	
Use local TV to explain innovations	.16	(.005)	-.01	NS	
Use local newspaper to explain innovations	.15	(.01)	.08	NS	
Percent of 1970 graduates going on to 4-year college	.08	NS	.09	NS	Apparently not correlates of Innovativeness
Difficulty in gaining citizen support for financing in the last year for:					
a. existing operations	.01	NS	.04	NS	
b. new projects	.03	NS	.01	NS	
Pupil-teacher ratio	.00	NS	-.10	NS	
PROCEDURES EMPHASIZED IN IMPLEMENTING THE MAJOR 1970-71 INNOVATION					Procedures generally stressed in problem-solving and linkage Perspectives toward innovation
Resolution of interpersonal conflicts (P IV)	.21	(.001)	.19	(.01)	
Creating awareness of the need for change (P IV)	.21	(.001)	.18	(.01)	
Maximizing chances of participation by many groups (P I)	.17	(.005)	.16	(.01)	
Stressing self-help by the users of the innovation (P I)	.16	(.005)	.15	(.01)	
Providing a climate conducive to risk-taking (P IV)	.16	(.005)	.13	(.01)	
Providing a climate conducive to sharing ideas (P I)	.15	(.005)	.10	NS	
Systematic evaluation (P II)	-.07	NS	-.13	(.05)	Procedures stressed in R,D,D&E. Perspective on Innovation.
Systematic planning (P II)	.07	NS	.04	NS	
Adequate definition of objectives (P III)	.04	NS	-.03	NS	
Solid research base (P II)	.07	NS	.06	NS	
BARRIERS EMPHASIZED IN IMPLEMENTING THE MAJOR 1970-71 INNOVATION					Respondents' willingness to cite barriers positively related to Innovativeness.
Frustration and difficulty encountered by teachers and/or relevant staff in trying to adopt	.18	(.001)	.16	(.01)	
Feeling by teachers that the innovation would have little benefit to them	1.5	(.01)	.12	(.05)	

Past studies by various authors have found relationships between innovativeness and a number of standard descriptive measures of school districts. Table 10.10 suggests the relative importance of a variety of factors including these traditional measures and a number of items related to the concepts of innovation process summarized in other parts of this report.

Starting at the top of this table, there appear to be five characteristics of school districts associated with innovativeness in addition to and independent of district size. Per pupil expenditure is a traditional and expected correlate, suggesting not only affluence but consistent local support for education over the years. Media centers and in-service training are inside resources which also spur innovation. Lay advisory groups represent another important type of linkage which innovative districts are slightly more likely to employ. It is interesting to contrast this interactive type of community linkage with the use of TV and newspapers which are also correlated, although their use seems to be a function of district size.

Many authors have suggested that crises may be conducive to an unfreezing of traditional school patterns and hence to innovativeness. It appears that teacher, community, and student-provoked crises are related to innovativeness. Again, however, only teacher strikes survive as a weak but significant correlate when size of district is controlled.

The third set of variables in Table 10.10 are included here because their lack of relationship to innovativeness may be of surprise to some readers. Neither the intellectual distinction of graduates nor reputed troubles with school finance appear to have much to do with number of innovations reported.

The last twelve items of Table 10.10 are selected from the list of procedures and barriers discussed in Chapters Eight and Nine. The first six represent the strongest correlations with innovativeness. The next four were selected to contrast the perspectives on change that they are intended to represent. It should be noted that these correlations in no way represent the relative popularity of different items to our respondents as a whole; for example, "systematic planning" and "definition of objectives" were reported as highly emphasized for most showcase innovations even though they are shown in Table 10.10 to correlate poorly with over-all innovativeness. The last two "barrier" items show a surprising positive relationship to innovativeness, suggesting either that such items elicit more "honest" responses from more innovative school districts or that those who innovate more, indeed encounter more resistance ("future shock" factor).

In general, it appears that superintendents who say they stress stimulation, active need arousal, openness, problem-solving, and intra-system linkage procedures in introducing their major innovation are more likely to report more innovations. Of special interest is the slight but statistically significant negative relationship between innovativeness and claims of systematic evaluation. Could it be that an emphasis on evaluation inhibits innovativeness?

REFERENCES

REFERENCES:

Brickell, Henry M., ORGANIZING NEW YORK STATE FOR EDUCATIONAL CHANGE, 1961, Commissioner of Education, State Education Department, Albany, New York, 107 pages.

Carlson, Richard O., ADOPTION OF EDUCATIONAL INNOVATIONS, Eugene, Oregon: University of Oregon, 1965, 84 pp.

Chase, Francis S., "Educational Research and Development: Promise or Mirage?" JOURNAL OF RESEARCH AND DEVELOPMENT IN EDUCATION, 1968, Vol. 1, No. 4, pp. 3-14.

Chesler, Mark A. and Lohman, John E., "Changing Schools Through Student Advocacy," in Schmuck, R.A. and Miles, M.B. (Eds.), ORGANIZATION DEVELOPMENT IN SCHOOLS, Palo Alto, Calif., National Press Books, 1971.

Clark, David L. and Guba, Egon G., INNOVATION IN SCHOOL CURRICULA, Washington, D.C.: The Center for the Study of Instruction, National Education Association, 1965, 33 pp. (a)

Clark, David L. and Guba, Egon G., "An Examination of Potential Change Roles in Education," Paper presented at the Symposium on INNOVATION IN PLANNING SCHOOL CURRICULA, Airlie House, Virginia, October, 1965. (b)

Coleman, James S.;Katz, Elihu; Menzel, Herbert, MEDICAL INNOVATION: A DIFFUSION STUDY, New York: Bobbs-Merrill, 1966.

Havelock, Ronald G. in collaboration with Alan E. Guskin and others, PLANNING FOR INNOVATION THROUGH THE DISSEMINATION AND UTILIZATION OF KNOWLEDGE, Ann Arbor, Michigan: Institute for Social Research, The University of Michigan. Report to the U.S. Office of Education on a Comparative Survey of the Literature, July 1969.

Havelock, Ronald G. and Havelock, Mary C., TRAINING FOR CHANGE AGENTS: A GUIDE TO THE DESIGN OF TRAINING PROGRAMS IN EDUCATION AND OTHER FIELDS, Ann Arbor, Michigan: Institute for Social Research, The University of Michigan, 1973.

Jung, Charles, RESEARCH UTILIZING PROBLEM SOLVING: An Instructional Program for School Personnel being developed by Northwest Regional Educational Laboratory, Portland, Oregon, 1970.

Kaiser, H.F., "The Varimax Criterion for Analytical Rotation in Factor Analysis," PSYCHOMETRIKA, 1958, pp. 187-200.

Lin, Nan; Leu, D.J.; Rogers, E.; and Schwartz, D.F., THE DIFFUSION OF AN INNOVATION IN THREE MICHIGAN HIGH SCHOOLS: INSTITUTION BUILDING THROUGH CHANGE, East Lansing, Michigan: Institute for International Studies in Education, Michigan State University, December, 1966.

Lindeman, John; Bailey, Stephen K.; Berke, Joel S.; and Naum, L.H., SOME ASPECTS OF EDUCATIONAL RESEARCH AND DEVELOPMENT IN THE U.S., Report for the Organization for Economic Cooperation and Development Review, Project #8-0515 Contract # OEC-9-420139-1373(010), 1969.

Lionberger, Herbert F., ADOPTION OF NEW IDEAS AND PRACTICES: A Summary of the Research Dealing with the Acceptance of Technological Change in Agriculture with Implications for Action in Facilitating such Change, Ames, Iowa: Iowa State University Press, 1960, 164 pp.

Lippitt, Ronald; Watson, Jeanne; and Westley, Bruce, THE DYNAMICS OF PLANNED CHANGE, New York: Harcourt, Brace, and Company, Inc., 1958, 312 pp.

Miles, Matthew B. (ed.), INNOVATION IN EDUCATION, New York: Bureau of Publications, Teachers College, Columbia University, 1964, 689 pp.

Mort, Paul R., "Studies in Educational Innovation from the Institute of Administrative Research," In Miles, Matthew B., (ed.), INNOVATION IN EDUCATION, New York: Bureau of Publications, Teachers College, Columbia University, 1964, 689 pp.

Mosher, Edith K., WHAT ABOUT THE SCHOOL RESEARCH OFFICE?, Berkeley, California: Far West Laboratory of Educational Research and Development, July 1968, 64 pp.

Nunnally, Jum C., PSYCHOMETRIC THEORY, New York: McGraw-Hill, 1967.

Rogers, Everett M., DIFFUSION OF INNOVATIONS, New York: The Free Press of Glencoe, Inc., 1962, 367 pp.

Rogers, Everett M. with F. Floyd Shoemaker, COMMUNICATION OF INNOVATIONS: A CROSS-CULTURAL APPROACH, New York: Free Press of Glencoe, December, 1971.

Ryan, Bryce and Gross, Neal C., "The Diffusion of Hybrid Seed Corn in Two Iowa Communities," RURAL SOCIOLOGY, March, 1943, Vol. 8, pp. 15-24.

Thelen, Herbert A., "Concepts for Collaborative Action-Inquiry," in Watson, G. (ed.), CONCEPTS FOR SOCIAL CHANGE, Baltimore, Maryland: Moran Printing Service, Published by N.T.L. National Education Association for COPED, March, 1967.

Watson, Goodwin, "Resistance to Change," in Watson, G. (ed.), CONCEPTS FOR SOCIAL CHANGE, Baltimore, Maryland: Moran Printing Service, Published by N.T.L. National Education Association for COPED, March, 1967, pp. 10-25.

APPENDIX A

QUESTIONNAIRE
(INCLUDING INSTRUCTION SHEET)

INSTRUCTIONS FOR COMPLETING THE SURVEY FORM

The enclosed questionnaire is intended to be self-explanatory. However, the following additional comments may be of some help in clarifying our objectives.

Question #1a: If you can't think of an innovation which fits the definition from the last school year, cite the most recent innovation from previous years and indicate the year in which it was attempted. If there was no such innovation in your memory, simply write "none in memory" in the space provided. In answering this question, you can rely on your own knowledge and memory exclusively. If there are several activities of the last year which you think might fit the definition, choose the one on which you feel you are the best informed or the one that stands out most clearly in your mind as an example of "innovation." It does not need to be an example of a "good" or a "successful" innovation, however.

Question #1b: Include brief mention of such aspects of the process as media employed, use of outside experts, special meetings, projects, planning, decision-making, and management procedures, participation.

Question #1c: Some individuals usually stand out as either advocates, initiators, or prime decision makers. These persons might be inside or outside the system. Can you indicate who some of these people were, not by name, but by the kinds of position they held and the roles they played?

Question #1d: "Consequences" might include any of the following: improved or worsened student performance on tests, placement of graduates, attitude changes, improved or worsened school atmosphere, school-community relations, changed teacher behavior or attitude, increased or reduced costs of education, changes in staff turn-over or student dropouts, teacher or student unrest, improved or worsened efficiency of instruction or administration. We are primarily interested in your perception and judgment of these consequences and their significance rather than a precise numerical accounting.

Question #1e: This is also a judgment question from the point of view of the superintendent.

Question #2 & #3: "Procedures" and "Barriers": These items are based on past writing and research on the diffusion and utilization of educational innovation. Most of these have been identified by various authors as "important" aspects of successful change but different authors don't always agree on what is most important. We would like to know which appeared to you to be most important for the specific innovation described by you in Question #1.

Question #4a: This question is asked for two reasons. First, we would like to be able to identify trends in innovation across the country for the next year and beyond. Second, we may be able to gather information on difficulties already encountered by some districts which would be of specific help in the future planning of similar programs in other districts.

Question #4b: One potential outcome of this survey may be planning and management tools for administrators and project supervisors. Your views on the value of such tools would be of major interest.

Question #5: In our initial work on this survey we included an extensive list of specific programs and projects as an "inventory" of innovations. However, superintendents had difficulty responding to such a list. Many districts have their own names for projects and choose to classify "innovations" in different ways. Therefore, Question #5 is purposely open-ended. We would like to have a general index of the amount of innovation activity in your district over the last year, using the definition which appears on the first page of the survey form. Five broad areas are suggested ("a" through "e") but these are probably not exhaustive. Use additional categories or change those suggested as you see fit. If there were no innovations in any or all of these categories, simply write the word "none" in the space provided. If there might have been some activity but relevant information is not easily accessible to you, you may simply write "no information." In any case do not include any changes that were made prior to the 1970-71 school year.

Question #6, "a" thru "h": Internal Resources: These refer to special roles, services or procedures which might provide information relevant to innovations or the adoption of innovations. Treat these categories as general labels; if your system has something that might be classified under one of these headings you should so indicate, but include in your consideration only those facilities or activities that are supported primarily by your own system and take place within your own system.

Question #6i: The USOE-supported "Educational Resource Information Centers." Include access to and use of any ERIC document collection or service.

Question #6j: Include use of laboratory products, services, training events, participation in pilot tests, etc.

Laboratories in operation during 1970-71 included: Appalachia Educational Laboratory (AEL), Center for Urban Education (CUE), Central Midwestern Regional Educational Laboratory (CEMREL), Eastern Regional Institute for Education (ERIE), Far West Laboratory for Educational Research and Development (FWLERD), Mid-Continent Regional Educational Laboratory (McREL), Northwest Regional Educational Laboratory (NWREL), Regional Educational Laboratory for the Carolinas and Virginia (RELCV), Research for Better Schools, Inc. (RBS), Southeastern Educational Laboratory (SEL), Southwest Educational Development Laboratory (SEDL), Southwestern Cooperative Educational Laboratory (SWCEL), Southwest Regional Laboratory for Educational Research and Development (SWRL), Upper Midwest Regional Educational Laboratory (UMREL).

Question #6n: Excluding federal programs administered through the states such as Titles I and III of ESEA.

Question #10: Use round figure estimates.

Question #11: Different states have widely differing procedures for financing local education. "Difficulty" will usually mean voter rejection of bonding or millage request. "Some difficulty" might mean a close vote or proposal passage only after compromise. "Great difficulty" would signify complete or repeated rejection of proposals, or severe cutting of budgets.

[Continued on back side]

Question #12d: Does unrest of various kinds hinder innovation or does it spur it on? Scholars are divided on this issue. The observations of superintendents should cast some light on the subject.

Question #13a: 1) Grade Span: Indicate the range of grades for each category, e.g., "K-6, 7-9, 10-12" or "K-8, none, 9-12." 2) Use round figure estimates. 3) Use an estimate of full-time equivalent staff positions occupied.

Question #13c: If the primary reason was consolidation or decentralization, indicate whether or not the student-age population in the communities served was increasing or declining.

The space below may be used for continuation or further explanation of item responses if necessary.

Survey Form Item #	Comment or Continuation

OE 131
OMB 51-S71045
Exp. 4-30-72

INNOVATION FROM THE

SUPERINTENDENT'S VIEWPOINT

No._____

A SURVEY
conducted by the
University of Michigan
Institute for Social Research

for the

Division of Practice Improvement
National Center for Educational Communication
U.S. Office of Education

Comments on specific items are welcomed and will be considered in our analysis.

ALL INFORMATION WILL BE TREATED WITH THE STRICTEST CONFIDENCE.

1. In the space below we would like you to identify the most significant innovation that has been tried out in your district in the last year, using the following definition of "innovation":

A major change introduced in the last year for the purpose of improving the quality of education within your district. This change may have involved any of the following:

a. a substantial reorientation on the part of staff,
b. a reallocation of resources,
c. adoption of new practices, programs, or technology.

Note that the innovation does not have to be successful and may or may not be retained. You might choose one which stands out in your mind as an example of how innovations are usually adopted and implemented in your district. (The questions to this and the following page refer to this particular innovation.)

1a. Describe the innovation briefly (i.e., in two or three sentences indicate what it was, what it involved in staff and resources, who it was to benefit and how)?

1b. By what process was the innovation introduced and implemented?

1c. What persons were primarily responsible for its introduction? (Indicate by positions, roles, or titles.)

1d. What were the actual consequences of this innovation (positive and/or negative)?

1e. What seemed to be the key factor(s) in making the adoption and acceptance of this innovation successful or unsuccessful?

1c. Would you recommend that other districts like yours adopt the same innovation? What advice would you offer them on implementation?

2. INNOVATION PROCEDURES

In the introduction and installation of the innovation identified in Question 1, how much emphasis was given to each of the following?

	EMPHASIS				
	Extreme 5	Major 4	Moderate 3	Slight 2	None 1
a. Systematic evaluation					
b. Solid research base					
c. Systematic planning					
d. Adequate definition of objectives					
e. Selecting a competent staff to implement change					
f. Starting out with adequate financial resources to do the job					
g. Utilizing a number of different media to get the new ideas across					
h. Persistence by those who advocate the innovation					
i. Maximizing chances of participation by many groups					
j. Stressing self-help by the users of the innovation					
k. Adequate diagnosis of the real educational need					
l. Providing a climate conducive to sharing ideas					
m. Providing a climate conducive to risk-taking					
n. Creating awareness of the need for change					
o. Creating an awareness of alternative solutions					
p. Confrontation of differences					
q. Resolution of interpersonal conflicts					
r. Involvement of informal leaders of opinion inside the schools					
s. Participation by key community leaders					
t. Taking advantage of crisis situations					
u. Finding shared values as a basis for working					
Other procedures used (specify):					

3. BARRIERS TO THIS INNOVATION

A number of circumstances are sometimes reported as "barriers" to innovation. In your experience with this innovation, how important was each of the following?

	IMPORTANCE as a barrier				
	Extreme 5	Major 4	Moderate 3	Slight 2	None 1
a. Lack of adequate contacts with outside resource groups (e.g., universities, labs, consultants, etc.)					
b. Lack of communication among the staff					
c. Lack of communication between staff and students					
d. Confusion among staff about the purpose of the innovation					
e. Staff's lack of precise information about the innovation					
f. Disorganization of the planning and implementation efforts					
g. Unwillingness of resource groups to help us revise or adopt					
h. Rigidity of school system structure and bureaucracy					
i. Unwillingness of teachers and other school personnel to change or listen to new ideas					
j. Shortage of funds allocated for the innovation					
k. Shortage of qualified personnel					
l. Feeling by teachers and staff that the innovation would have little benefit for them					
m. Frustration and difficulty encountered by teachers and/or relevent staff in trying to adopt					
n. Frustration and difficulty encountered by students during the adoption process					
o. Lack of contact with other school systems who had considered the same innovation					
p. Lack of coordination and teamwork within the school system					
q. Absence of a concerted campaign to put the new ideas across					
r. Inadequacy of school plant, facilities, equipment, or supplies					
Other barriers (specify):					

4a. Is there another major area or problem on which you are planning to make changes in the next year? (Specify briefly)

b. Would items like those in Questions 2 and 3 above be helpful as a checklist in planning or evaluating such changes? Yes___ or No___
Major reason for checking "yes" or "no."

OTHER AREAS IN WHICH THE SCHOOL DISTRICT HAS BEEN INNOVATING IN THE LAST SCHOOL YEAR (1970-71)

Using the same definition of "innovation" as suggested on Question 1, make a brief listing of other innovations introduced or attempted in the last year. Only the briefest descriptive phrase is necessary (e.g., "12 month year" or "a black studies program"). If the program is a widely distributed educational product such as "PSSC physics," the latter abbreviation will be sufficient. Also indicate the number of innovations tried out in each category "a thru f". If there were none in a particular area last year indicate with a "0"; if there are many in an area that would fit the definition, give your best estimate as to how many there were.

CIRCLE TOTAL NUMBER of innovations in EACH category for 1970-71

a. Major Changes in Administration and Organization (e.g., student, teacher, or citizen participation in governance; programming, planning, or budgeting procedures; promotion and grading practices, decentralization, desegregation).

Most significant innovation (if any):

_____

_____

_____

_____

0 1 2 3 4 or more

b. Major Changes in Instructional Procedures (e.g., individualization of instruction, team teaching, work-study, flexible scheduling, programmed learning, computer-assisted instruction, grouping, teacher aides).

Most significant innovation (if any):

_____

_____

_____

_____

0 1 2 3 4 or more

c. New Services and Special Programs (e.g., guidance and counselling, information centers, library, research or evaluation offits, in-service training for teachers, community relations).

Most significant innovation (if any):

_____

_____

_____

_____

0 1 2 3 4 or more

d. Major Curriculum Changes (e.g., new math, science or social studies, new courses and course programs, or restructuring of entire programs. Only changes which involve several classrooms or more than one building).

Most significant innovation at elementary level (if applicable):

_____

_____

0 1 2 3 4 or more

Most significant innovation at junior high or middle (if applicable):

_____

_____

0 1 2 3 4 or more

Most significant innovation at senior high level (if applicable):

_____

_____

0 1 2 3 4 or more

e. New Educational Technology Acquired (e.g., audio or video tape equipment, computer, teaching machines, specially designed facilities, language laboratory).

Most significant innovation (if any):

_____

_____

_____

_____

0 1 2 3 4 or more

f. Are there other areas in which you made innovations in 1970-71 not covered by the categories above? (Specify briefly)

_____

_____

_____

_____

0 1 2 3 4 or more

6 The two lists below suggest some of the resources which can be used when implementing innovations. Indicate the degree to which your system has used these internal and external resources for this purpose in the past year. (Add others where appropriate.)

INTERNAL RESOURCES	Not Available (-)	FREQUENCY OF USE IF AVAILABLE: Very Freq. (5)	Frequently (4)	Occasionally (3)	Very Infreq. (2)	Never (1)
a. Research and Evaluation Office or Staff						
b. In-Service Training Program						
c. Library Facilities						
d. Media Specialists or Centers						
e. Curriculum Supervisors						
f. Teacher Discussions & Idea Presentations						
g. Student Discussions & Idea Presentations						
h. Other (specify)						

EXTERNAL RESOURCES	Not Available (-)	FREQUENCY OF USE IF AVAILABLE: Very Freq. (5)	Frequently (4)	Occasionally (3)	Very Infreq. (2)	Never (1)
j. ERIC						
j. USOE Supported Regional Educational Laboratories						
k. ESEA Title I Projects or Services						
l. ESEA Title III Projects or Services						
m. Other Federally Funded Programs and Services						
n. State Education Agency Services						
o. Foundations and Other Private Programs						
p. Universities and Colleges						
q. Professional Associations						
r. Other (specify)						

7. Were any of the above resources (internal or external) used in choosing or implementing the specific innovation described on Page 1? (Indicate by letter, "a" through "r"): _____

8. How frequently does your system utilize the following media to explain innovations to parents and the community?

	Weekly or More Often (5)	Monthly (4)	Quarterly (3)	Once or Twice a Year (2)	Very Rarely or Never (1)
a. Local newspaper					
b. Local television					
c. Local radio					
d. Newsletters					
e. Public meetings					

9. To what extent does your system utilize the following policies and procedures?

	Usual Policy (4)	In Special Cases (3)	Very Rarely (2)	Never (1)
a. Pay staff travel				
b. Sabbatical leaves				
c. Staff tuition-paid courses				
d. Service awards				
e. Lay advisory groups (community, minority, parents)				

10. What percent of the 1970 graduates of this system continued their formal education beyond high school?

a. _____% four year college
b. _____% two-year or community college
c. _____% non-degree technical/vocational training
d. _____% other (specify) _____

11. In the last year has the school system experienced difficulty in gaining citizen support for financing education?

	No Difficulty (1)	(2)	Some Difficulty (3)	(4)	Great Difficulty (5)
a. For maintenance of existing operations:					
b. For proposed new projects and programs:					

12. Did your school system experience any of the following events in the last year?

	Never	Once	More than Once
a. Teacher strikes and demonstrations			
b. Community group protests			
c. Student unrest (protests, confrontations, etc.)			

d. Has any of these events influenced innovation activities such as those described in Questions 1, 4, or 5? If so, how?

_____

_____

_____

_____

13a. System size and staffing:

	Elementary	Jr.High/Middle	High School
1) Grade Span 1970-71			
2) Student Enrollment 1970-71			
3) Teachers Employed 1970-71			
4) Admin. Staff Employed 1970-71			

b. Has there been any change in enrollment in the last 5 years?
Increase (1) _____ No Change (2) _____ Decrease (3) _____

c. Primary reason for change _____

14a. What was the total per pupil expenditure for the 1970-71 school year (round figure estimate)? _____

b. Has there been any significant change in per pupil expenditures over the last 5 years?
Increase _____ No Change _____ Decrease _____

c. Primary reason for change _____

APPENDIX B

BACKGROUND CHARACTERISTICS OF THE SAMPLE

TABLE B.1
SAMPLE BY SIZE AND REGION
FREQUENCY DISTRIBUTION

Region	1-299	300-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000-79,999	80,000 and over	Total
New England								
Connecticut	-	4	1	3	4	1	-	13
Maine	-	-	-	-	-	-	-	-
Massachusetts	-	3	4	3	2	1	1	14
New Hampshire	-	1	1	-	-	-	-	2
Rhode Island	-	-	-	-	2	-	-	2
Vermont	-	-	-	-	-	-	-	-
Total	0	8	6	6	8	2	1	31
Mid East								
Delaware	-	-	-	-	1	-	-	1
Maryland	-	-	-	1	2	1	4	8
New Jersey	2	4	6	4	4	1	-	21
New York	-	9	5	8	5	3	1	31
Pennsylvania	-	1	7	5	6	1	1	21
Washington, D.C.	-	-	-	-	-	-	1	1
Total	2	14	18	18	18	6	7	83
Great Lakes								
Illinois	-	8	4	5	4	2	1	24
Indiana	-	2	1	3	4	1	1	12
Michigan	-	5	5	7	3	2	1	23
Ohio	-	7	8	3	4	2	3	27
Wisconsin	-	6	4	-	1	1	1	13
Total	-	28	22	18	16	8	7	99
Plains								
Iowa	1	5	-	1	2	2	-	11
Kansas	-	2	2	1	-	3	-	8
Minnesota	-	3	2	-	1	2	-	8
Missouri	1	5	1	2	2	1	1	13
Nebraska	-	-	-	-	-	1	-	1
North Dakota	-	2	-	-	-	-	-	2
South Dakota	-	1	1	-	-	-	-	2
Total	2	18	6	4	5	9	1	45

(Table continues on next page)

Region	1-299	300-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000-79,999	80,000 and over	Total
South East								
Alabama	-	1	1	2	1	3	-	8
Arkansas	-	3	1	-	1	1	-	6
Florida	-	-	2	2	5	4	6	19
Georgia	-	2	5	1	1	3	2	14
Kentucky	-	1	2	4	1	1	1	10
Louisiana	-	-	-	2	4	4	1	11
Mississippi	-	2	-	2	-	-	-	4
North Carolina	-	-	3	5	5	1	1	15
South Carolina	-	-	1	3	-	3	-	7
Tennessee	-	-	1	2	-	2	2	7
Virginia	-	1	2	2	-	3	1	9
West Virginia	-	-	2	1	2	1	-	6
Total	-	10	20	26	20	26	14	116
Rocky Mountains								
Colorado	-	-	-	2	-	2	1	5
Idaho	-	1	2	-	1	-	-	4
Montana	2	1	-	-	1	-	-	4
Utah	-	-	-	-	-	2	-	2
Wyoming	-	-	-	-	-	-	-	-
Total	2	2	2	2	2	4	1	15
South West								
Arizona	-	3	-	2	3	2	-	10
New Mexico	-	-	1	1	1	-	1	4
Oklahoma	-	2	-	-	1	1	-	4
Texas	-	7	5	3	5	5	3	28
Total	-	12	6	6	10	8	4	46
Far West								
Alaska	-	-	-	-	-	-	-	-
California	1	6	3	9	17	12	4	52
Hawaii	-	-	-	-	-	-	-	-
Nevada	-	-	-	-	-	1	-	1
Oregon	-	2	1	-	-	1	-	4
Washington	1	-	2	3	1	-	1	8
Total	2	8	6	12	18	14	5	65
Grand Total	8	100	86	92	97	77	40	500

TABLE B.3
RESPONSE RATE BY REGION

Region	Districts < 80,000					Districts ≥ 80,000				
	Sample Freq.	%	Responding Freq.	%	Response Rate %	Sample Freq.	%	Responding Freq.	%	Response Rate %
New England	(30)	7	(24)	8	80	(1)	2	(1)	3	100
Mid East	(76)	17	(52)	16	68	(7)	18	(6)	19	86
Great Lakes	(92)	20	(68)	21	74	(7)	18	(4)	13	57
South East	(102)	22	(67)	21	66	(14)	35	(13)	42	93
Plains	(44)	10	(32)	10	73	(1)	2	(1)	3	100
Rocky Mountains	(14)	3	(12)	4	86	(1)	2	-	-	0
South West	(42)	9	(25)	8	60	(4)	10	(3)	10	75
Far West	(60)	13	(42)	13	70	(5)	13	(3)	10	60
Total	(460)	100	(322)	100	70	(40)	100	(31)	100	76

TABLE B.4
RETURNED QUESTIONNAIRES
BY DISTRICT SIZE AND REGION
PERCENT DISTRIBUTION

Region	Districts < 80,000							Districts ≥ 80,000 N=31
	1-299 N=6	300-2,499 N=71	2,500-4,999 N=55	5,000-9,999 N=57	10,000-24,999 N=77	25,000-79,999 N=56	Total N=322	
New England	-	11	7	9	8	2	8	3
Mid East	33	13	16	21	22	5	16	19
Great Lakes	-	27	33	19	16	14	21	13
South East	-	7	18	25	21	39	21	42
Plains	-	21	7	7	4	11	10	3
Rocky Mountains	33	3	4	2	3	5	4	-
South West	-	11	4	5	9	9	8	10
Far West	33	7	11	12	18	14	13	10
Total	100	100	100	100	100	100	100	100

TABLE B.5
GRADE SPAN: ELEMENTARY +

Elementary Grade Span	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
K-3	(1)	*	-	-
K-4	(5)	2	-	-
K-5	(31)	12	(1)	5
K-6**	(145)	54	(9)	43
K-7**	-	-	(1)	5
K-8**	(14)	5	(2)	10
1-3	(1)	*	-	-
1-4	(3)	1	-	-
1-5	(9)	3	-	-
1-6	(47)	17	(6)	29
1-7	(2)	1	(1)	5
1-8***	(11)	4	(1)	5
Total	(269)	100	(21)	100
Elementary - unspecified	(29)		(6)	
Doesn't Apply	(10)		-	
No Information	(14)		4	
Grand Total	(322)		(31)	

\+ Question #13a(1)
* Less than 0.5%
** Includes 4 cases of less of pre-Kindergarten
*** Includes one representative district and one very large district with elementary schools spanning grades 1-6 and 1-8.

TABLE B.6
GRADE SPAN: JUNIOR/MIDDLE*

Junior/Middle Grade Span	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
3-9	(1)	*	-	-
4-8	(1)	*	-	-
5-7	(1)	*	-	-
5-8	(7)	3	-	-
5-9	(1)	*	(1)	5
6-8	(40)	17	(1)	5
6-9	(4)	2	(1)	5
7-8	(61)	26	(1)	5
7-9	(118)	50	(15)	79
7-10	(2)	1	-	-
8-9	(1)	**	-	-
Total	(237)	100	(19)	100
Junior/Middle, unspecified	(26)		(5)	
Doesn't Apply	(45)		(3)	
No Information	(14)		(4)	
Grand Total	(322)		(31)	

* Question #13a(1)
** Less than 0.5%

TABLE 8.7
GRADE SPAN: SENIOR HIGH*

Senior High Grade Span	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
7-12	(7)	3	-	-
8-12	(2)	1	(2)	10
9-12**	(125)	48	(5)	24
10-12	(122)	47	(14)	67
11-12	(2)	1	-	-
Total	(258)	100	(21)	100
Senior High, unspecified	(29)		(5)	
Doesn't Apply	(21)		-	
No Information	(14)		(5)	
Grand Total	(322)		(31)	

* Question #13a(1)
** Includes one representative district and one very large district with high schools spanning grades 7-12 and 9-12.

TABLE B.8
ENROLLMENT*

Enrollment Size	Districts < 80,000						Districts ≥ 80,000					
	Elementary		Junior/ Middle		Senior High		Elementary		Junior/ Middle		Senior High	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
0-499	(19)	7	(36)	15	(28)	11	-	-	-	-	-	-
500-999	(22)	8	(45)	19	(49)	19	-	-	-	-	-	-
1,000-1,499	(28)	10	(27)	12	(34)	13	-	-	-	-	-	-
1,500-1,999	(21)	8	(19)	8	(22)	8	-	-	-	-	-	-
2,000-2,999	(25)	9	(22)	9	(34)	13	-	-	(1)	6	-	-
3,000-3,999	(21)	8	(25)	11	(18)	7	-	-	-	-	-	-
4,000-4,999	(19)	7	(11)	5	(13)	5	-	-	-	-	-	
5,000-6,999	(29)	11	(19)	8	(20)	8	-	-	-	-	-	-
7,000-9,999	(20)	7	(12)	5	(10)	4	-	-	-	-	-	-
10,000-14,999	(26)	10	(7)	3	(19)	7	-	-	-	-	-	-
15,000-24,999	(19)	7	(11)	5	(14)	5	-	-	(9)	50	(10)	48
25,000-39,999	(16)	6	-	-	(1)	**	(2)	9	(4)	22	(7)	33
40,000-59,999	(8)	3	-	-	-	-	(6)	27	(4)	22	(2)	10
60,000-79,999	-	-	-	-	-	-	(9)	41	-	-	(2)	1(
80,000-99,999	-	-	-	-	-	-	(1)	5	-	-	-	-
100,000-149,999	-	-	-	-	-	-	(2)	9	-	-	-	-
150,000-200,000	-	-	-	-	-	-	(2)	9	-	-	-	--
Total	(273)	100	(234)	100	(262)	100	(22)	100	(18)	100	(21)	100
Doesn't Apply	(10)		(46)		(21)		-		(3)		(-)	
No Information	(39)		(42)		(39)		(9)		(10)		(10)	
Grand Total	(322)		(322)		(322)		(31)		(31)		(31)	
Mean	7,926.5		3,335.6		3,975.9		75,418.0		28,746.0		30,104.0	

* Question #13a(2)
** Less than 0.5%

TABLE B.9
NUMBER OF TEACHERS EMPLOYED*

Number of Teachers	Districts < 80,000						Districts ≥ 80,000					
	Elementary		Junior/ Middle		Senior High		Elementary		Junior/ Middle		Senior High	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
1-49	(47)	18	(81)	40	(67)	29	-	-	-	-	-	-
50-99	(52)	20	(33)	16	(49)	21	-	-	-	-	-	-
100-199	(46)	18	(42)	21	(54)	23	-	-	(1)	6	-	-
200-299	(31)	12	(22)	11	(20)	9	-	-	-	-	-	-
300-499	(34)	13	(15)	7	(16)	7	-	-	-	-	-	-
500-999	(25)	10	(11)	5	(25)	11	-	-	(7)	44	(6)	30
1,000-1,999	(18)	7	-	-	(2)	1	(6)	26	(5)	31	(11)	55
2,000-2,999	(3)	1	-	-	-	-	(7)	30	(3)	19	(3)	15
3,000-3,999	-	-	-	-	-	-	(5)	22	-	-	-	-
4,000-4,999	-	-	-	-	-	-	(3)	13	-	-	-	-
5,000-6,999	-	-	-	-	-	-	(2)	9	-	-	-	-
Total	(256)	100	(204)	100	(233)	100	(23)	100	(16)	100	(20)	100
Doesn't Apply	(10)		(45)		(21)		(-)		(3)		(-)	
No Information	(56)		(73)		(68)		(8)		(12)		(11)	
Grand Total	(322)		(322)		(322)		(31)		(31)		(31)	
Mean	319.3		145.3		184.1		2,912.7		1,214.7		1,405.7	

* Question #13a (3)

TABLE B.10
NUMBER OF ADMINISTRATIVE STAFF EMPLOYED*+*

Number of Administrative Staff	Districts < 80,000						Districts ≥ 80,000					
	Elementary		Junior/ Middle		Senior High		Elementary		Junior/ Middle		Senior High	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
1-2	(44)	20	(66)	38	(71)	35	-	-	-	-		
3-4	(26)	12	(29)	17	(36)	18	-	-	-	-		
5-9	(43)	20	(32)	18	(44)	22	-	-	(1)	8		
10-14	(30)	14	(25)	14	(20)	10	-	-	-	-		
15-24	(35)	16	(10)	6	(12)	6	-	-	(1)	8	(2)	13
25-49	(21)	10	(11)	6	(16)	8	-	-	(5)	38	(5)	31
50-99	(13)	6	-	-	(3)	2	(5)	28	(3)	23	(6)	46
100-199	(4)	2	-	-	(1)	**	(7)	39	(2)	15	(1)	6
200-299	-	-	-	-	-	-	(5)	28	(1)	8	(1)	6
300-499	-	-	-	-	-	-	(1)	6	-	-	(1)	6
Total	(216)	100	(173)	100	(203)	100	(18)	100	(13)	100	(16)	100
Doesn't Apply	(9)		(43)		(20)		(0)		(2)		(0)	
No Information	(97)		(106)		(99)		(13)		(16)		(15)	
Grand Total	(322)		(322)		(322)		(31)		(31)		(31)	
Mean	16.7		7.2		9.2		172.1		74.6		80.3	

* Question #13a (4)
** Less than 0.5%

TABLE B.11
STUDENT/TEACHER AND STUDENT/ADMINISTRATOR RATIOS
BY DISTRICT SIZE

District Size	Student/Teacher Ratio	Student/Administrator Ratio
1-299	16.2	103.0
300-2,499	20.0	370.3
2,500-4,999	22.9	400.1
5,000-9,999	21.7	532.0
10,000-24,999	22.1	506.4
25,000-79,999	23.2	504.5
80,000 and over	24.3	486.1
Combined	22.0	455.8
Significance Level (F-Test)	$P < .0001$	$P < .001$

TABLE B.12
STUDENT/TEACHER AND STUDENT/ADMINISTRATOR RATIOS
BY REGION

Region	Districts < 80,000		Districts ≥ 80,000	
	Student/ Teacher Ratio	Student/ Administrator Ratio	Student/ Teacher Ratio	Student/ Administrator Ratio
New England	19.5	418.0	21.9	834.2
Mid East	20.6	470.2	22.8	403.8
Great Lakes	22.3	418.9	24.5	422.5
South East	22.8	544.4	25.2	558.3
Plains	20.4	383.8	26.3	365.0
Rocky Mountains	21.5	429.5	-	-
South West	21.9	395.1	27.1	527.7
Far West	23.2	427.8	21.8	302.7
Combined	21.8	453.3	24.3	486.1
Significance Level (F-Test)	P<.001	N.S.	N.S.	N.S.

TABLE B.13
ENROLLMENT CHANGE IN LAST FIVE YEARS*

Change	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
Increase	(195)	63	(16)	59
No Change	(35)	11	(2)	7
Decrease	(79)	26	(9)	33
Total	(309)	100	(27)	100
No Information	(13)		(4)	

* Question #13 b

TABLE B.14
ENROLLMENT CHANGE BY DISTRICT SIZE

Size	Increase Freq.	%	No Change Freq.	%	Decrease Freq.	%
1-299	(2)	33	(2)	33	(2)	33
300-2,499	(41)	61	(16)	24	(10)	15
2,500-4,999	(39)	75	(5)	10	(8)	15
5,000-9,999	(38)	69	(6)	11	(11)	20
10,000-24,999	(44)	58	(4)	5	(28)	37
25,000-79,999	(31)	59	(2)	4	(20)	38
80,000 and over	(16)	59	(2)	7	(9)	33
Total	(211)	63	(37)	11	(88)	26
Significance Level (Chi Square Test): P < .0003.						

TABLE B.15
ENROLLMENT CHANGE BY REGION

Region	Districts < 80,000						Districts ≥ 80,000					
	Increase		No Change		Decrease		Increase		No Change		Decrease	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
New England	(22)	92	(1)	4	(1)	4	(1)	100	-	-	-	-
Mid East	(30)	59	(9)	18	(12)	24	(5)	100	-	-	-	-
Great Lakes	(43)	67	(8)	13	(13)	20	(1)	33	-	-	(2)	67
South East	(34)	52	(5)	8	(27)	41	(8)	67	(1)	8	(3)	25
Plains	(17)	63	(5)	19	(5)	19	-	-	-	-	(1)	100
Rocky Mountains	(9)	90	-	-	(1)	10	-	-	-	-	-	-
South West	(18)	72	(4)	16	(3)	12	(1)	50	(1)	50	-	-
Far West	(22)	52	(3)	7	(17)	41	-	-	-	-	(3)	100
Total	(195)	63	(35)	11	(79)	26	(16)	59	(2)	7	(9)	33

$P < .004$

N.S.
$(P < .08)$

TABLE B.16
REASONS FOR ENROLLMENT CHANGE *

Reason for Increase	Districts < 80,000				Districts ≥ 80,000			
	First Reason Freq.	% of 176	All Reasons Freq.	% of 176	First Reason Freq.	% of 15	All Reasons Freq.	% of 15
Community growth	(55)	31	(59)	34	(7)	47	(7)	47
New home construction	(40)	23	(40)	23	(1)	7	(1)	7
In-migration	(34)	19	(37)	21	(1)	7	(1)	7
Population increase	(13)	7	(14)	8	(4)	27	(4)	27
Shift from private to public schools	(10)	6	(13)	7	-	-	-	-
Desegregation	(6)	3	8)	5	-	-	-	-
Industrial growth	(6)	3	(7)	4.	-	-	(1)	7
Consolidation	(5)	3	(6)	3	-	-	-	-
Annexation	(3)	2	(3)	2	-	-	-	-
New highway access	(2)	1	(3)	2	-	-	-	-
Increasing birth rate	(1)	1	(1)	1	(1)	7	(1)	7
Busing	(1)	1	(1)	1	-	-	-	-
More school-age children	-	-	(1)	1	(1)	7	(2)	13
Total	(176)	100	(193)	110	(15)	100	(17)	113
Reason for Decrease	**Freq.**	**% of 66**	**Freq.**	**% of 66**	**Freq.**	**% of 8**	**Freq.**	**% of 8**
Out-Migration	(21)	32	(26)	39	(2)	25	(3)	38
Decreasing birthrate	(14)	21	(18)	27	(3)	38	(3)	38
Less school-age children	(10)	15	(11)	17	(1)	13	(1)	13
Economic conditions	(7)	11	(11)	17	-	-	(1)	13
Unemployment	(6)	9	(7)	11	-	-	-	-
Population stabilization	(4)	6	(4)	6	-	-	-	-
Shift from public to private school	(2)	3	(7)	11	-	-	-	-
Population decrease	(2)	3	(2)	3	-	-	-	-
Desegregation	-	-	-	-	(1)	13	(1)	13
Homes torn down for commercial growth	-	-	-	-	(1)	13	(1)	13
Total	(66)	100	(86)	130	(8)	100	(10)	125

Question #13c.

TABLE B.17
PER PUPIL EXPENDITURE*

Expenditure	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
$300 - 399	(4)	1	-	-
$400 - 499	(18)	6	-	-
$500 - 599	(34)	12	(3)	13
$600 - 699	(48)	17	(2)	8
$700 - 799	(60)	22	(7)	29
$800 - 899	(53)	19	(6)	25
$900 - 999	(30)	11	(5)	21
$1000 - 1499	(25)	9	(1)	4
$1500 - 2500	(6)	2	-	-
Total	(278)	100	(24)	100
No Information	(44)		(7)	
Mean	$785.39		$789.50	

* Question # 14a

TABLE B.18
PER PUPIL EXPENDITURE CHANGE
IN LAST FIVE YEARS*

Change	Districts < 80,000 Freq.	%	Districts ≥ 80,000 Freq.	%
Increase	(280)	92	(26)	93
No Change	(18)	6	(2)	7
Decrease	(6)	2	-	-
Total	(304)	100	(28)	100
No Information	(18)		(3)	

* Question # 14 b

TABLE B.19
CHANGE IN PER PUPIL EXPENDITURE BY DISTRICT SIZE

Size	Increase		No Change		Decrease	
	Freq.	%	Freq.	%	Freq.	%
1 - 299	(5)	100	-	-	-	-
300 - 2,499	(57)	88	(7)	11	(1)	2
2,500 - 4,999	(48)	92	(2)	4	(2)	4
5,000 - 9,999	(50)	93	(4)	7	-	-
10,000 - 24,999	(71)	95	(2)	3	(2)	3
25,000 - 79,999	(49)	93	(3)	6	(1)	2
80,000 and over	(26)	93	(2)	7	-	-
Total	(306)	92	(20)	6	(6)	2
Not Significant						

TABLE B.20
PER PUPIL EXPENDITURE CHANGE BY REGION

Region	Districts < 80,000						Districts ≥ 80,000					
	Increase		No Change		Decrease		Increase		No Change		Decrease	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
New England	(22)	100	-	-	-	-	(1)	100	-	-	-	-
Mid East	(47)	94	(2)	4	(1)	2	(5)	100	-	-	-	-
Great Lakes	(59)	92	(5)	8	-	-	(4)	100	-	-	-	-
South East	(58)	89	(5)	8	(2)	3	(11)	92	(1)	8	-	-
Plains	(27)	96	(1)	4	-	-	(1)	100	-	-	-	-
Rocky Mountains	(11)	100	-	-	-	-	-	-	-	-	-	-
South West	(20)	87	(3)	13	-	-	(1)	50	(1)	50	-	-
Far West	(36)	88	(2)	5	(3)	7	(3)	100	-	-	-	-
Total	(280)	92	(18)	6	(6)	2	(26)	93	(2)	7	-	-

TABLE B.21
REASONS FOR CHANGE IN PER PUPIL EXPENDITURE *

Reason Increased Expenditure	Districts < 80,000				Districts ≥ 80,000			
	First Reason Freq.	% of 256	All Reasons Freq.	% of 256	First Reason Freq.	% of 25	All Reasons Freq.	% of 25
Inflation	(78)	30	(81)	32	(5)	20	(5)	20
Increased costs	(53)	22	(69)	27	(10)	40	(10)	40
Salaries, Fringe Benefits	(56)	22	(105)	41	(5)	20	(15)	60
New or improved programs or services	(20)	8	(62)	24	(3)	12	(6)	24
Increased State funds	(21)	8	(26)	10	(1)	4	(2)	8
Increased Local funds	(11)	4	(22)	9	-	-	(2)	8
Increased Federal funds	(6)	2	(10)	4	-	-	(1)	4
Increased enrollment	(5)	2	(13)	5	(1)	4	(1)	4
Increased funding-unspec.	(3)	1	(5)	2	-	-	(1)	4
New or improved equipment or facilities	(1)	**	(11)	4	-	-	(1)	4
More Staff	(1)	**	(15)	6	-	-	(1)	4
Smaller class size	(1)	**	(2)	1	-	-	(1)	4
Total	(256)	100	(421)	164	(25)	100	(46)	184
Decreased Expenditure	Freq.	% of 6	Freq.	% of 6	Freq.	%	Freq.	%
Decreased Local funds	(3)	50	(3)	50	-	-	-	-
Decreased Funding-unspec.	(2)	33	(2)	33	-	-	-	-
Decreased State funds	(1)	17	(1)	17	-	-	-	-
Total	(6)	100	(6)	100	-	-	-	-

* Question # 14c
** Less than 0.5%

TABLE B.22
PERCENT OF GRADUATES CONTINUING THEIR EDUCATION*
FREQUENCY DISTRIBUTION

Percent Continuing	Districts < 80,000				Districts ≥ 80,000			
	Four-Year College Freq.	Two-Year College Freq.	Non-degree Voc./Tech. Freq.	Other Freq.	Four-Year College Freq.	Two-Year College Freq.	Non-degree Voc./Tech. Freq.	Other Freq.
0 - 10%	11	47	109	20	-	4	12	2
10 - 19	22	76	78	1	1	3	3	-
20 - 29	55	55	27	-	2	6	-	-
30 - 39	57	15	4	-	7	-	2	-
40 - 49	53	15	-	-	4	-	-	-
50 - 59	36	9	1	-	2	1	-	-
60 - 69	13	2	-	-	-	-	-	-
70 - 79	4	-	-	-	-	1	-	-
80% and over	2	-	-	-	-	-	-	-
Total	253	219	219	21	16	15	17	2
Doesn't Apply	13	22	17	84	-	-	-	2
No Information	56	81	86	217	15	16	14	27
Grand Total	322	322	322	322	31	31	31	31
Mean	35.5	19.0	10.2	3.7	36.1	20.7	9.4	4.0

* Question #10

TABLE B.23
MEAN PERCENT OF GRADUATES CONTINUING THEIR EDUCATION
BY DISTRICT SIZE

Size	Four-Year College Mean %	Two-Year College Mean %	Non-degree Voc./Tech. Mean %	Other Mean %
1 - 299	49.0	22.0	15.0	-
300 - 2,499	32.9	21.1	10.9	3.7
2,500 - 4,999	36.6	14.5	10.1	3.5
5,000 - 9,999	32.5	19.1	10.4	2.5
10,000 - 24,999	37.8	20.2	9.4	5.3
25,000 - 79,999	36.8	18.8	10.1	3.4
80,000 and over	36.1	20.7	9.4	4.0
Total	35.6	19.1	10.1	3.7
Significance Level	N.S.	N.S.	N.S.	N.S.

TABLE B.24
MEAN PERCENT OF GRADUATES CONTINUING THEIR EDUCATION
BY REGION

	Districts < 80,000				Districts ≥ 80,000			
Region	Four-Year College Mean %	Two-Year College Mean %	Non-degree Voc./Tech. Mean %	Other Mean %	Four-Year College Mean %	Two-Year College Mean %	Non-degree Voc./Tech. Mean %	Other Mean
New England	38.3	16.9	10.8	4.0	27.0	4.0	9.0	1.0
Mid East	37.0	16.4	7.5	3.0	37.0	17.3	3.7	3.0
Great Lakes	36.6	15.4	10.3	2.5	30.7	15.0	5.0	3.0
South East	33.7	15.3	11.0	2.5	38.4	19.4	11.8	2.5
Plains	32.8	21.2	11.6	6.3	-	-	-	5.0
Rocky Mountains	48.6	21.3	11.1	2.0	-	-	-	-
South West	38.9	23.9	10.1	-	41.0	-	12.0	1.0
Far West	30.2	29.3	10.2	-	-	70.0	-	3.0
Total	35.5	19.0	10.2	3.7	36.1	20.7	9.4	4.0
Significance Level, F-Test	P < .05	P < .0001	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

APPENDIX C
SUPPORTING STATEMENT

THIRD DRAFT
September 17, 1971

Supporting Statement for the Questionnaire

"Innovation from the Superintendent's Viewpoint"

(A Pretest)

Ronald G. Havelock
CRUSK/ISR
University of Michigan

BR #1-0719

Paragraph
No. 350: A. Justification of Form

The need for the questionnaire, "Innovations from the Superintendent Viewpoint" arises out of the focus of the entire project on the processes of innovation* in education. It is essential to collect empirical data on aspects of innovation procedures and barriers which operate in different types of school systems.

The questionnaire will be used with a national sample of school systems for the purpose of meeting the objectives cited below:

1. To provide an empirical base for specific recommendations to USOE on priority needs in research and development on the knowledge dissemination and utilization process. Such recommendations will be of use to the National Center for Educational Communication in the determination of priority applied research and development for the future and to those OE officials responsible for planning the National Institute for Education.
2. To create a set of baseline data on processes in the dissemination and utilization of educational innovations to assist in possible future monitoring of innovation in education.
3. To pretest the questionnaire and to determine the feasibility of the proposed method of analyzing results.

*"Innovation" is defined as a major change introduced for the purpose of improving the quality of education within a district. This change may have involved any of the following: (a) a substantial reorientation on the part of the staff, (b) a reallocation of resources, (c) adoption of new practices, programs, or technology.

No. 351 A(2): This project is part of a sequence of logically related studies by Havelock to improve the quality of educational dissemination and utilization. The first study, begun in December of 1966 and concluded with a 500 page report in July, 1969, reviewed over 4,000 studies and publications relevant to D&U in all fields of practice: education, medicine, industrial technology, mental health, etc. The final report synthesized this material, and from the synthesis derived specific guidelines for educational research, development, practice and policy.

Once such a synthesis is made, however, it must be tested and reworked on the basis of empirical data. Educational innovation processes have been studied empirically in the past (Mort, 1964; Carlson, 1965; Lin, et al., 1966). Such studies provided part of the knowledge base for the literature review and synthesis. However, such studies are not adequate as baseline data for current OE policy planning for a number of reasons:

1. all these studies used regional or local samples rather than a national sample: hence generalization for national policy purposes is questionable;
2. almost all of these studies are ten or more years out of date, not reflecting any changes which might have come about as a result of Federal legislation in the 1960's;
3. these studies were not generated out of a comprehensive theoretical framework for D&U analysis such as is offered by the Literature Survey report (Havelock, 1969).

In this study some of the questions from these previous research investigations will be asked again, but, in addition, there are several sets of new questions that will be asked relating both to the developments of the 1960's and to the hypotheses and models of D&U outlined by Havelock.

From the empirical data derived from the proposed national study, OE will be better able to formulate appropriate and needed policies and programs in applied research and development in educational dissemination and utilization.

Paragraph
No. 352: Justification of Method Used in Selecting and Contacting Those to be Covered

Pilot Test:

The questionnaire and follow-up procedures will be pilot tested using a sample of 9 school systems. These systems will be chosen accordingly to the sampling procedures outlined below. Once chosen, these systems will be removed from the study population so that there will be no chance of their being included in the main study.

During the pilot test period a codebook will be constructed in which each questionnaire item will be assigned a variable number and card/tape location. Once coded, specific questionnaire items will be referenced by this variable number.

In addition to providing information concerning expected response rates and needed questionnaire modifications, the pilot test will be useful in "debugging" the code manual and in preliminary construction of codes for the more complex open-ended questions.

Mail Out:

Once the sample has been manually selected, the contractor will access the master tape file, selecting all tape records whose ID numbers correspond to those selected in the sample. The new tape file, or "Master Control Tape File" will be used to print name and address labels to be used in mailing all materials to respondents.*

*The first contact with the respondent will be a "commitment" letter in which the contractor explains the study and asks the respondent if he would join in the project by filling out a questionnaire which will be mailed at a later date. The respondent is asked to indicate his willingness to participate by returning an endorsed form. After a period of two weeks respondents not returning a commitment form will be telephoned. At the completion of this process, the Master Tape File will be updated to delete all superintendents who are unwilling to participate in the study, and questionnaires will be mailed to the remaining names in the file.

An additional set of name and address labels will be used to generate a printed card "Control File." This file will be updated daily so that the contractor will always know how many commitment letters and questionnaires have been mailed, how many returned completed or refused, how many follow-up letters have been mailed, etc., and in each case who the respondent is.

Expected Response Rate, Follow-up, and Non-Response Study:

Some benefits of this survey will be answers to such basic questions as: What is the response rate of superintendents? What constitute the most appropriate research instruments and questions to use in monitoring of innovation? What are the most efficient and fruitful follow-up procedures? It is difficult to specify actual response rates in advance. Therefore, what follows is a rough estimate, and the procedures outlined will be subject to some modification. For this reason also the survey of non-respondents becomes crucial.

Approximately 3 days after the initial mail-out of the questionnaire, a reminder post card will be sent to non-respondents. After an additional two weeks, remaining non-respondents will be mailed a letter and a second questionnaire. It is hoped that within 10 days of this follow-up the response rate will have reached 80% leaving 100 non-respondents. At this point the contractor would attempt to contact each non-respondent by telephone and urge him to return a completed questionnaire.

Paragraph
No 355: The sampling procedure will be to draw a probability sample of 500 operating public school systems stratified by enrollment size and geographic regions.

A. The Study Population

The study population is all operating public school systems in the U.S., exclusive of those in Alaska, Hawaii, U.S. Service Schools, Canal Zone, Guam, Puerto Rico, and the Virgin Islands, according to a list obtained from the Office of Education which will be used to prepare the Education Directory, 1970-71: Public School Systems.

B. Definition of Terms

To assure maximum comparability, the concept of region, the categorization of pupil enrollment size, and the definition of public school system were designed to agree generally with the categories and terminology of the following U.S. Office of Education documents. For the concept of region, the document Statistics of Non-Public Secondary Schools, 1960-61, U.S. Department of Health, Education and Welfare, Office of Education, National Center for Educational Statistics, 1963 was used. For the concept of enrollment size categories and the definition of school system, the document, Statistics of Local Public School Systems, Fall, 1970, U.S. Department of Health, Education and Welfare, Office of Education, National Center for Educational Statistics was used.

C. Sampling Unit

The sampling unit is the operating public school system. The selection of this unit makes it possible to direct questions to the school superintendent about the process of innovation, adoption, and management of educational change in the school system.

School districts will be the unit of study and analysis for the following reasons:

1. major policy decisions for educational change are made at the school district level;
2. when support or funding is given for educational innovation, it is frequently provided at the school district level;
3. a national listing of school districts was available for sampling. No such list is available for individual schools or other types of educational units.

D. Sample Size

Considering the budget resources and the research objectives of the investigation (to get acceptable reliability for estimates of means, proportions, and measures of association), the contractor decided to draw a stratified sample of 500 school systems with probability proportionate of pupil enrollment.

E. Type of Design: Stratified Single Stage Sample with Varying Probabilities

It is assumed that educational change is likely to vary from region to region, and among school systems of different sizes. It was deemed desirable to reduce sampling errors in estimating means and percentages for the population to be studied. The assumption of low variability within region and within the pupil enrollment size category provides for greater precision of estimates as a result of stratification of these factors. Further, the contractor wanted to insure adequate representation of regions, and school systems of different sizes.

The foregoing consideration leads to the formulation of the following sampling procedures. The sample of school systems will:

1. give proportionate representation to the eight regions of the U.S.;
2. give proportionate representation to the six pupil enrollment size classes;
3. use pupil enrollment to measure proportionate representation.

F. Sampling Frame

The operating public school systems are to be stratified according to the eight regions and six classes of pupil enrollment size.

G. Sampling Procedure

The sample will be selected manually using the following procedure. It is given that there are 44,753,426 pupils distributed among 17,467 public school systems with probability proportionate to pupil size stratified according to region.

Specifically the total number of pupils is divided by the sample size in order to determine the number of pupils that each sample system will represent:

$$\frac{\text{Total number of pupils}}{\text{Sample size}} = \frac{44,753,426}{500} = 89,506.85$$

Thus, each public school system selected would represent approximately 89,507 pupils. But since some school systems have enrollments larger than 89,507, it is felt that these should all be included with certainty rather than sampled. Looking at the distribution of enrollment sizes, the contractor decided to choose a natural cutting off point for this selection and include with certainty all school systems with enrollments

of 80,000 or more. These systems then will have weights proportionate to their actual enrollment size and hence will represent only themselves. In contrast the remaining systems in the sample, the "non-self-representing" school systems, represent not only themselves, but also other school systems belonging to the same stratum from which they are selected.

H. Listing of School Systems and Sample Selection

The contractor has prepared a complete list of all school systems in the sampling size in each of eight geographical regions. He set aside the 40 school systems with enrollments of 80,000 or more (to be included with certainty) and then allocated the residual 460 systems across 48 cells, each cell representing one of the eight regions and one of the six pupil size categories. In each cell, the school systems are listed in ascending order according to pupil enrollment size.

He will then determine the unit weight, that is the number of pupils that each sample system will represent. Using the formula listed, he arrives at a rounded figure of 81,695 as follows:

$$\frac{\text{Total pupil enrollment in non-self-representing school systems}}{\text{Sample size minus self-representing school systems}} = \frac{37,579,703}{(500-40)=460} = 81,695.007$$

The total number of systems to be selected from each cell is determined by dividing the total number of pupils in that cell by the unit weight (81,695).

$$\frac{\text{Total pupil enrollment in cell}}{\text{Unit weight}} = \text{Number of systems to be selected from that cell}$$

I. Mechanics of Sample Selection

Sample units will be selected by systematic random sampling method. To do this the contractor first determines a skip interval by dividing the total number of pupils in a given cell by the number of systems to be

selected from that cell:

$$\frac{\text{Total pupil enrollment in cell}}{\text{Number of systems to be selected from that cell}} = \text{Skip Interval}$$

Using a table of random numbers, he selects a random number which is equal to or less than the skip interval. Looking at the cumulative totals of pupil enrollment size in the cell, he locates the school system whose enrollment size contains this random number, and selects that system as a study unit. Then he adds the skip interval to the random number, arriving at a new number, and selects the next school system whose cumulative enrollment contains this number. He continues this process until he has selected the required number of systems from that cell. This process is then repeated across all the 48 cells. Selections in each cell are made in pairs for convenience of calculating sampling errors (see Section K). If a cell does not contain a total number of pupils large enough to give at least a pair of selection units (school systems) we skip that cell.

J. Weighting *

Because each superintendent represents 81,695 pupils, in the analysis each superintendent is to receive equal weight with the exception that superintendents from districts with more than 80,000 pupils are to be assigned weights in units of 81,695. For example, a superintendent from a system of 164,000 pupils would receive a weighting factor of 2. This type of design in which respondents receive equal weight greatly simplifies data processing and analysis as compared to a design that has numerous sampling rates and consequently requires that many weights be applied before data can be combined across cells. Furthermore, the sample con-

* After consulting with other researchers, the decision was made to forego the weighting of the larger districts ($\geq$ 80,000) and in lieu of that technique to treat them as a separate category throughout the analysis. (See footnote on page 28 of the report.)

centrates among the larger school districts, and selected superintendents tend to be those having the greatest influence in terms of the number of pupils affected by their decisions.

K. Calculation of Sampling Errors

Sample selections are to be made in pairs to facilitate the calculation of sampling errors using paired difference technique or a balanced replicated half-sample technique (Kish, L. and Frankel, M.R., "Balanced Repeated Replications for Standard Error," Journal of the American Statistical Association, Vol. 65, Sept., 1970, pp. 1071-1094; Kish, L. and Hess, I., "On Variance of Ratios and Their Differences in Multi-State Sampling," Journal of the American Statistical Association, Vol. 54, June, 1969, pp. 416-446).

Paragraph No. 360: C. Brief Description of Plans for Collection, Tabulation, and Publication

October 1:	Mail Commitment Letter
October 15:	Telephone follow-up
October 29:	Update Master Tape File
November 1:	Questionnaire Approved by OMB
November 8:	Completion of printing and reproduction of materials
November 12:	Mailout date
November 15:	Postcard follow-up
November 29:	Follow-up letter and questionnaire
December 13:	Closeout date
December 14 - January 3:	Time of quality check and non-response study
January 31:	Completion data for output by data processors
February 14:	Completion of requested tabulations
March 1:	Completion date of manuscript for review
March 7:	Completion date for review and editing of manuscript
March 14:	Date when copies of report will become available for distribution

Paragraph
No. 362: Data Preparation

Returned questionnaires will be "logged" on the control file and then coded by project staff according to the codebook directions established during the pilot phase. Contractor's data processing staff in liaison with project staff will coordinate the coding, key punching, and computer processing of all information. Once coded and key punched, the data will be read onto tape. This tape will then be matched against and merged with the Master Control Tape File. Data records which do not match will be checked for errors (e.g., miscoded ID numbers) corrected, and merged back onto the tape.

No. 363: Analysis

After all records have been matched, preliminary analysis will be made. In this phase, univariate frequency and percent distributions on all variables will be generated. No control variables will be used. These printouts will be scanned for "illegal" codes and other obvious coding errors. Once this data "clean-up" is completed the major analysis will be made.

Throughout the analysis contractor will control two variables: the geographic region and the school system size which each respondent represents. These will be combined and collapsed into a composite variable (e.g., perhaps using three enrollment sizes and four geographic regions) to reduce complexity.

The analysis will be divided into four sections:

1. System background information
2. Correlates of innovativeness
3. Creation of an innovation inventory
4. How innovations become adopted

1. Background Information:

This section will be limited to simple bivariate numeric and percent frequency distributions. All variables listed below will be run against the controls specified above. Where appropriate, tests of association and differences between means will be computed. Specifically the items included in the background phase will be:

Question Number	Item	Statistics
10	Index of proportion of graduates continuing education	Mean, F-test
11a, 11b	Index of difficulty in gaining citizen support for financing education	Mean, F-test
12a, 12b, 12c	Occurrence of school disruptions	Mean, F-test
12d	Relationship of disruptions to innovations	Chi-square
13a(1)	Grade Span	" "
13a(2)	Size of student enrollment	Mean, F-test
13a(3)	Number of teachers employed	" "
13b	Change in enrollment size	" "
13c	Reason for change	Chi-square
14a	Per pupil expenditures	Mean, F-test
14b	Change in per pupil expenditure	" "
14c	Reason for change	Chi-square

2. Correlates of Innovation:

In this section an innovativeness score based on the responses to that part of question 5 asking for total number of innovations will be derived. This number will be summed over all innovation areas to yield a single measure of innovativeness for each school system sampled. In

addition, these scores will be averaged to obtain Mean Innovativeness Scores for regions and Mean Innovativeness Scores for pupil size groups. In most instances product moment correlations will be used to examine the relationship between this score and variables such as use of internal and external resources (question 6) and measures of system reward structure (question 9), use of media (question 8) and the background variables.

To aid in the interpretation of these correlations, numerical and percent frequency tables will be generated by cross-tabulating each of the above variables with innovativeness scores.

3. Innovation Inventory:

In this section, the specific innovations listed in Question 5 will be examined. An attempt will be made to codify these into a workable and meaningful inventory to be used in subsequent monitoring efforts. Analysis will consist of numerical and percent frequency distributions of the responses given in Question 5. An additional control variable will be the content area of innovation.

4. How Innovations become Adopted:

In this section we will examine the innovation process by analyzing the case study of a significant innovation tried out in the respondent's school system in the last year.

Specifically analysis will utilize the two control variables or some combined composite of these and will consist of:

1. Numeric and percent frequency distribution of the specific innovation described in Question 1a.
2. Bivariate numeric and percent frequency distributions in which specific innovations are cross tabulated with the following:

Question Number	Item	Statistics
1b	Actual consequence	Chi-square
1c	Key factors in success or failure	" "
1d	Recommendation to adopt this innovation	" "
	Advice on adoption	" "
2	Aspects of innovation procedures	Mean, F-test
3	Barriers to innovation	" "

3. Factor Analysis of Innovation Procedures (Question 2) and Barriers to Innovation (Question 3).
4. Derivation of Mean Factor Scores for each of the factors extracted.
5. Use of F-test of the differences between these mean factor scores across the various innovations listed in Part I above.

4a	Other major area of change	Chi-square
4b	Utility of checklist	" "
7	Use of resources	Mean, F-test

Paragraph
No. 370: D. Documentation of Consultation

To determine the suitability of the questions for this form, members of the staff consulted with practitioners in school systems and members of the Research Advisory Committee on Innovation Processes in Education. A questionnaire was prepared and delivered to the practitioners for their comments and suggestions. Their criticisms and responses were carefully reviewed. Using their suggestions a second questionnaire was prepared and then formally presented to the members of the Research Advisory Committee on Innovation Processes in Education as they are to be the immediate users of this information. As a panel, they reviewed the questionnaire with some of the revisions suggested by the practitioners and provided criticism.

Subsequently this revised version was reviewed by a second group of superintendents; again, their detailed reactions were used to simplify and clarify the form.

The practitioners who responded to the questionnaire were from Michigan school systems which differ in enrollment size and populations served. The systems were selected on their perceived degree of innovativeness in different areas of educational practice. The selection of these systems was based on a discussion with Dr. George Mills who is a school systems consultant at the University of Michigan, Bureau of School Services.

The persons who assisted in reviewing the pre-submission questionnaire from the practitioner's viewpoint were:

1. R.A. Montambeau
   Supervisor, Research & Assessment
   Livonia Public Schools
   15125 Farmington Road
   Livonia, Michigan 48154

2. Dr. Lawrence H. J. Valad
   Superintendent of Schools
   235 E. Thirteen Mile Road
   Madison Heights, Michigan 48071

3. James H. Rossman
   Superintendent of Schools
   Plymouth, Michigan

4. Carlo W. Heikkinen
   Superintendent
   Adrian Public Schools
   204 E. Church Street
   Adrian, Michigan 49221

5. Jack E. Meeder
   Superintendent
   Albion Public Schools
   709 N. Clinton Street
   Albion, Michigan 49224

6. Elwood Larsen
   Superintendent
   Charlotte Public Schools
   378 State Street
   Charlotte, Michigan 48813

7. Malcolm Katz
   Superintendent
   East Lansing Schools
   509 Burcham Drive
   East Lansing, Michigan 48823

8. Lawrence Gasnon
   Superintendent
   Hillsdale Community Schools
   30 S. Norwood
   Hillsdale, Michigan 49242

9. Kenneth W. Oslen
   Superintendent
   Okemos Public Schools
   4406 Okemos Road
   Okemos, Michigan 48864

Prior to consulting with the Research Advisory Committee on Innovation Processes in Education members, the contractor submitted the questionnaire to OE for informal review. The Clearance Staff of USOE informally reviewed the questionnaire and suggested a number of worthwhile changes. The amended questionnaire and the Clearance Staff's comments were placed before the panel for its comments and reactions.

The panel members who invested a great deal of time and energy on improving the questionnaire are:

Dr. Richard O. Carlson
Center for Advanced Study of Educational Administration
Hendricks Hall
University of Oregon
Eugene, Oregon 97403 Tel: (503) 686-5171

Dr. Robert Chin
Human Relations Center
Boston University
Boston, Massachusetts Tel: (617) 353-2770

Dr. Neal Gross, Dean
Graduate School of Education
University of Pennsylvania
3700 Walnut Street
Philadelphia, Pa. 19104 Tel: (215) 594-7014

Dr. Ronald Lippitt
Center for Research on Utilization of Scientific Knowledge
Institute for Social Research
426 Thompson
Ann Arbor, Michigan 48104 Tel: (313) 764-6108

Dr. Matthew B. Miles
Program on Humanistic Education
State University of New York (Albany)
Retreat House Road
Glenmont, New York 12077 Tel: (518) 472-8680

Dr. Everett Rogers
College of Communication Arts
Department of Communication
Michigan State University
526 South Kedzie Building
East Lansing, Michigan 48823 Tel: (517) 355-3480

Paragraph No. 372: D(2): The time necessary to complete the submitted form on the average requires approximately 40 minutes.

APPENDIX D
LETTERS TO RESPONDENTS

ISR

NTER FOR RESEARCH ON UTILIZATION OF SCIENTIFIC KNOWLEDGE / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48106

Within the last year the U.S. Office of Education has established a "Division of Practice Improvement." The mission of this new agency will be to provide more effective support to local school districts considering and implementing innovations. As a first step in their program they have asked the University of Michigan to provide an accurate picture of current innovation activities across the nation. Because your district has been chosen as representative of districts of similar size in your region, I am writing to ask for your cooperation in the project.

The focus of this survey is the process of change. Past studies have shown that the superintendent is usually the one person in the best position to observe and comment on this subject. For that reason we feel that federal policy guidance should be based initially on information reported by people like yourself and collected from a select national sample.

Results of the survey will be tabulated quickly by the Michigan survey team in a way that protects the anonymity of yourself and your district; these summary results will be returned to you within a few months and should be of specific help in planning and guiding your own efforts next year. In other words, we see this project as a two-way activity providing guidance to the U.S. Office of Education and to you and your own staff at the same time.

The initial survey form, which will be sent to you within a few weeks will be four pages in length and should take about 30 to 40 minutes of your time. It has been pretested and pared down to a minimum length. Most questions require thought, but you will not be expected to dig through files or make extensive inquiries among your staff.

Finally, I think you will find the questions interesting and provocative. The few superintendents we have talked to so far tell us that these are the questions that are relevant for them today and they want the answers just as much as the USOE does.

Will you join in this project? I would like to have your response by return mail if possible.

Thanks for your consideration; it is greatly appreciated.

Yours sincerely,

Ronald G. Havelock, Ph.D.
Program Director

RGH:rw
Enclosures: Reply Note and envelope

Re: Project on Innovation Process for the Division of Practice Improvement, U.S. Office of Education

To: Ronald G. Havelock
Program Director
Institute for Social Research
University of Michigan
Ann Arbor, Michigan 48106

Yes, I will be willing to participate in this project.. ___

No, I will not be able to participate..... ___

Reason for not participating:
Our rules do not permit this _____
I am not interested _____
I cannot afford the time _____
Other reason _____

_____

I need more information about the project before I can make a decision..... ___

How should future correspondence regarding this project be addressed?

_____

_____

_____

_____

10/71

SR

TER FOR RESEARCH ON UTILIZATION OF SCIENTIFIC KNOWLEDGE / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48106

November 9, 1971

Dear Superintendent

Approximately 3 weeks ago we mailed you the enclosed letter asking for your participation in a major survey of change in school systems. Since we have had no response as of this date, we thought that the original letter might have been mislaid. Because the study is nationally important I hope you will be able to participate. In any case we need to have your response before we can procede with the study. A duplicate response form and stamped return envelope are enclosed for your convenience. If this matter has already been taken care of, I hope you will accept my apologies and disregard this reminder.

Yours sincerely,

Ronald G. Havelock, Ph.D.
Program Director

RGH:rw
Enclosures

ISR

CENTER FOR RESEARCH ON UTILIZATION OF SCIENTIFIC KNOWLEDGE / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGA
ANN ARBOR, MICHIGAN 48

December 10, 1971

Dear Superintendent

We are most grateful that you have agreed to participate in the study of innovation process for the National Center for Educational Communication. As I indicated in my letter of October 13, the enclosed form is intended to cover the issues that are usually relevant to the management of innovation in education. Up to now there have been few attempts to collect information of this nature. For that reason we are especially eager to have your comments on the questions themselves and on important issues which you feel we may have overlooked.

Although most of the questions are self-explanatory, an instruction sheet is includad which provides additional clarification. If possible, we would like you to respond to every item on the form. However, if you find that you cannot readily answer a particular question, we would like you to indicate very briefly why you cannot respond to that item.

If you encounter any difficulties or have further questions, please call me collect at (313) 764-2560. If I am not in the office when you call, Mr. Sripada Raju, Mrs. Elizabeth Markowitz, or Mr. Bruce Shaw should be able to help you.

Yours sincerely,

Ronald G. Havelock, Ph.D.
Program Director

RGH:rw

Enclosures

ISR

NTER FOR RESEARCH ON UTILIZATION OF SCIENTIFIC KNOWLEDGE / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48106

December 16, 1971

As I indicated in an earlier letter, the Institute for Social Research is conducting a study of innovation management for the National Center for Educational Communication of the U.S. Office of Education. The enclosed form is intended to cover the issues which are usually relevant to the management of innovation. However, there have been few previous attempts to collect information of this nature, and for this reason we are especially eager to have your comments on the questions themselves and on important issues which you feel we may have overlooked. Results will be used by the U.S. Office of Education in determining how it can best serve the needs of the school districts of the nation in the implementation of planned changes. Results will also be returned to participating school districts, and they may be useful in planning and guiding your own program for the coming year.

Full participation is necessary if the study is to have validity as a national survey. Your district was chosen as part of a carefully drawn probability sample representing all regions and district sizes in the United States. The procedure and the form have been carefully reviewed by the U.S. Office of Education and cleared by the U.S. Office of Management and Budget.

Although most of the questions are self-explanatory, an instruction sheet is included which provides additional clarification. If possible, we would like you to respond to every item on the form, but extensive staff work and file searching are not expected. If you find that you cannot readily answer a particular question for this or any other reason, we would like you to omit that item indicating very briefly why you cannot respond.

The form may be completed either by yourself or by some member of your staff. It would be helpful to us if you would indicate the title of the individual who actually completes it.

If you encounter any difficulties or have further questions, please call me collect at (313) 764-2560. If I am not in the office when you call, Mr. Sripada Raju, Mrs. Elizabeth Markowitz, or Mr. Bruce Shaw should be able to help you.

Yours sincerely,

Ronald G. Havelock, Ph.D.
Program Director

RGH:rw
Enclosures

ISR

CENTER FOR RESEARCH ON UTILIZATION OF SCIENTIFIC KNOWLEDGE / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIG
ANN ARBOR, MICHIGAN 48

January 18, 1972

We have not yet had a response from you or your office since mailing out the form on innovation process about three weeks ago. We are very appreciative of your consent to participate in the project and would like to make your task as easy as possible. Therefore, if you have encountered any difficulties, I hope you will not hesitate to call *me* collect at (313) 764-2560. In the event that this form has been misplaced, an additional copy is enclosed for your convenience.

Sincerely yours,

Ronald G. Havelock, Ph.D.

RHG:rw

Enclosures

Telegram sent to non-responding superintendents as part of the follow-up procedures:

WE ARE STILL VERY CONCERNED TO INCLUDE YOUR DISTRICT AS A PART OF THE NATIONAL STUDY OF INNOVATION. WILL IT BE POSSIBLE FOR YOU TO RESPOND WITHIN THIS NEXT WEEK? A REPLY WOULD BE APPRECIATED. IF YOU NEED FURTHER ASSISTANCE MY NUMBER IS (313) 764-2560.

RONALD G. HAVELOCK