DOCUMENT RESUME

ED 268 643 EA 018 362

| | |
|---|---|
| TITLE | Assisting State Education Agencies to Improve the Quality of Education. RBS Regional Exchange Final Report. |
| INSTITUTION | Research for Better Schools, Inc., Philadelphia, Pa. |
| SPONS AGENCY | National Inst. of Education (ED), Washington, DC. |
| PUB DATE | 30 Nov 85 |
| CONTRACT | 400-83-0006 |
| NOTE | 104p. |
| PUB TYPE | Reports - Descriptive (141) |
| EDRS PRICE | MF01/PC05 Plus Postage. |
| DESCRIPTORS | Consultation Programs; Educational Assessment; *Educational Improvement; Educational Planning; Elementary Secondary Education; Information Dissemination; *Information Services; Program Implementation; *Research and Development; School Effectiveness; State Programs; *Statewide Planning; *Technical Assistance |
| IDENTIFIERS | Delaware; Maryland; New Jersey; Pennsylvania; *Research for Better Schools Incorporated |

ABSTRACT

This document comprises the final report of the Regional Exchange project, through which Research for Better Schools (RBS) has provided research-based information, technical assistance, and training services to the states of Delaware, Maryland, New Jersey, and Pennsylvania, to assist state educational leaders in developing and implementing policies and programs aimed at improving local education agencies and their staffs. The first part of the report provides a brief review of RBS's history of working with state educational leaders, highlighting its goals and some of the ways it has conducted its activities. The second part describes eight case studies selected to reflect educational improvement priorities to which RBS has contributed over the past three years. These descriptions illustrate how state educational improvement priorities came into being; how a laboratory can contribute to the design, development, implementation, and institutionalization of programs that address those priorities; and what the outcomes of such collaboration can be for state and local educational agencies. The third part summarizes some of the understandings that RBS has developed about states, about RBS itself, and about the conditions that allow laboratories to contribute constructively to state educational improvement priorities. The last part presents several recommendations based on these understandings. Two appendixes are included: (1) a five-part summary of the information provided in the 1983 and 1984 annual reports and the 1985 quarterly reports; and (2) a summary of the RBS pilot project to help local education agencies assess current practice in light of educational research and development. (TE)

RBS Regional Exchange
Final Report

# ASSISTING STATE EDUCATION AGENCIES TO IMPROVE THE QUALITY OF EDUCATION

NIE Contract #400-83-0006

Research for Better Schools, Inc.
444 North Third Street
Philadelphia, Pennsylvania 19123

November 30, 1985

## EXECUTIVE SUMMARY

In 1976, NIE funded a set of projects, known as the R&D Exchange, which would enable the regional educational laboratories to work collaboratively with state education agencies to foster the exchange of information between the educational R&D community and educational practitioners. Since then, RBS has provided R&D-based information, technical assistance, and training services to the states of Delaware, Maryland, New Jersey, and Pennsylvania.

RBS, through its Regional Exchange project, has pursued one primary goal: to support state planning and implementation of educational improvement programs. From RBS' perspective, its four states have focused their recent educational improvement programs on four broad goals.

- Improve students' basic skills achievement. All states have been helping local districts and schools to improve students' basic skills performance by: (1) clarifying objectives and identifying effective instructional practices in the basic skills; (2) instituting testing programs to assess students' skills at selected grade levels, and, in two states, requiring adequate performance as a prerequisite for high school graduation; and (3) developing programs to help districts improve the use of state and federal resources targeted to helping special needs students acquire the basic skills.

- Improve curriculum, instruction, and the use of educational technology. The states have: (1) increased graduation requirements in science, mathematics, and other subjects; (2) revised standards and developed K-12 guidelines for many of the basic content areas; (3) provided training and support for the improvement of content-specific instruction through sponsoring academies and similar initiatives; (4) initiated projects to infuse higher order thinking skills in the curriculum; and (5) initiated projects which help schools apply microcomputer technology in selected content areas.

- Improve the quality of teaching. All states have initiated activities aimed at improving the quality of teaching. They are beginning to: (1) provide incentives which both encourage good teachers to stay in the profession and attract high quality college students to enter the profession; (2) develop standards and procedures directed at improving the quality of new teachers; and (3) establish programs aimed at improving the performance of current teachers and facilitating the termination of ineffective teachers.

- Improve the effectiveness of schools at all levels. All states have considered the results of studies which have sought to identify those characteristics which differentiated high and low performing schools, and initiated a number of activities aimed at helping local educators apply that knowledge.

RBS has come to see state educational improvement activities as falling into three broad types. First, state governments have been establishing new expectations regarding student learning outcomes and local educational practices. These expectations have been embodied in law, state board of education mandates, departmental guidelines, state tests, and various kinds of state recognition programs; they have also been articulated by governors, chief state school officers, state board members, and other state leaders.

Second, state governments have undertaken a variety of activities to encourage local districts, schools, and staff to fulfill the intent of a new expectation: (1) prepared and disseminated information about the new expectations and how to meet them, (2) provided indepth staff development programs, (3) provided personalized technical assistance, (4) provided fiscal incentives, (5) provided support for local development/demonstration projects, (6) monitored local practices, and (7) threatened sanctions for low or non-performance.

Third, state governments have provided general services which are supportive of local school improvement: provided information services which facilitate the exchange of knowledge and expertise, sponsored regular conferences and meetings to facilitate exchange of information and encourage the exploration of issues, and built and maintained networks of persons and agencies which share common educational improvement interests and concerns.

Over the past three years, RBS has supported 21 state educational improvement programs and projects--for example:

- Maryland's program to encourage schools to implement R&D-based instructional processes
- Delaware's project to increase school's use of computers as an instructional resource
- Maryland's program to improve teacher quality
- Pennsylvania's program to improve the quality of local teacher supervision/evaluation systems
- Delaware's project to improve the education provided delinquent and disruptive youth
- New Jersey's program to improve the quality of education provided by its urban schools

In addition, RBS contributed to a small number of multi-state improvement efforts--for example, the six-state cooperative project to develop and implement a process which would improve the effectiveness of local Chapter 1 programs.

In supporting state educational improvement activities, RBS has provided five types of services.

- Information services. RBS staff have collected information pertinent to a specific state leader's task, summarized that information in a form appropriate for that task, and presented the summary in person to the state leader.
- Planning assistance. RBS staff have helped state leaders design comprehensive school improvement programs as well as more limited state educational improvement initiatives.
- Implementation-related services. RBS staff have helped state staff with the design and conduct of orientation and staff development programs aimed at helping local educational leaders implement new practices. RBS has also helped state staff with the development of specific resource materials which will support local implementation. Finally, RBS has helped state staff design and provide technical assistance in support of local implementation.
- Evaluation/research services. RBS staff have designed and conducted studies aimed at providing information which will help state leaders plan, implement, and refine state educational improvement programs.
- Convening services. RBS has brought together state staff from across the region to consider research-related topics, developing educational issues, and the effects of current state educational improvement efforts.

In providing these services, RBS has sought to achieve three knowledge utilization outcomes. First, RBS has tried to increase state leaders' awareness and understanding of educational R&D which may have implications for the design and implementation tasks in which they are engaged. Second, assuming success in achieving the first outcome, RBS has tried to help state leaders modify or develop policies, guidelines, programs, and resource documents, so that they reflect current R&D findings. Finally, assuming some success with the second outcome, RBS has tried to help state leaders modify such state practices as the assistance they offer schools and districts, the staff development programs they conduct, and the way they monitor school and district performance. From RBS' perspective, the states have sought an analogous set of outcomes. They have sought to increase school and district staff awareness and understanding of what is known, for example, about effective teaching, effective classrooms, and effective schools. They have encouraged schools and districts to modify or develop policies and plans based on those understandings. And, finally, they have encouraged schools and districts to modify current practices in ways which reflect what is known.

From its eight-year experience providing services in support of state educational improvement programs, RBS sees four sets of conditions which can affect the kinds of outcomes achieved and the scope of impact of particular improvement programs. First, there are such conditions as the following which exist within the state.

- Extent to which state leaders make educational improvement a priority of their administration.
- Extent to which state leaders are able to create the management conditions for an effective improvement effort.
- Extent to which there is stable state leadership.
- Extent to which state educational improvement efforts establish clear and defensible standards or expectations for local educators.

- Extent to which state educational improvement efforts use multiple strategies for encouraging local action to meet expectations.
- Extent to which states design their educational improvement efforts as collaboratives.
- Extent to which states are open to outside knowledge and resources.

Second, there is the condition of the R&D knowledge base, the extent to which there is a knowledge base which speaks to a given state educational improvement effort. Third, there are conditions within the laboratory; these are primarily related to the extent to which appropriate staff, in terms of knowledge and skill, can be assigned at the time and at a level of effort which will be responsive to state interests and needs. Fourth, there are conditions external to the state-laboratory relationship, such as national priorities, externally available discretionary funds, and information suggesting a new, critical need.

RBS' experience in supporting state educational improvement activities has implications for federal and laboratory leadership. It suggests the following recommendations for federal leadership.

- Use a greater variety of strategies to encourage laboratories to meet the expectations which have been established for their state leadership assistance projects.
- Provide leadership and incentive funds for multi-state collaborative improvement projects.

It also suggests the following recommendations for laboratory leadership.

- Use the knowledge and perspectives presented in this report in negotiations with state leaders.
- Continue to support documentation and assessment activities which expand understanding of how states can best affect the quality of local educational practice, and how laboratories can best assist them.

Table of Contents

## List of Figures

# INTRODUCTION

This final report is intended for persons who are interested in how laboratories can best assist state educational leaders to develop and implement policies and programs aimed at improving the quality and effectiveness of local education agencies and their staffs. It is organized into four parts. The first provides a brief review of RBS' history of working with state educational leaders, highlighting its goals and some of the ways it has conducted its activities. The second describes, in some detail, eight educational improvement priorities to which RBS has contributed over the past three years. These descriptions illustrate how state educational improvement priorities come into being; how a laboratory can contribute to the design, development, implementation, and, in some cases, institutionalization of programs which address those priorities; and what the outcomes of such collaboration can be for state and local education agencies. The third summarizes some of the understandings which RBS has developed about states, itself, and the conditions which allow laboratories to contribute constructively to state educational improvement priorities. The last presents several recommendations based on these understandings.

The report has two appendices. The first summarizes, the information provided in the 1983 and 1984 Annual Reports, and the 1985 Quarterly Reports. It is organized into five sections. The first four summarize RBS' work with Delaware, Maryland, New Jersey, and Pennsylvania, respectively. The fifth describes multi-state and regional activities which RBS has undertaken.

The second appendix summarizes RBS' pilot project to help local education agencies assess aspects of current practice in the light of educational R&D, and develop improvement plans based on that assessment.

## THE RBS EXCHANGE PROJECT

This section begins with a brief historical review of RBS' relationship with state educational agencies. It then describes the basic characteristics of the RBS Exchange Project over the past three years: its goals, its general approach and procedures, and its organization and management of staff.

### Historical Review

In 1966, the first year of its existence, RBS initiated a modest project (3 FTE) aimed at helping educational leaders use the results of current research. That project included state educational leaders as part of its client group. After two years of exploration, RBS decided to discontinue the project for a number of reasons. These included: (1) state leaders were defining their role and responsibilities as primarily regulatory, (2) the existing knowledge base did not speak to the tasks and problems of the project's clients, (3) RBS was unable to access the knowledge base efficiently (ERIC was just being initiated), and (4) RBS staff had limited experience in playing the role of disseminator.

In 1975 and 1976, through an NIE-funded project which enabled the laboratory to explore ways it could relate to state education agencies, intermediate units, study councils, and educational associations, RBS determined that it could affect the quality and impact of selected school improvement efforts under certain conditions. The notable project activities were: (1) the development of materials and the implementation of a series of workshops, in collaboration with the New Jersey School Boards Association, to help school boards and superintendents understand their role and responsibilities under the new Thorough and Efficient legislation; (2) the development of a desegregation plan for New Castle County, Delaware; and (3) the design of a project

to improve the basic skills performance of selected schools, which was led by the Pennsylvania Department of Education and involved two intermediate units, the Learning Research and Development Center at the University of Pittsburgh, and RBS.

In 1976, as this exploratory project was ending, NIE requested laboratories to develop plans for projects which would have them work collaboratively with state education agencies to foster the exchange of information between the educational R&D community and educational practitioners. That is, to foster the communication of information about the work of researchers and developers to practitioners; and the communication of information about practitioner needs to researchers, developers, and R&D policymakers. The entire set of projects was to be known as the R&D Exchange.

In response, RBS and the states of Delaware, Maryland, and Pennsylvania developed a plan for a Mid-Atlantic Regional Exchange. In March 1977, the RBS Regional Exchange began providing R&D-based information, technical assistance, and training services to those three states. In the spring of 1979, those services were extended to the state of New Jersey. Also in 1979, the Exchange became a major component of RBS' research, development, and dissemination program, supported by NIE under its then-existing "special institutional relationship" policy. Each year since 1979, RBS' management has met with state leaders to review the work of the Exchange and to consider whether the project should be continued. The decision has been to proceed, because each year the assessment has determined that:

- the states of Delaware, Maryland, New Jersey, and Pennsylvania were considering, designing, and/or implementing programs aimed at influencing the quality of local educational practices
- RBS' services, through the Exchange project, did help state staff use current educational R&D-based knowledge as they considered, designed, and/or implemented selected educational improvement programs

- some of the resulting programs have established new expectations for local educational practice, and encouraged some schools and districts to make the improvements necessary to meet those expectations.

## Goals of the RBS Exchange

Over the past three years, the RBS Exchange has continued to pursue one primary goal: to support state planning and implementation of educational improvement programs by providing R&D-based information, technical assistance, and training. This goal recognizes the leadership position which the states in its region have assumed toward educational improvement.

In supporting state-led educational improvement efforts, the RBS Exchange has also sought to contribute to the three goals which NIE first posted for the R&D Exchange. First, it has sought to increase the use of R&D outcomes by educators developing and/or benefiting from state educational improvement efforts. Second, it has sought to encourage increased coordination among dissemination and educational improvement efforts across levels within each state and across its region. And third, it has sought to gather information about the experience of state educational improvement efforts which would help the laboratory plan future research and development efforts.

These three goals have provided structure to the Exchange's primary purpose of supporting state planning and implementation of educational improvement efforts. Specifically, the first has emphasized that the principal support provided by the Exchange would be R&D-based. The second has emphasized that in its work with the states, the Exchange would facilitate communication and foster exchange of ideas and resources among units within a state education agency, across education levels within a state, and among state agencies in a region. The third has emphasized that in its work with the states the Exchange would seek to gain experience and information which would be of value to those planning future R&D programs.

## General Dissemination Approach

To achieve its objective of providing support to state planning and implementation of educational improvement efforts, RBS staff adopted a client-centered, client-responsive, dissemination approach involving four general processes (which do not necessarily occur in a linear fashion): needs identification and clarification, knowledge building, information preparation/transformation, and information delivery and assistance. Each of these four processes is described more fully below.

### Needs Identification and Clarification

The purpose of needs identification and clarification has been to determine which state educational improvement priorities would be supported by Exchange activity, and how that support would be provided. It has been conducted as a negotiative process at several levels.

At the highest level, RBS has often negotiated priorities with a liaison person designated by the chief state school officer. The state liaison person has usually been a senior official with an overview of the state's program priorities and, in some cases, has had management responsibility for some of the state's principal educational improvement programs. The discussions with state liaison persons have occurred several times a year, to review current state priorities and related Exchange activities. Existing state priorities have either been confirmed, or new priorities have been set for the Exchange.

Within the framework established with the state liaison person, RBS staff have then proceeded to negotiate their specific roles with state staff responsible for particular priorities. Through these negotiations, RBS staff have clarified the tasks associated with each priority, the schedule of work, and the roles of other participants. In addition, they have determined the kinds of knowledge which might be helpful. Sometimes, as part of this

process, RBS staff have collected information from local practitioners to help the state and RBS determine the state-of-the-art practice and site-specific needs for the state activity.

Knowledge Building

The process of knowledge building has been interwoven with the process of needs clarification. RBS staff have engaged in two kinds of knowledge building: anticipatory and responsive. In both cases, the process has involved three activities: identification of useful sources of information, search and retrieval of information, and screening and organization of the information most relevant to the task at hand. These three activities have been facilitated by the RBS Resource Center, by other members of the R&D Exchange, and by informal networks within RBS and across the country. That is, RBS staff have been assisted by Resource Center staff in conducting computer searches of ERIC and similar data bases, accessing materials from nearby public and university libraries, and classifying and filing the accessed materials. RBS staff have been assisted by other members of the R&D Exchange, both through the formal system of central support services and through more informal systems of exchange. For example, the Resource Referral Service at Ohio State University has been tapped to identify agencies and individuals working on questions related to state tasks. Finally, RBS staff have developed informal networks with individuals at universities and colleges; at federal, state, and local education agencies; and at information services and teacher centers. Information gathering from these sources has been initiated either in person or by telephone--whichever is the fastest method for identifying information most relevant to a given task.

All three activities have been used to identify and retrieve information for both anticipatory and directly responsive knowledge building. When trends are strong, files have been built in anticipation of state needs; when change has occurred quickly, information has been accessed in direct response to specific needs. The former has allowed for comprehensive file building, the latter--usually with tight time constraints--has required accurate clarification of needs, and focused on obtaining immediately relevant materials.

Information Preparation/Transformation

Information acquired by RBS staff has rarely been delivered to state clients in its original form. Responding to the specific needs of a client group has required selection and collation of information from several sources; preparation of a synthesis of the information; translation of the information into a more readily understandable language; adaptation of information into another form (e.g., a research report into workshop materials); or a specific analysis of the information and its value to a certain task. RBS staff have carried out such transformations, tailoring particular information to the specific needs of client groups.

RBS' information products have taken such forms as matrices, flow charts, diagrams, tables, collections of key citations ("highlights") accompanied by short bibliographies, annotated bibliographies, and research papers. RBS staff have also developed workshop materials which include discussion papers, worksheets, simulations, guidelines, overhead transparencies, and audio and video tapes. It has also compiled collections of carefully selected samples of materials on specific topics.

Information Delivery and Assistance

In order to increase the probability that the information provided would be used, RBS staff have delivered the information in person, and offered to provide assistance in its use. In general, RBS' assistance has taken the following three forms, depending on the nature of the task, the structure and organization of the client group, and the content of the information.

- Personalized technical assistance. RBS staff have helped state leaders consider information which could help them with a specific task.

- Planning and design assistance. RBS staff have worked as members of state planning groups. In that capacity, they have both contributed information and ideas based on the information collected, and undertaken specific planning tasks.

- Implementation assistance. RBS staff have helped with the development specific resource materials needed to support the implementation process (e.g , planning guides, descriptions of recommended practices, syntheses of research, lists of resources, developed instruments). RBS staff have also helped with the design and conduct of orientation and staff development programs for state and/or local staff. Finally, RBS staff have provided evaluation services in a manner consistent with an "action research" model. That is, RBS staff have collected information from school district staff with whom the state staff has been working, summarized that information in a form useful to the state staff involved, and presented state staff with that information and other related research in a manner and at a time which enables state staff to take steps to improve their educational improvement efforts.

In summary, through the looping processes of needs identification and clarification, knowledge building, information preparation and transformation, and information delivery and assistance, RBS staff have sought to support the planning and implementation of statewide programs aimed at stimulating and supporting local educational improvement.

Other Complementary Approaches

In addition to the client responsive approach, the Exchange has also initiated activities of its own with the states. For example, in cooperation

with NIE, the R&D Interpretation Service (RDIS), and other NIE contractors, RBS brought to the attention of key state staff many major research reports and knowledge syntheses. It has also aggressively pursued opportunities to present the contents of those reports and syntheses to state staffs in a task-relevant way. Further, RBS has periodically initiated collaborative planning and conducted one and two-day conferences at which state staff could share their current program activities and consider the implications of recent research for those activities. Finally, RBS has stimulated and contributed to multi-state projects. In all of these activities, RBS has played a proactive role in stimulating state use of current knowledge to facilitate intra-state and multi-state collaboration and sharing.

## Organization and Management

To implement these approaches, the RBS Regional Exchange director established four state teams and, as required, designated individual project staff to assume leadership of specific multi-state and regional activities.

Each team has been responsible for identifying a state's needs and priorities, and for negotiating with state leaders the specific contributions that RBS would make to selected priorities. The team has usually assumed responsibility for delivering the requested services. However, when a priority has required knowledge and skills of persons outside of the team, these resources have been negotiated with other teams or been obtained from other laboratory projects.

Each state team has had a full-time staff member. Three teams have also had a management team member assigned to them on a part-time basis. Over the past three years, these teams have drawn on the services of 12 other RBS staff.

Though a team has been established for each state, the level of services actually provided each state has depended on a complex of conditions. For example, the clarity of state needs, the extent to which a state has organized its staff and resources to meet those needs, a state's openness to outside assistance, the availability of RBS' resources, and the knowledge and interests of RBS staff have all played a part in this determination. On the average, states have received between .09 and 1.3 FTE of service a year, though RBS' services to individual states may range between .06 and 2 FTE within a given year.

Multi-state and regional activities have occurred as a result of the availability of an outside resource (e.g., a Research Within Reach publication), an outside initiative (e.g., the Secretary of Education's Chapter 1 program improvement initiative), or a shared need or interest across states (e.g., concern about what happens to graduates of high cost special education programs). Depending on the scope of a multi-state or regional activity, either an individual staff member or a small ad hoc staff team has plannned and carried out the activity.

The organization and staffing of the RBS Exchange project over the past three years is summarized in Figure 1.

Figure 1

Organization and Staffing of the Exchange Project

RBS Executive Director
and Project Quality Assurer

Exchange Project Director
and Director of Dissemination

| Delaware State Team | Maryland State Team | New Jersey State Team | Pennsylvania State Team |
|---|---|---|---|
| • State Coordinator<br>• Dissemination Specialist | • State Coordinator | • State Coordinator<br>• Dissemination Specialist | • State Coordinator<br>• Dissemination Specialist |

Other RBS Staff Contributing to Exchange Services

| Development | Research and Evaluation | Dissemination | Resource Center |
|---|---|---|---|
| • Field Coordinator, Basic Skills<br>• Assoc. Director of Urban Development<br>• Training Specialist | • Director of Research & Evaluation Division<br>• Director of Evaluation<br>• Senior Evaluator<br>• Evaluation Specialist<br>• Research Associate<br>• Programmer-Analyst | • Special Education Director<br>• Information Specialists | • Director of Information Services |

## MAJOR ACTIVITIES AND THEIR OUTCOMES

During the past three years, RBS has contributed to 21 state priorities and undertaken 10 multi-state or regional activities. These priorities and activities, RBS' contributions to them, and their outcomes are summarized in Appendix A. This section provides a narrative description of eight of these improvement efforts. The eight cases have been selected to reflect the variety of state educational improvement activities on which RBS has worked, the range of services RBS has provided in support of these activities, the kinds of outcomes which can be achieved through such activities, and some of the conditions which influenced the scope and impact of these efforts.

### Overview of Eight Case Studies

Six of the eight cases describe educational improvement activities of the states with which RBS works. Their goals were to:

- encourage schools to implement more effective R&D-based instructional processes
- increase school's use of computers as in instructional resource
- improve teacher quality
- improve the quality of local teacher supervision/evaluation systems
- improve educational programs for delinquent and disruptive youth
- improve the quality of education provided by urban schools.

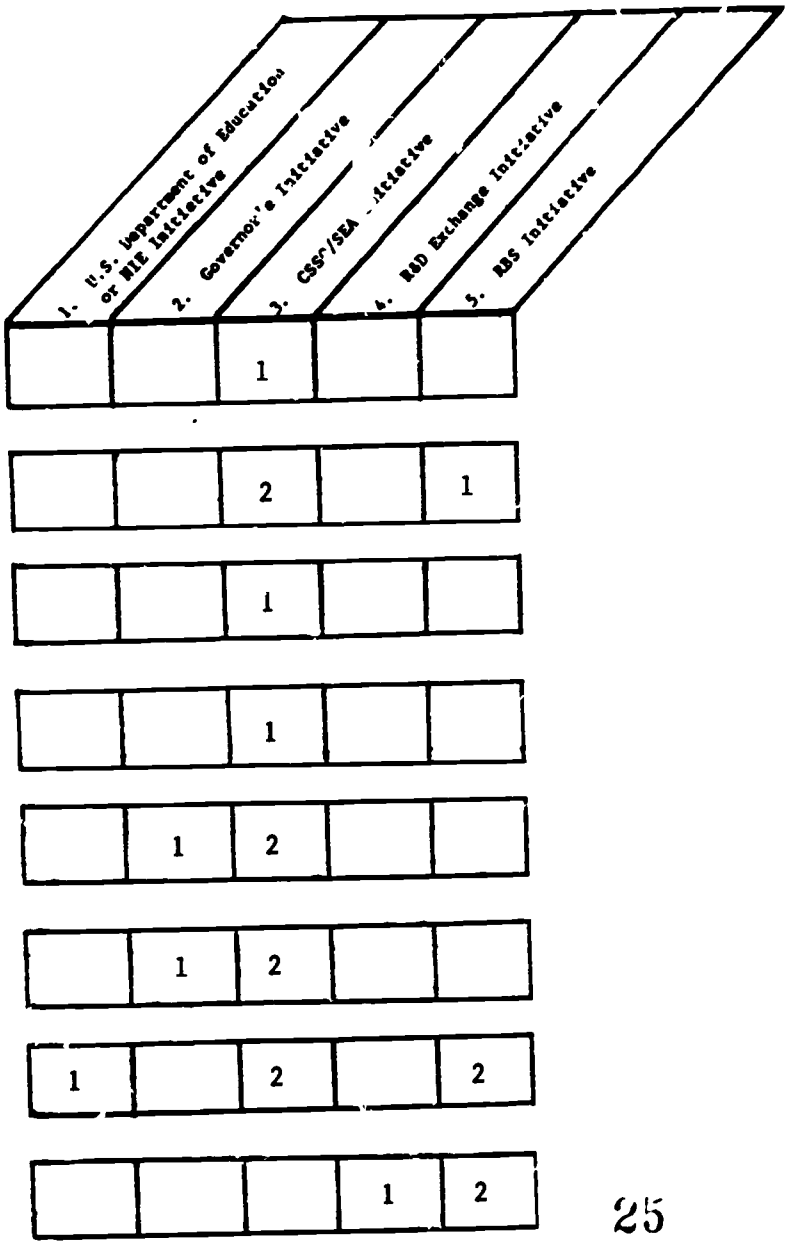
The remaining two cases represent major multi-state and regional activities. The first was a six-state project to develop and implement a process to improve the effectiveness of local Chapter 1 programs. The second was a collaborative effort of the R&D Exchange to increase educators' awareness and understanding of research related to teaching the basic skills and science.

As the eight cases reveal, each had a different origin (see Figure 2). One was initiated by the U.S. Secretary of Education, but was defined by a

Figure 2

SOURCE OF THE INITIATIVES

Key: 1 = Primary Source
2 = Secondary Source

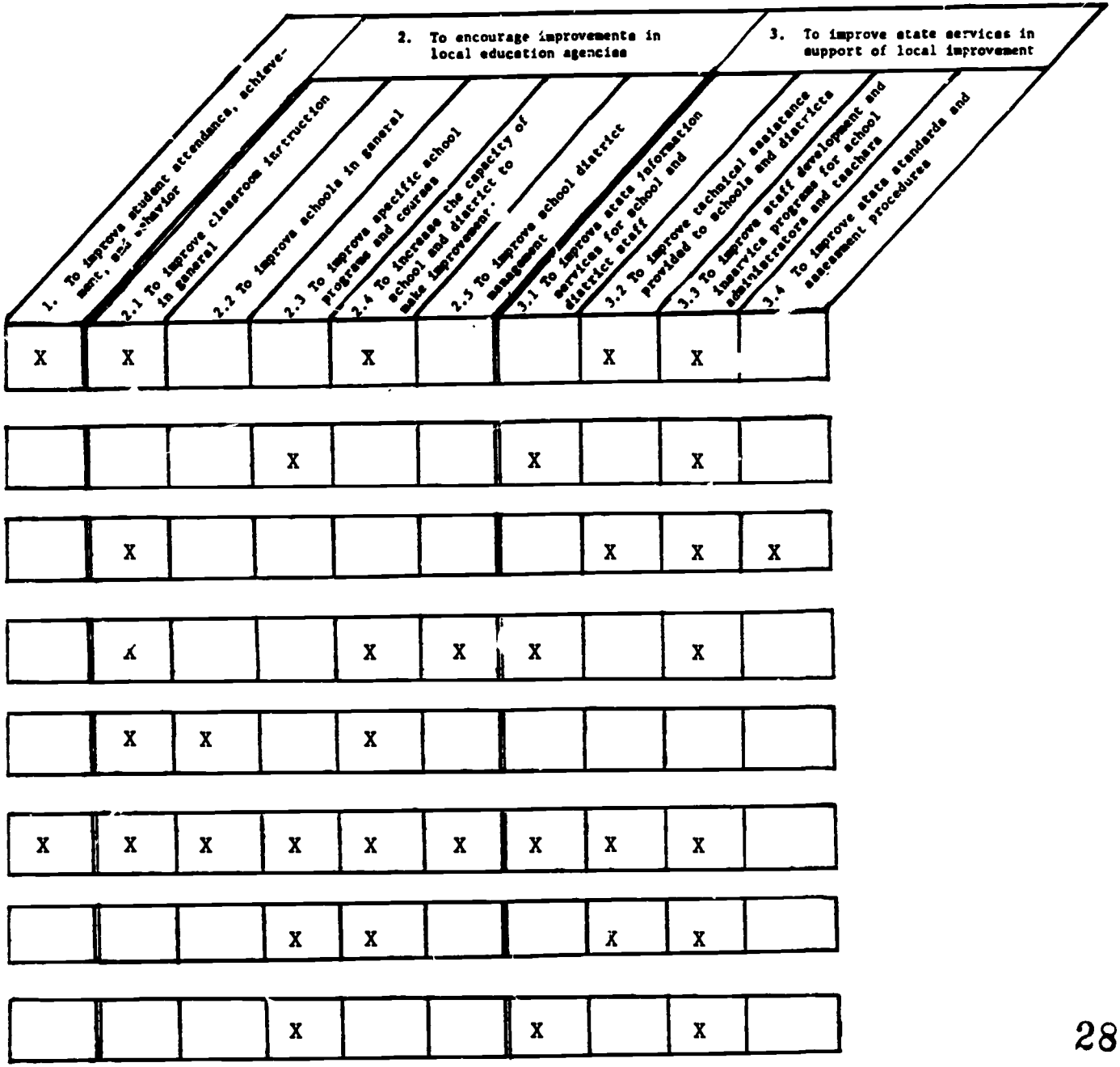


collaborative planning group made up of six state Chapter 1 directors and three technical assistance agencies, including RBS. Two were presented as part of governors' educational reform agenda which were developed with the support of their chief state school officer. Three were basically initiated by state education agency leadership. One developed as a result of a decision by the R&D Exchange project directors; RBS' Exchange director participated in that decision. And one grew out of needs sensing activities which RBS undertook, and for which RBS gained support of state education agency leaders.

Though their goals and origins differed, all eight improvement activities had three interrelated purposes. The first was to establish or strengthen state policies and services which would support local improvements. The second was to affect local educational policy and practice in specific ways. The third expressed the ultimate intent--to affect student attendance, behavior, and/or achievement. Figure 3 suggests some of the specific ways in which these purposes were focused. It indicates that the eight activities varied in number and kinds of state services which they intended to establish or strengthen, in the kinds of local improvement which they intended to affect, and in the extent to which those improvement were explicitly linked to some kind of student outcome. Each of the case descriptions which follow begins with a brief overview. Each then describes the major phases through which the improvement activity moved. The descriptions highlight both state and RBS activities. Each concludes with a summary of outcomes. At the end of the report, there is a listing of the major products, by case study, which RBS developed and/or contributed to.

Figure 3

INTENT OF STATE ACTIVITIES



## 1. Encourage Schools to Implement More Effective R&D-based Instructional Processes

The School Improvement Through Instructional Process (SITIP) program was initiated in 1980 by the Maryland State Department of Education (MSDE), and resulted in all 24 county school systems putting into practice research on effective classrooms and planned change. By June 1985, over 22 percent of Maryland's schools were involved (about 3,800 teachers in 270 schools), with almost equal representation of elementary and secondary schools.

This case traces the development, implementation, and expansion of the SITIP program, and of RBS' role in it.

### Early Planning

The need for a state program aimed at improving instruction in classrooms was identified by MSDE staff responsible for the statewide competency-based program. Their analysis of test scores and classroom observations suggested that districts implementing the program needed to address instructional processes as well as the curriculum. In mid-1980, MSDE therefore decided to initiate a program to help Maryland's districts, schools, and teachers use research-based instructional practices. With the assistance of RBS, MSDE identified four instruction models which would be the focus of the program: Active Teaching (AT), based on the work of Thomas Good at the University of Missouri; Mastery Learning (ML), based on the work of Benjamin Bloom and his colleagues at the University of Chicago; Student Team Learning (STL), developed at the John Hopkins University's Center for the Study of School Organization; and Teaching Variables (TV), a preliminary version of RBS' Achievement Directed Leadership program.

The implementation plan for the program was influenced by the success of two other MSDE programs: (1) the Professional Development Academy, which

provided intensive training and follow-up to principals, and (2) Project Basic, the state's competency program, which employed an implementation strategy based on current research on planned change. Later, national attention to the research on school and classroom effectiveness and the various reports on educational issues, such as "A Nation at Risk," provided an additional positive press for local implementation of SITIP.

As the program got underway in 1981, three decisions were made which had major impact on the program. First, MSDE assigned the leadership of SITIP to their Assistant Deputy Superintendent, who was also the director of Project Basic, the chairperson of the MSDE Instructional Coordinating Council, and the RBS liaison. This assignment ensured effective communication and coordination among the staff involved. Second, RBS reassigned staff, moving accountability for SITIP from evaluation to technical assistance staff. This decision changed the focus of RBS' efforts, resulting in increased involvement in SITIP planning, and in the provision of information on classroom and school effectiveness and on planned change. And third, as it became clear that the support which MSDE wanted from RBS would exceed its available resources, MSDE decided to enter into a cost-sharing arrangement with RBS. That arrangement increased the number of RBS staff involved in the program and the impact of RBS' effort.*

The plan for the initial phase of the program had four components. First, there would be a series of four awareness conferences--one for each of

*Throughout the project, the RBS state coordinator for Maryland, a member of the Regional Exchange, provided overall leadership, directed the study, conducted training, and developed research syntheses. In addition, the staff of the Basic Skills Component conducted training on Teaching Variables; staff of the Research and Evaluation Division assisted with the study; and other staff of the Regional Exchange assisted in providing information, training, and technical assistance.

the instructional models--to which all school districts would be invited. Second, small grants (up to $10,000) would be made available to districts interested in implementing one or more models. To receive a grant, districts had only to prepare a short proposal which described the model(s) they had selected. their implementation strategy, and their proposed use of grant funds. Third, intensive training would be provided to school implementation teams during the summer. Fourth, annual instructional leadership conferences would be sponsored by MSDE for state and local educators. Each conference would include presentations by local teams involved in SITIP and by researchers such as Jane Stallings, Karen Louis, Barak Rosenshine, and Bruce Joyce. Finally, RBS would collect evaluation data related to each of the program's activities and report it in a way which would help MSDE and district staff make adjustments. As a result of recommendations made by RBS, the plan was modified in the summer of 1981 to provide in-person technical assistance to districts and schools from a team of MSDE staff drawn from five instructional divisions.

Implementation

Following the conferences which featured the developers of the four instructional models, 19 of the 24 districts submitted preliminary proposals for implementation and subsequently received small grants from MSDE. During the summer, the developers provided intensive training to implementation teams from the districts. Districts were asked by MSDE to revise their plans based on the training, and to then proceed to implement those plans. In support of these activities, MSDE technical assistance staff provided on-site coaching, helped local teams conduct staff development workshops, and provided trouble-shooting assistance to overcome implementation problems. They also conducted

one or two workshops each year at which districts implementing the same model could share accomplishments, consider evaluation data provided by RBS, explore alternative approaches to implementation problems, and receive additional training. In the spring of 1982, MSDE sponsored a state conference which provided opportunity for the districts to showcase their projects and to hear presentations by national experts on instructional improvement and planned change.

For the next three years, as the local instructional improvement efforts moved through the various phases of implementation and institutionalization, MSDE provided continuing technical assistance and sponsored state conferences each spring.

Throughout this period, RBS carried out four major supporting activities. First, RBS evaluated all major conferences and training events, and prepared reports which provided information for future MSDE planning and technical assistance. Second, RBS evaluated the overall program at the state and local levels to determine progress on a variety of goals and summarized the findings in four annual reports. Goals evaluated by RBS included MSDE's goals to increase internal coordination, to increase purposeful communication between MSDE and the 24 districts, and to encourage significant instructional improvement at school and classroom levels; they also included the districts' goals to promote teachers' professional growth and instructional effectiveness. Third, RBS provided ongoing planning assistance to MSDE technical assistance teams. Fourth, RBS developed materials and conducted training, based on the research on classroom effectiveness and planned change. Specifically, through training, information exchange, and feedback of evaluation findings, RBS facilitated MSDE staff's use of procedures to improve state and district communication, facilitate cross-hierarchical decision-making, establish

district networks, conduct high-impact staff development activities, and maintain harmony and productivity in the local projects, and between state and local groups.

As a result of RBS' efforts, MSDE and district staff gained increased insight into the process of school improvement. For example, RBS determined that the districts used the four following implementation strategies, and that these strategies had a major influence on what specific districts accomplished.

- District-wide. All schools at a given level (usually elementary) were involved. A selected model was used routinely by all teachers in a specific subject. This strategy required the most work from the most people, with central office staff enthusiasm and support most important for its success. Two districts began with this strategy. By June 1985, three were implementing it. All three implemented Active Teaching. The largest project involved 33 schools.

- Pilot/district. One to three schools were involved in the first year, with strong central office support for school-based activities. Evidence of success led to greater administrative involvement and, in some cases, use of selected teachers as turnkey trainers. This strategy was the most feasible, especially for complex models. Five districts began with this strategy, and eight were using it by June 1985. The largest number of schools involved in a pilot/district LEA was 56.

- Capacity building. The LEA team that participated in the MSDE institutes trained volunteer teachers who were willing to "try" the model. There was no formal commitment to follow-up by administrators. Where this strategy was effective, an administrator did "energize" the project. Five districts, all using Student Team Learning, began with this strategy; the efforts of three waned during the second or third year. By June 1985, there were four capacity building districts, with 25 schools involved in the largest project.

- Lighthouse. A single school was involved, and no commitment was made by central office staff to advocate further use or to initiate planning or training for other schools. Success was usually shared informally with other schools. This strategy put the greatest burden on the pilot school staff. There were 20 lighthouse sites initially. By June 1985, there were 13 lighthouse sites. In the districts using this strategy, the largest number of schools involved was 7 (each of the four instructional models was employed in one or more of the lighthouse schools).

RBS' studies also suggested that district designs or plans for instructional improvement were most likely to be successful if: (1) participation of organizations was voluntary and cross-hierarchical, (2) communication was multi-dimensional, (3) planning was interactive with training, (3) training and technical assistance were provided during implementation, (5) "lip service compliance" was not accepted as implementation, (6) adjustments of scope were considered legitimate and related to resources available, and (7) each participant had some degree of choice about his or her involvement in the effort.

## Expansion and Coordination

During the four school years beginning in September 1981, SITIP expanded in the numbers of districts, schools, and teachers involved. In addition, MSDE initiated several related programs. For instance, MSDE staff used the SITIP design in a program in which MSDE provided training for faculties of colleges of education, and MSDE staff drew on the SITIP knowledge base for Chapter 1 and special education initiatives. MSDE conducted retreats for state and local policy makers to encourage discussion of instructional improvement and planned change.

RBS played a part in all of these activities. Its staff developed research syntheses, conducted workshops, provided technical assistance, provided information, and evaluated specific events. RBS staff also disseminated information about Maryland's instructional improvement efforts through presentations at national, regional, and local professional meetings.

## Outcomes

The School Improvement Through Instructional Process program has, over its five years of existence, had a wide variety outcomes. Most notable are:

- MSDE staff's growth in knowledge and understanding of what a state education agency can do to influence instructional improvement

- MSDE staff's ability to provide effective training and technical assistance to district and school staff

- the adoption of improved instructional practices in more than 22 percent of Maryland's schools

- the evidence that there were increases in student achievement where models were implemented with fidelity and used consistently

- the increased understanding of factors which can contribute to the process of school and classroom improvement.

## 2. Increase Schools' Use of Computers as an Instructional Resource

With the encouragement and support of RBS and Project Direct (Delaware's computer facility) staff, Delaware's Department of Public Instruction (DPI) curriculum supervisors increased their knowledge and understanding of how computers can be used in language arts, mathematics, and social studies programs, and undertook a collaborative project with the Red Clay Consolidated School District to develop lessons in those subjects which incorporated the use of computers as instructional resources. Currently, the supervisors, with continuing assistance from RBS and Project Direct staff, are developing resource guides and inservice programs which will help teachers throughout the state to use computers in their language arts, mathematics, and social studies programs.

This case describes the activities which have occurred over the past three years to help DPI supervisors develop the capacity to provide leadership in the use of microcomputers in traditional subject areas.

### Identifying a Need

In October 1982, RBS invited representatives from each of its states to attend a one-day meeting at the laboratory. The purpose was to provide an opportunity for state leaders to describe the roles they were playing with respect to the use of microcomputer technology and to discuss pending problems

and needs. In preparing for the conference, RBS staff reviewed available literature related to the topic and the small number of state plans which were then available. As a result of the conference, RBS identified five areas of state activity. One was directed toward helping all students and teachers become computer literate; a second was concerned with obtaining access for schools to basic skills drill and practice programs like the Computer Curriculum Corporation (CCC) materials; a third was aimed toward exploring the value of traditional business application programs (word processing, data base management, spreadsheet, information search and retrieval) in both regular and vocational education courses; a fourth sought to explore ways the computer could help students achieve traditional school subject objectives; and a fifth was involved with developing hardware configurations which would facilitate schools' use of computers.

RBS decided it could best contribute by working in the fourth area, helping to develop ways for teachers to incorporate the computer as an instructional resource into their language arts, mathematics, social studies, and science programs. During the winter of 1983, RBS staff* began to develop a knowledge base related to the topic, sponsored two follow-up meetings with state staff involved in responding to school staffs' requests for information about computer applications in education, and developed a mock-up of a resource book for teachers interested in using computers in their writing programs.

As a result of a number of informal discussions with state leaders, RBS decided to approach the Delaware state staff with the idea of a collaborative

*Three Exchange staff, supported by the RBS Resource Center, were involved in the initial planning of this activity. The Delaware dissemination specialist was responsible for all the field activities with the curriculum supervisors.

project. Through the project, DPI would develop its capacity to provide leadership to traditional subject matter teachers regarding the use of computers by designing resource guides and inservice programs. Delaware seemed to be the most appropriate state for such a project because:

- the state had invested in a major computer facility, Project Direct, to provide basic skills drill and practice exercises over telephone lines to all schools in the state
- its districts had purchased a significant number of microcomputers
- the state department was conducting a computer literacy inservice program aimed at reaching every teacher in the state
- the state had purchased a membership in MECC (Minnesota Educational Computer Consortium) which enable school staffs throughout the state to receive copies of their programs
- the state departme had initiated a planning effort which would result in a compre nsive lon'-range plan for computers in education
- the state department's curriculum supervisors regularly offered inservice programs to the state's 19 school districts.

Exploration and Planning

In May 1983, RBS staff met with Delaware's Division of Instruction staff to explore the project idea. As a result of that meeting, four curriculum supervisors agreed to work with RBS staff, though only one had experience with microcomputers. Therefore, it was necessary to address first their need for hands-on experience with microcomputers and with software relevant to their subject area. Project Direct staff, with the support of RBS staff, conducted at their facility several workshops for the supervisors. In subsequent planning meetings, the supervisors decided to design resource guides which would describe how computers could be used in each subject area, provide concrete examples of lessons which incorporated computer software, and provide both information about state computer resources and an up-to-date bibliography

of books and articles describing computer applications and effective software. They also decided that such materials could best be developed in collaboration with the staff of a school district.

One spin-off of this work with the supervisors was the request by one of them for RBS to participate on Delaware's computer planning committee. The committee included staff from DPI and a representative from each of the school districts. Its task was to develop a comprehensive plan to guide local activities for the next several years. As a member of the committee, RBS contributed to all aspects of the plan; however, it worked intensively for the inclusion of activities related to the use of the computers in traditional subject areas. The existence of the plan encouraged the state legislature to increase funding for technology in 1985.

Subsequently, DPI asked RBS to prepare a paper which would provide an overview of instructional uses of microcomputers. This paper was presented at a state-sponsored workshop in the fall of 1984, which involved admininstrators from every district in the state.

Red Clay Consolidated School District Project

In April 1984, DPI, DIRECT, and RBS staff negotiated a cooperative project with the Red Clay Consolidated School District which had recently purchased a significant number of microcomputers for each of its schools. The project involved three phases. First, three subject matter teams from a high school, middle school, and an elementary school were to participate in an inservice program to be conducted during May and June (1984) by DPI, DIRECT, and RBS staff, and to produce a set of lesson plans incorporating computer software. Second, the teachers were to pilot the lesson plans during the 1984-85 school

year, allow project staff to observe those lessons, and make any revisions suggested by the pilot. Finally, project staff were to use the revised lesson plans to develop resource guides and inservice programs.

The first part of the project unfolded as planned. Principals from all of Red Clay's schools were introduced to the project. Two inservice sessions in May presented the project to the selected teachers and provided a hands-on experience in previewing software and planning a lesson which used that software. A week-long inservice program in June enabled each of the teacher teams to preview four to eight pieces of software and to develop a number of draft lesson plans. As a whole, the group produced over 100 draft plans. The week's program culminated in a session in which teachers and principals worked together to plan how the computers in their buildings could best be managed.

Between September 1984 and June 1985, project staff observed teachers piloting lessons. Drawing upon their experience to date, project staff drafted materials which addressed the identified needs of teachers and principals, and which could be used in future inservice programs. The materials addressed teachers' general reluctance to work with unfamiliar technology, their need for strategies to help them approach both the task of previewing software and the task of developing lesson plans which could be understood by others, and their need for examples of how hardware could be configured and managed.

Over the summer of 1985, project staff conducted several one to two-day workshops during which the draft materials and lesson plans were tested with small groups of teachers. These teachers provided many suggestions for improving the materials.

Development of Resource Guides

Using the results of the Red Clay project and the summer workshops, DPI began compiling the resource materials into coherent resource guides. The initial set of guides are to help teachers of language arts, mathematics, and social studies plan and conduct lessons which use computers as an effective instructional resource. The guides will have four major sections: (1) using computers to teach the subject, (2) developing instructional activities, (3) selecting educational software, and (4) using other resources.

RBS has agreed to help the supervisors with this development effort. Current plans call for the guides to be completed by February or March 1986, for use in a spring inservice program to be conducted by DPI staff.

Outcomes

RBS's contributions to the project have: (1) increased DPI staff awareness and knowledge of how computers can be used effectively in language arts, mathematics, and social studies; (2) increased collaboration between state instructional and computer staffs; and (3) resulted in state commitment to provide leadership in the area of microcomputer use through inservice programs and the publication of resource guides. To date, the project has helped over 50 Delaware teachers develop the knowledge, skills, and confidence to use computer technology in their language arts, mathematics, and social studies programs.

### 3. Improve Teacher Quality

In 1982, the Maryland State Department of Education (MSDF) launched a major effort to enhance teacher quality. A state task force was formed which examined data related to existing practice and future needs in the

areas of teacher pre-service, induction, inservice, recruitment, retention, and evaluation. As a result of recommendations made by this task force, several committees were formed, each charged with the development of programs or policies in specific areas: preservice education, use of the National Teachers' Examination, beginning teacher evaluation, inservice, recruitment, and overall implementation of policy and program changes. The work of these committees is currently underway, with initial phases of implementation planned for 1986.

This case describes how three RBS Exchange staff contributed to the work of the task force's committee on the evaluation of beginning teachers.*

Development of Competencies for Beginning Teacher Evaluation

One task force committee was charged with developing a system which would assess the on-the-job performance of beginning teachers and provide support to ensure their competence. The demonstration of teaching competence was to be a requirement for a Maryland teaching certificate. Other committees were considering additional requirements: satisfactory completion of the required preservice courses and passing the National Teachers' Examination.

*RBS was only involved with the early work of the task force when it became concerned with the issue of teachers incentives. In 1983, national attention was caught by the ideas of merit pay and career ladders for teachers. The MSDE Director of the Division of Certification and Accreditation asked RBS to find out what was being done in various states and large school systems across the country, to analyze the relative successes of those programs, and to develop a resource paper that might inform the task force, as well as state and local policy makers. RBS staff developed a paper, Rewarding Teachers: Issues and Incentives, in which the use of performance-based pay as an incentive was discussed, and six recently initiated merit pay systems were described. The paper was widely distributed and contributed to state policy makers' decision not to initiate formal systems of merit pay or career ladders in Maryland.

The committee was composed of representatives from various school districts, colleges, and MSDE, and was chaired by a school district staff person and coordinated by a MSDE staff person. It met monthly during the 1984-85 school year, reviewing state and local programs, drafting a list of competencies, and beginning to consider how proposed teaching competencies might be validated and implemented. Early in 1985, at the request of MSDE, an RBS staff person joined the state committee and participated in their regular meetings and working retreats. Since members had diverse backgrounds and no shared knowledge base, RBS made brief presentations on instructional models and classroom management.* By June, a set of criteria had been drafted by the committee (version I). In July, a team of MSDE staff revised the criteria, organized them into six domains, and defined them using over 100 behavioral indicators (version II). This set was distributed to the committee (including RBS) and to about 20 MSDE staff for review. At the same time, RBS summarized the research that was available to support version II.

In September, the committee discussed reviewer reactions and considered the research summaries and critique developed by RBS. It decided that further revision was needed. In response, RBS staff revised the criteria (version III) by organizing 17 competencies and 65 behaviors into five domains: (1) instructional planning and delivery, (2) classroom management, (3) teacher-student interaction, (4) subject knowledge, and (5) assessment. RBS' revisions added criteria related to lesson planning, independent and guided practice, and success rate. RBS further suggested the relative value of the

---

*RBS' efforts in this area were supervised by the RBS state coordinator for Maryland, who also participated in some of the MSDE planning meetings and contributed to materials development. Other staff of the Regional Exchange carried out research and development tasks, and provided training and assistance to the committee.

included in each. For instance, 25 behaviors were grouped under five competencies in the domain of instructional planning and delivery, but only two competencies and eight behaviors were in the assessment domain.

Following review by the committee, version III of the criteria will be distributed to a number of Maryland educators for further suggestions. Additional cycles of development and validation of the performance criteria will be carried out during the winter and spring of 1986, as progressively larger numbers of people evaluate the criteria in terms of their importance and assessability. The final version is expected to be developed by the summer of 1986.

## Support for Beginning Teachers

As the committee began to make progress in defining criteria for beginning teacher evaluation, they began to consider the support beginning teachers would need during the induction period to develop those competencies. They recommended that the program be entitled Beginning Teacher Evaluation and Development for Certification. They also recommended that appropriate training be developed for all the criteria. RBS provided support for one pilot program by developing a summary of the research on classroom management, in the form of a set of overhead transparencies and a script. The RBS materials have been incorporated into the pilot inservice program.

## Outcomes

RBS' contributions to date have increased state policy makers' awareness of the complexity of alternative "approaches" to providing incentives for teachers to enter into and continue in the field, increased MSDE staff and state task force members' awareness of current research on effective teaching,

and provided them with a possible set of criteria against which beginning teachers could be assessed. State policy makers have begun a process which will produce new criteria that beginning teachers will have to meet in order to be certified, and procedures for applying those criteria. In addition, they will be addressing questions related to the implementation of those procedures, and the development and implementation of inservice programs which will help beginning teachers meet those criteria.

### 4. Improve the Quality of Local Teacher Supervision/Evaluation Systems

In October 1983, the Governor and Secretary of Education of Pennsylvania published an Agenda for Excellence. It established as one of the priorities, teacher supervision and evaluation (TS/E). In 1984, the Pennsylvania Department of Education (PDE) initiate activities to improve Pennsylvania administrators' and supervisors' skills in supervising and evaluating teachers, as a means of improving the quality of instruction in the state's classrooms. To date, the initiative's major accomplishment is the delivery, at 27 locations around the state, of a two-day training academy which was designed to increase 1 800 supervisors' awareness of the roles and skills involved in implementing effective TS/E programs.

This case describes how Pennsylvania's TS/E initiative developed during 1984 and how RBS* contributed to it.

#### Exploration of Possible Designs of the Initiative

Responsibility for defining the specifics of the Governor's agenda regarding TS/E was assigned to PDE's Commissioner of Basic Education. During

---

*Two RBS Exchange staff contributed to the design of the Executive Academy; the study of exemplary TS/E system was a cooperative effort of RBS Exchange and Research and Evaluation staff.

January and February 1984, an internal steering committee considered alternative ways of defining the TS/E initiative. Since no special resources were earmarked for the initiative, the committee's challenge was to arrive at a design which could be delivered within existing resources and yet have notable impact.

In late February, PDE invited representatives from the various state education associations (school boards, superintendents, principals, and curriculum supervisors), and staff from RBS, to consider a proposed press release on the initiative. The draft release described a cooperative effort of PDE and the associations which would encourage districts to strengthen their teacher evaluation procedures, so that marginal or incompetent teachers would either become more effective or be removed from the classroom. It specifically proposed that the associations would highlight TS/E in their conferences and workshops and that PDE would devote its Executive Academies for school year 1984-85 to TS/E. The associations encouraged PDE to present the purpose of the initiative as improving administrators' and supervisors' teacher supervision skills.

PDE decided to include the topic of TS/E in an Executive Academy on Mathematics and Science Leadership scheduled for late March 1984. RBS was asked by PDE to facilitate the discussion of the topic. On the basis of that discussion, RBS prepared a report which summarized the perspectives of district mathematics and science supervisors on the critical components of effective TS/E systems. The report also described supervisors needs, as they sought to design, implement, and maintain their TS/E systems.

Development and Delivery of the Workshop Program

To develop the TS/E Academy program, PDE formed a planning group comprised of representatives of the intermediate units, the principals' associations,

the University of Pittsburgh, and RBS. Its task was to produce a plan for the academy, including its goals, training activities, and schedule. The planning group met twice. For each meeting, RBS staff provided summaries of relevant research, information about exemplary TS/E practices, and ideas for the academy program. As a result of the committee's deliberations, an academy program was proposed which would cover two days and which would focus on four sets of skills: setting goals for supervisory activities, collecting and analyzing data, conferencing, and following due process procedures.

To refine the program plan, PDE decided to have an advisory group review the plan and to pilot test the program twice. In early May, at PDE's invitation, 35 educators (principals, curriculum supervisors, staff developers, university professors, and association superintendents) met in Harrisburg to discuss the academy. The 35 educators were organized into four discussion groups led by either a PDE or RBS staff member. The comments of the groups supported the general academy plan; they did, however, suggest ways to develop the plan further.

With the support of the advisory group, PDE staff scheduled a June pilot test. Presenters at the academy were drawn from intermediate units, districts, and universities. RBS provided some draft exercises and took responsibility for obtaining participants' feedback. The 30 participants reinforced the developing plan and provided suggestions for further improvement.

A second pilot was conducted in July 1984 at the Shippensburg Curriculum Conference. It involved 55 local administrators and supervisors. This pilot produced the strong suggestion from the presenters that they be provided more detailed plans and materials. Though PDE staff were reluctant to be "prescriptive," they accepted the suggestion and asked RBS to develop a resource

book. During August, RBS prepared a draft resource book. It included a suggested agenda, the proposed sequence of training activities, and, for each activity, objectives, resource materials, guidelines, and suggestions.

The "Presenters' Resource Book" was presented in September 1984 to the intermediate unit staff who would be managing the regional academies. It served as the guide for 27 regional academies conducted in the 1984-85 school year. Evaluation data collected by PDE showed that the academies were very favorably received.

Describing Exemplary TS/E Systems

As a follow-up to the academies, PDE decided to turn its attention to the characteristics of TS/E systems in the 500 districts in the state. Based on a survey of TS/E practices which PDE staff had conducted during the fall of 1984, they concluded that districts needed, at a minimum, concrete information on how to design and operate an effective TS/E system--information which would be based on systems existing in the state.

In February 1985, PDE leadership asked RBS to design and conduct a study of five exemplary school district TS/E systems which would provide the data required for the 1985-86 initiative. RBS designed a case study to obtain in-depth, descriptive information about the contextual history, goals, planning process, development process, design components, funding, implementation timeline/procedures, staff development, organization, day-to-day operations, evaluation, and perceived utility, effectiveness, and strengths and weaknesses of a representative sampling of exemplary Pennsylvania school district TS/E systems. This design was reviewed in two meetings with PDE staff in the spring of 1985.

With PDE's approval, RBS proceeded to develop and test three interview protocols for district central office staff, administrators/trainers, and teachers. They were based in part on the protocols used in a Rand Corporation study of effective teacher evaluation practices (Wise, et al., 1984, personal communication). They also included 25 how-to-do-it questions posed by Pennsylvania school officials in TS/E meetings and conversations. A three-phase study procedure was devised.

- Descriptive TS/E system background and policy information (e.g., policy manuals, training materials, observation instruments, budget data) was solicited from each of the five districts. A brief pre-site visit background information questionnaire was also used.

- Two researchers spent three days on-site at each district (six person days per site) interviewing school staff. At each site, central office staff and district trainers were interviewed for approximately three hours, administrators for one-and-a-half hours, and teachers (separately or in small groups) for a half-hour. In the four smaller districts, the number of administrators (including central office staff) and teachers interviewed ranged from 7 to 10 and 31 to 43, respectively. In the largest district, 22 administrative staff and 51 teachers were interviewed either separately or in small groups. Across the five districts, a total of 90 central office staff, 37 administrators and/or trainers, and 194 teachers were interviewed.

- Follow-up contacts were made with selected district officials in cases where further clarification of the information was required in the process of preparing the final report (i.e., phase three of the study). In essence, district staff verified the accuracy of the program descriptions and implementation procedures cited in the report.

RBS' final report presented a brief summary and an in-depth description of each TS/E system. It also provided a cross-system analysis along with discussion of the issues identified, recommendations for other districts considering the development or revision of their TS/E systems, and implications for organizations planning on providing assistance to these districts. The report described over 20 specific process factors or issues critical to the initiation, design, startup, implementation, and maintenance of effective

TS/E systems (e.g., sources of funding, homophyly of trainers with target audience, nature and duration of training and system phase in period, importance of system monitoring procedures).

RBS staff met with PDE staff in October 1985 to discuss the publication and use of the study results. PDE may choose to disseminate selected aspects of the study to school administrators through their own publications, incorporate the findings in the content of two executive academies for school administrators planned for the 1985-86 school year, or use the findings to guide their technical assistance to districts that need help in upgrading their TS/E systems.

Outcomes

With consultants from the University of Pittsburgh and Pennsylvania State University, RBS staff increased state staff awareness of current research and theory related to teacher effectiveness and to teacher supervision/evaluation, and helped them incorporate that research and theory into a workshop design. Subsequently, over 1,800 school administrators and supervisors, through their attendance at the state-sponsored workshop, increased their understanding of the knowledge and skills required for effective teacher supervision/evaluation. In response to a state survey, 134 school districts reported that they planned to conduct additional inservice programs related to teacher supervision/evaluation. The survey also revealed that 103 school districts either have adopted and updated their teacher supervision/evaluation systems, or have plans to do so.

As a result of RBS' study of exemplary TS/E systems, Pennsylvania leadership has become more aware of the conditions which must be present in a district for effective teacher supervision/evaluation to occur. It is

expected that Pennsylvania leadership, with RBS' assistance, will design materials and workshops to help local educational leaders consider the implementations of the study's findings for their districts.

## 5. Improve Educational Programs for Deliquent and Disruptive Youth

Since 1981, the Delaware State Interagency Agreement (SIA), the Department of Public Instruction (DPI), and the Department of Corrections have been involved in a program to improve the quality of education provided to approximately 139 male and female youths, ages 13 to 19, incarcerated in two juvenile corrections facilities (Ferris School for Boys and Woods-Haven Kruse School for Girls). Their efforts resulted in a revised curriculum, a more highly trained instructional staff, an ongoing school-based improvement process, and awareness among state leadership of structural problems which are hampering educational efforts at the juvenile corrections facilities.

This case presents the origin of this program and describes how the SIA, with the support of other state agencies and RBS, identified critical needs at those institutions, and designed and implemented activities to address them.

### Identification of Needs and Priorities

In 1981, DPI and RBS staff observed the education programs offered at Delaware's two mental health and corrections facilities for youth and, in the process, identified several areas in need of improvement. The most critical of these was non-compliance with P.L. 94-142 special education requirements. Subsequently, DPI, in conjunction with the Department of Corrections and the Department of Health and Social Services, decided to use the State Interagency Agreement (SIA), a small independent agency, to define and resolve educational problems identified at the two facilities.

To assist with this responsibility, the SIA organized early in 1982 a Planning Educational Development and Troubleshooting (PEDaT) team, comprised of representatives from DPI, the Brandywine and Red Clay Consolidated school districts, the Ferris School for Boys, the Woods-Haven Kruse School for Girls, and Research for Better Schools.* The team first conducted an indepth needs assessment which identified at least ten specific areas in need of improvement. Examples of some of the needs identified include the following.

- Develop better lines of communication between the facility and parents.
- Develop a working relationship between the facility and the public schools.
- Transfer relevant information between the public schools and the corrections facilities.
- Establish curricular planning to provide continuity in the child's program (from previous placement, within the facility, and to subsequent placement).

Members of the team were assigned to design activities which would address each of the needs. However, due to a lack of time and resources, team members made only minimal progress on the tasks. The SIA director, in response, dissolved the PEDaT team and asked RBS to assist his staff directly in developing improvement initiatives which would address the identified needs.

## Curriculum Revision and Special Education Program Improvement

In the summer of 1982, SIA staff identified three areas for improvement: the school curriculum, the services provided special education students, and the level of staff expertise and performance. A four phase implementation plan was developed.

---

*From the beginning of the project, RBS staff from both the Regional Exchange and the Evaluation Services component contributed to the project. The services of evaluation staff were covered by personal service contracts with SIA.

- Identify possible career paths for students and, given those paths, set goals and objectives which should be a priority for the schools.

- Design a curriculum which would include statements of goals, objectives, competencies, and instructional plans. Provisions for meeting P.L. 94-142 special education requirements would be embedded in the curriculum.

- Implement a staff development program related to phases I and II. The program would include careful assessment of staff knowledge and skills, workshops which address staff needs, and follow-up assistance to individual staff members.

- Design a student IEP form and tracking system, and implement an individualized educational planning process.

Implementation of the Plan

In 1983 and 1984, the two schools' staffs, supported by SIA and RBS staff, worked through the phases of the plan. They identified possible career paths, given their students' educational histories, and used them to establish three possible goals for the schools' educational programs: (1) prepare students to be successful upon re-entry into a public school educational program, (2) prepare students for vocational training, and (3) prepare students for entry into the world of work.

With this framework, the staffs reviewed ability and achievement data for the students. Their analysis showed that the student body had a normal distribution in general ability, that their reading achievement scores varied widely (1.5 to 12.9 in grade equivalent scores), and that their mathematics achievement scores were very low and more clustered (3 to 6 in grade equivalent scores). This analysis was used to structure the revision of the schools' basic skills curriculum, making it more responsive to the range of student ability and achievement. It also was used to integrate more completely the basic skills and vocational components of the curriculum.

The curriculum revision activities were conducted as an integral part of a staff development program for the schools' teachers. The program developed their ability to analyze tests, revise objectives based on test results, develop course and lesson plans, and select and use appropriate instructional materials. In addition, DPI, with the assistance of RBS, sponsored workshops for the schools' staff to help them understand and address individual student differences (e.g., learning styles) and develop more effective group process skills. There were also workshops which helped different subject matter teachers use alternative instructional materials and systems. For example, the vocational teachers were trained to use the individualized instruction system developed by the staff at Hodgeson Vocational and Technical School.

Finally, school staffs addressed the need for an instructional planning and information system which would meet the requirements of federal special education law and which would document student progress for parents and for schools which students might attend, after completing their term at the corrections facilities. To these ends, the staffs designed an individualized educational plan (IEP) form, prepared IEPs for all students, and then used them to structure the education program they provided.

Design a Structure for Ongoing School Improvement

As the school staffs successfully instituted significant change in their curriculum, instructional planning processes, and classroom practices, SIA and RBS staff asked the schools' principal to consider ways the faculties could be organized for ongoing improvement. The decision was made to establish a school improvement coordinating council, which would identify developing school problems, obtain suggestions and ideas from all staff, and design and implement activities to resolve those problems. The council was established

during the summer of 1984, and it organized itself into three committees: management, curriculum, and staff development. SIA and RBS staff served as advisors to the council, during the remainder of 1984 and early 1985.

Evaluation Services

In addition to providing planning and implementation assistance with all aspects of the project, RBS provided a number of evaluation services as a result of a contract with SIA. RBS analyzed the results of a battery of I.Q. and basic skills achievement tests which had been administered to the schools' students, in order to inform both curriculum development and individualized educational planning activities. Subsequently, RBS developed and helped administer a test designed to assess students' achievement of the objectives of the Individualized Learning for Adults programs and those on the Delaware list of minimum competencies. RBS also evaluated specific training events. Finally, it prepared interim reports which were consolidated into one progress report and, in the fall of 1985, prepared a final report describing project accomplishments and making recommendations for future improvements.

Outcomes

As a result of this cooperative project involving DPI, SIA, and RBS staff, Delaware's juvenile corrections facilities made a number of significant changes in management, program, and practice. Specifically, educational goals and objectives were established, a framework for a comprehensive curriculum which would address the needs of individual students was developed, and an individualized educational planning process and a system for documenting student progress was instituted. In addition, a coordinating council was established as a mechanism for ensuring ongoing school improvement. Through a series of staff development activities, the schools' faculties acquired

knowledge and skills which were required for the above tasks as well as ones which enabled them to work more effectively with students. Finally, these improvements within the schools dramatized for state educational and corrections leadership major structural issues associated with the rehabilitation of delinquent youth which they are now beginning to address.

6. Improve the Quality of Education Provided by Urban Schools

Governor Kean's state-of-the-state message to the New Jersey legislature, in January 1984, enunciated a clear educational priority: "Urban education deserves our attention. And, it will get it." The focal point for the Governor's campaign to improve inner city schools became the state department's Urban Initiative, launched in March 1984 after a full year of planning. The initiative has now been underway for eighteen months. Expenditures related to the initiative have exceeded 12 million dollars, most of the 56 urban districts in New Jersey have been involved in some aspect of the initiative, and well over 100,000 students have participated in new programs offered as a result of the initiative.

This case describes the work of the New Jersey Department of Education and RBS' role* in supporting the Department as it planned, developed, and began to implement the Urban Initiative.

---

*The Urban Initiative involved staff from all RBS projects. The Director of the Urban Development component served on the Urban Education Advisory Committee and was responsible for the 1983 survey. The New Jersey State Coordinator provided planning assistance. The New Jersey Dissemination Specialist contributed to the Urban Education Seminar, developed the research digest and was responsible for the Urban Sourcebook. The actual preparation of sourcebook materials involved four other Exchange staff. Field studies staff conducted a field agent training program. Basic skills staff contributed to the seminar and follow-up training for urban districts interested in Achievement Directed Leadership. Evaluation staff provided technical assistance to the urban initiative.

## Planning the Initiative

Upon taking office in the summer of 1982, the Commissioner of Education established an Urban Education Advisory Committee to help him consider urban education issues. He asked RBS staff to serve on the committee. At its meetings in January and March 1983, the Committee's members presented a variety of ideas about how the state department could help urban districts and schools improve their performance. One central recommendation was for the department to use the results of educational research to foster the design and implementation of urban school improvement programs. The committee also encouraged the Department to survey the New Jersey urban superintendents to have them identify the critical issues.

During the spring of 1983, RBS conducted the survey of urban superintendents. That survey identified the full range of issues which the state could address--for example, student attendance, disruptive student behavior, basic skills achievement, and employment of urban youth.

To test interest in research-based urban school improvement programs, the Department sponsored, in May of 1983, a two-day Urban Education Seminar. The seminar showcased four urban school improvement programs which were targeted at improving basic skills performance: (1) Achievement Directed Leadership, developed by RBS and implemented by the New Brunswick (NJ) Public School District; (2) School Improvement Project (SIP), developed by the New York City Public Schools and based on the research of Ronald Edmonds; (3) St. Louis Public School Project, based on the research and development work of Rufus Young, one of the school district's associate superintendents; and (4) Effective Urban School Practices, developed by Lawrence Lezotte of the Center for School Improvement at Michigan State University.

RBS staff helped the Department plan and deliver the seminar. In addition to helping it identify effective urban school improvement programs and develop the seminar's agenda, RBS staff prepared a digest of the effective schools research, Implementing the Effective Schools Research, which was mailed to each participant prior to the meeting.

The success of the seminar encouraged the Department to plan a major statewide urban school improvement initiative. The Commissioner assigned his Assistant Commissioner for Educational Programs to lead the development effort. Over the next six months, the Assistant Commissioner and his staff, working directly with the Commissioner, developed the plan. RBS, throughout this period, reviewed draft materials for the plan and provided suggestions for improving them.

The project, entitled An Urban Initiative, was formally launched by the governor at the March 1984 meeting of the state board of education. The initiative was divided into two related components. The first component, Operation School Renewal, called for intensive state assistance to three pilot districts that agreed to mount major improvement efforts focused on five objectives: improve student attendance; reduce disruptive student behavior; improve student achievement in reading, writing and mathematics; expand employment opportunities for students; and increase the effectiveness of school principals. The second component called for the Department to work collaboratively with selected urban districts in one or more of ten problem areas: school attendance, disruptive youth, basic skills, youth employment, drug/alcohol abuse, special education, youth dropout, computer instruction, compensatory/bilingual education, and writing instruction. In addition, pertinent information related to those ten areas was to be shared in an information network involving all 56 urban districts in the state.

The Assistant Commissioner credits RBS for several important elements of the plan: the plan's focus on clear objectives for which state and local educators could be held accountable; the commitment to a long-term, multi-year effort; the design of the initiative as a collaboration of the state and districts; and the inclusion of a strong evaluation/assessment component, conducted by an external source. (Rutgers University became the initiative's evaluator.)

Developing the Initiative

Soon after the release of the plan, the Department began the developmental work needed for successful implementation of the initiative. Most of their attention at the outset was focused on Operation School Renewal. An immediate priority was the design and implementation of a process for selecting the three urban districts to participate in the renewal program.

NJDE staff designing the selection process had to consider a number of political and technical issues. While most school districts in the state welcomed the special attention and extra resources that could be gained through participation in the initiative, they also feared the stigma of being labelled "high-need" districts. Also, the process had to be impartial, free of political interference, and sensitive to differences in district size. The Department decided that the best way to deal with these issues was to appoint a committee of external experts (both educators and non-educators) to help with the design and conduct of the selection process.

RBS staff was asked by the Commissioner to serve on the site selection committee. The committee determined the criteria for rating proposals, read and discussed all proposals, and conducted site visits to the six districts

under final consideration. In June 1984, the Commissioner accepted the committee's recommendations that Trenton, West Orange, and Neptune should be the three districts selected for Operation School Renewal.

In addition to selecting sites for Operation School Renewal, the Department's plan called for each of the selected districts to generate a three-year improvement plan. To help the Department clarify its interest, RBS developed a paper entitled "Planning for the Implementation of Operation School Renewal." This paper provided much of the background and rationale for the Department's guidelines for the development of the three-year action plans. Those guidelines requested plans not only from the districts but also from each school in each district. They also suggested the creation of "renewal teams" in each school and district to develop the plans and oversee their implementation.

Implementing the Initiative

During the summer and fall of 1984, districts worked on their initial three-year plans. They were then submitted to the Department and approved in November 1984.

As work began at the district and school levels, the Department began the design of support structures and activities. The Department assigned to its three Regional Curriculum Service Units (RCSUs) responsibility for organizing training programs useful to the participating districts and schools. In addition, the Department conducted a series of institutes for the principals of the 40 participating schools. In support of these activities, RBS conducted a field agent training program for state and RCSU staff, and also contributed to a series of workshops sponsored by the Department for district staff on improving student writing performance.

In the fall of 1984, the Department asked RBS to develop materials which would provide urban districts and schools with information about programs which effectively address one or more of the objectives of the Urban Initiative. In response, RBS developed The Urban Initiative Sourcebook: A Discussion of the Literature and a Directory of Practices and Programs. The sourcebook was addressed specifically to administrators and teachers in New Jersey's urban districts. The first section reviews the research on effective schools and classrooms, and discusses the skills needed by the principal in the areas of instructional leadership, administrative management, and school improvement. The second section presents a directory of exemplary practices and programs for each of the content areas. The third section provides guidance to district staff in the management of school improvement. It synthesizes topics which research suggests need to be considered in any effort to bring about systematic change and improvement in schools, including understanding the change literature, planning implementation, providing leadership for school improvement, selecting implementation strategies, and designing and conducting staff development efforts. The sourcebook has been disseminated to all 56 urban districts in the state, and the Department and RBS are currently planning a training program to help district and school staffs use it in updating their improvement plans.

## Assessing the Initiative

In May 1985, the Department organized a retreat to assess the initiative and to plan new directions. Every phase of the initiative was examined during the retreat (e.g., business and industry cooperation, higher education involvement, the use of research outcomes, the role of the RCSUs, and the results of evaluation studies). RBS staff served as chairperson and facilitator for the retreat, focusing the discussion, clarifying issues, and

summarizing outcomes of each session. Other RBS staff gave substantive presentations on the use of research outcomes and on strategies for conflict resolution. The results of the retreat were summarized in an end-of-the-year report issued in August 1985.

In the spring of 1985, Department staff visited all forty schools in the three selected districts to review the progress made in implementing their plans, discuss with teachers and administrators their problems/concerns, and plan for additional assistance and resources.

Outcomes

New Jersey's Urban Initiative has now been underway for eighteen months. To date, its primary outcomes have been related to state and local planning, the development of supporting materials and structures, and the initiation of local improvement plans. Specifically, the Department has established the improvement of urban education as a top priority, established goals for the initiative, described a two-component strategy for achieving those goals, and obtained funding for selected aspects of the plan. The three urban districts selected for Operation School Renewal have developed improvement plans at both district and school levels, and have begun to implement them. In support of their implementation activities, the Department has developed information resources and is providing a series of training and technical assistance services. The work of the next several years will tell whether these efforts will result in qualitative change in school and classrooms practices which, in turn, will improve student attendance, behavior, and achievement.

7. Improve the Effectiveness of Local Chapter 1 Programs

Delaware, Maryland, New Jersey, Pennsylvania, the District of Columbia, Virginia, and West Virginia, with the support of Research for Better Schools,

the Appalachia Educational Laboratory, and the Region I Technical Assistance Center (TAC), undertook a federally-supported one-year project to develop and field test a Chapter 1 program improvement process. The project, known as MAGIC 1, achieved its development objectives and also trained more than 140 state and local Chapter 1 staff to implement the process, conducted program visits to 68 school districts, provided those districts with suggestions on how to improve their programs, developed a cadre of 18 team trainers, provided an orientation to the process to over 250 Chapter 1 staff from across the country, and initiated follow-up activities in most of the participating states. Throughout the project, RBS served as chief designer, product developer, and trainer.*

This case describes the Magic 1 project in terms of an eight-step development process: initiation, pre-award design, development, training, field test, revision, transfer, adaptation, and extension.

## Initiation

As a result of negotiations between NIE and federal Chapter 1 staff, the regional exchanges were asked in the fall of 1981 to organize and conduct seminars for state and local Chapter 1 staff on the topics of effective teaching, staff development, and technical assistance. Due to its location and interest, RBS served as the host for the East Coast seminar, which was held in Philadelphia in January 1982. That seminar stimulated informal discussions among Chapter 1 state leaders and the RBS Exchange director about

*Five Exchange staff worked together on this activity. Three focused their energies on development tasks, while two focused their energies on training and implementation tasks.

ways they could collaborate. Coincident with these discussions, the Secretary of Education announced, in the fall of 1982, his initiative to encourage state Chapter 1 staff to focus energy and resources on program improvement and his decision to allocate discretionary funds for this initiative. In response, the state Chapter 1 directors of Delaware, Maryland, Pennsylvania, Virginia, West Virginia, and the District of Columbia, and, at their invitation, staff from AEL, RBS, and the Region I Technical Assistance Center met in Harpers Ferry in May 1983 to explore the possibility of a project which would meet both the Secretary's intent and their individual interests. Their deliberations resulted in a draft project plan with two primary objectives: (1) to develop materials and instruments which would help local Chapter 1 staff identify strengths and weaknesses in their programs, and (2) to field test those materials and instruments in a significant number of across-state program visits conducted by trained Chapter 1 staff. The group appointed a writing team to prepare a detailed project plan and develop a proposal for federal funds. The writing team, which included RBS staff, prepared a one-year plan. It projected an expenditure of over $300,000 of inkind staff time and resources, and it requested $80,000 in federal funds to help cover the costs of the planning meetings, the training of Chapter 1 visiting teams, and the across-state program visits.

Preaward Design

Gambling that the U.S. Department would fund the proposal, RBS staff initiated work on a number of design tasks during the summer of 1983. It developed a framework of 13 factors which research suggested may affect Chapter 1 student achievement. The framework reflected a backward mapping logic, citing first those student-related factors which could be good

predictors of year-end achievement; then, classroom-related factors which could be influenced by the teacher; then, program, school, and district related factors which could influence what teachers do. In addition, RBS staff prepared a summary of the research they had used to develop the framework, a list of the methods Chapter 1 staff could use to collect information about the extent each factor was present for a specific group of Chapter 1 students, and a guide describing a process for organizing and conducting program visits. With the announcement in late September 1983 of the award of federal funds, RBS mailed copies of those materials to the participating states and support agencies.

Development

The development period began with a two-day workshop for project leaders. The project leaders systematically worked through the proposed framework of factors, making suggestions for revisions; selected what they believed would be the most feasible data collection methods from the list of possibilities; and critiqued the proposed process steps and the format of the guide describing those steps. They decided to pilot the process in two districts before they initiated the field test. To allow for the pilot, they scheduled the training of Chapter 1 visiting teams for December 1983. They also agreed on how they would select and organize the program visiting teams, and they designated AEL staff to facilitate the planning of the team training.

Based on the leaders' suggestions, RBS staff revised the framework of factors and the guide. They also developed the instruments. These tasks were completed in the three weeks between the workshop and the pilot test. RBS staff participated in both pilots, orienting the teams which would try out the

process and instruments, and observing their interviews, classroom observations, and exit conferences. The pilot test suggested a number of modest revisions. These were reviewed by project leaders at a November planning meeting. RBS staff made the revisions and provided the states with camera-ready copy of the materials to be used in the team training.

## Team Training

The training program was conducted in mid-December 1983, with 120 local and 20 state Chapter 1 staff participating. It began with orientations to the project and process, and an introduction to the factors. It included sessions on conducting interviews, observing classrooms, summarizing information, and conducting an exit conference. It culminated with team planning of their across-state visits.

All project leaders assumed responsibility for one or more training sessions. RBS staff contributed to three sessions. They introduced the program improvement process and the factors, assisted with the sessions on conducting interviews, and facilitated state meetings at which personal concerns were addressed.

## Field Test

Between February and May 1984, the teams made 68 across-state program visits. RBS staff observed three team visits (those to Harford County, Maryland; Marple-Newtown, Pennsylvania; and Washington, D.C.). RBS staff served as substitute team members on visits to Brandywine, Delaware; and Philippe, West Virginia.

To obtain information from team members, RBS staff prepared and distributed feedback forms on the process, guide, and instruments; and on the impact

of the program visits. RBS analyzed the information received from 62 team members, prepared a summary report, and presented the findings and their possible implications at a June 1984 meeting of the project leaders.

In a complementary effort, staff from the Pennsylvania and West Virginia Chapter 1 units and from the TAC undertook an analysis of completed instruments and school reports. That analysis suggested items and factors which most discriminated between high and low performing Chapter 1 programs.

Revision

RBS was assigned the tasks of revising the project's products and developing a resourcebook for team trainers. To check their perceptions and revision plans, RBS staff involved a small ad hoc group of team leaders to review both recommended changes and draft revisions. RBS staff also had the project leaders review the revisions at their August 1984 meeting. The results of this effort was a simplified framework of factors (11 instead of 13 factors) and clarification of some of the factor definitions; some modest additions to the guide; a new set of interview forms (organized by factor); and a resourcebook for team trainers which provided lesson plans for ten objectives, scripts for presenters, worksheets, directions for team role plays, and a videotape for teaching the coding of student behavior.

Transfer

The project leaders decided to undertake two major events to develop the capability of others to use the project's products to implement the Chapter 1 program improvement process. First, at the end of September 1984, with RBS staff serving as trainers, 18 local Chapter 1 staff who served on the visiting teams were prepared to be trainers. Second, in May 1985, project leaders and RBS staff conducted a presession at the International Reading Association

convention for over 300 participants from state and local education agencies across the country. The participants received complete sets of the project's products and an orientation in their use.

## Adaptation and Extension

The six states participating in the project have each made their own use of project results. Delaware, Maryland, Virginia, and the District of Columbia have undertaken dissemination, staff development, and monitoring activities which reflect the work of the project. West Virginia has made substantial revisions in its monitoring process, which now focuses on program improvement and involves both state and local Chapter 1 staff on the monitoring teams. Pennsylvania has asked RBS to help adapt the process and products to Pennsylvania's needs. To date, the process and guide have been revised, 23 local and 4 state Chapter 1 staff have been trained, and the revised process is being implemented in six low-performing school districts.

## Outcomes

RBS' contributions to the MAGIC 1 project increased the awareness of many persons associated with Chapter 1 of the factors which research suggests may influence Chapter 1 students' basic skills achievement. These persons included state Chapter 1 leaders from the six project states as well as those attending the IRA presession. They also included the staff of the 68 districts involved in the program visits as well as the staff in those districts now involved in state adaptations. In addition, RBS helped state and local staff develop the interview, observation, and analysis skills needed to implement the program improvement process.

Districts which have participated in the program improvement process have informally reported to state Chapter 1 leaders that they have made a variety

of changes as a consequence of the process. These have included: increased communication and collaboration between regular and Chapter 1 staff, changes in scope and sequence of the basic skills curriculum, changes in instructional materials being used, increased attention to test results and their use in instructional planning, and changes in how Chapter 1 teachers are observed and supervised. Several states are developing plans to explore the effects of these changes in practice on Chapter 1 students' achievement scores.

### 8. Increase Educator's Awareness and Understanding of Research Related to the Teaching of the Basic Skills and Science

The Research and Development Exchange collaborated in the development and dissemination of a series of publication's which summarized current research related to teaching the basis skills and science. RBS actively participated in the collaboration. As a result, educators in its region became more aware of current research related to the teaching of oral and written communication skills and science, and were able to participate in training events aimed at helping them apply that knowledge.

This case describes RBS' activities in support of the development and dissemination of three publications: Research Within Reach: Oral and Written Communication, Research within Reach: Science Education, and Research Within Reach: Secondary School Reading.

#### Research and Development Interpretation Service's Developmental Process

The Research and Development Interpretation Service (RDIS) was one of the central support projects funded as part of the original R&D Exchange. Its task was to create a series of publications that would communicate to practitioners research-based findings related to several of the basic skills, and to work with the regional exchanges in the dissemination of those publications.

RDIS devised a multi-step process to ensure that the needs of classroom teachers were addressed in the publications. The process involved:

- soliciting content questions from teachers via phone interviews, questionnaires, and/or workshops
- presenting those questions to an advisory panel of content experts who categorize and prioritize the questions and determine if research-based answers could be prepared
- reviewing the R&D literature to develop the knowledge base needed to respond to the questions, developing an annotated bibliography, and creating portfolios of related support materials
- preparing draft responses to question sets (interpretive reports) which include a review of the relevant research, a discussion of classroom implications, and recommendations to teachers for classroom implementation of the research
- revising the initial draft based on reviewers' comments (reviewers include the advisory panel and also involved school, university, state, intermediate service agency, and regional exchange staff). printing copies, and disseminating the reports through workshops conducted by the regional exchanges, state, intermediate service agency, and district staff, and through professional association publications.

This process has evolved over the past eight years. The first three documents developed (Research Within Reach: Elementary Reading (1978), Research Within Reach: Elementary Mathematic (1980), and Research Within Reach: Secondary Mathematics (1982)) were prepared primarily by RDIS staff. In late 1979, RDIS and regional exchange staff decided that a strategy was needed to create both broader ownership and a larger market for the publications. Accordingly, agreement was reached to involve regional exchange staff and their clients more directly in the development process. As a result, RDIS asked RBS and the other exchanges to make specific contributions to the development and dissemination of its three most recent publications.

Research Within Reach: Oral and Written Communication

To support the development of the oral and written communication document, RBS staff* identified state, local, and higher education staff in the four-state region with expertise/interest in oral and written communication. In 1980, these staff were invited to RBS for one day, during which the participants generated questions pertinent to the content area, and sorted and prioritized them. RBS staff then forwarded the questions to RDIS staff, and subsequently participated in RDIS advisory committee meetings. When the first draft of the document became available in early 1981, the educators who had generated the initial questions were invited back to RBS to review and critique that draft. Their suggestions and concerns were communicated back to RDIS, where they were taken into account as the publication was revised. The second meeting also provided an opportunity for sharing and discussing a number of exemplary oral and written communication programs in the region.

RBS staff worked collaboratively with state and local educators to design activities which would increase awareness and use of the document, and application of its content in practice. Specifically, RBS staff:

- assisted during 1980-81 staff from Maryland and Delaware state education agencies, from a district language arts division, and from a state college with the development, testing, revision, and dissemination of a K-12 program in oral communication skills, which incorporated content from RDIS' oral and written communication product
- conducted a workshop, in collaboration with RDIS staff, on research in oral and written communication for participants at the 1982 East Coast Title I Basic Skills workshop, hosted by the NETWORK

*An Exchange staff member was assigned the responsibility to work with RDIS on the development of each publication. All state-related Exchange staff helped identify the educators in their states who would contribute to the development and dissemination activities. They also participated in regional meetings and frequently supported the planning and implementation of follow-up training and dissemination activities.

- distributed 110 copies of the RDIS product to selected educators in the region

- collaborated with the New Jersey Commissioner of Education and RDIS staff in 1984 to plan, develop, and implement three two-day regional workshops for New Jersey district staff on improving writing instruction and assessment. Materials were drawn from the RDIS product and were included in an information packet for the workshop participants

- planned with NJDE staff in 1984 an awareness session for NJDE and district staff responsible for improving writing instruction K-12, and assisted NJDE staff with the development of a writing resource file for use by Regional Curriculum Service Unit (RCSU) staff. Both activities used the RDIS product. In addition, NJDE obtained the galleys of the oral and written publication, printed 300 copies, and distributed them to New Jersey educators.

In addition, RBS staff participated in several planning meetings conducted by RDIS staff in 1984-85. The purpose of these meetings was to develop a series of three-day turnkey training workshops to enable educators to use the RDIS publication in inservice programs. RBS staff assisted with the design and implementation of the workshops, and recruited ten educators (representing state, intermediate, and local educators) from the region as participants. In return for having their training expenses covered to attend workshops in Ohio and Washington, D.C., the participants agreed to conduct one or more oral and written communication workshops for their respective client groups.

Research Within Reach: Science Education

In February 1983, RBS staff formed an ad hoc science committee to assist RDIS staff develop a Research Within Reach document on science education K-12. The committee was comprised of science educators from state, local, and higher education agencies and from the National Science Foundation. They identified key issues and collected and organized questions from teachers teaching science K-12 in schools in the region. RBS staff forwarded those questions to RDIS. From mid-1983 through mid-1984, RBS staff participated in RDIS' science

consultant panel meetings to provide feedback from the committee and to review draft materials. In September 1984, RBS and the committee met to consider the first complete draft of the document; a summary of the recommendations resulting from that discussion was forwarded to RDIS. In November 1984, RBS staff reviewed the final draft of the document.

Planning for the dissemination of the science education product began in late 1984. RBS participated in an RDIS-sponsored meeting at which alternative dissemination strategies, including turnkey training workshops, were explored. RBS subsequently convened another meeting of regional science educators to discuss preliminary dissemination plans and participation in proposed RDIS turnkey training events.

In late 1984 and early 1985, RBS collaborated with RDIS and NEREX staff on the development and conduct of a science and mathematics turnkey training workshop in Boston. RBS successfully recruited several science educators from state, local, and higher education agencies to participate in the workshop and to conduct one or more follow-up training activities for their respective client groups. RBS staff served as workshop facilitators and helped participants develop and refine specific follow-up training activity plans.

Throughout the remainder of 1985, RBS staff participated in a number of dissemination activities related to the science education product. Specifically, RBS staff:

- planned and conducted with PDE, Bucks County IU, and Schuylkill County IU science staff a workshop at PDE's annual Shippensburg Curriculum Conference. The workshop, which drew heavily from the RDIS product, was attended by 23 science supervisors from Pennsylvania school districts. Participants developed dissemination and/or application plans as part of the workshop activities

- assisted New Jersey science educators, representing state, local, and higher education staff, to design and conduct summer institutes for teachers and administrators using RDIS science and mathematics products. Over 300 educators attended the institutes at Edison and

Stockton. Included on the agendas of these institutes were such topics as: major purposes and outcomes of science education, science in relation to other disciplines, successful science and mathematic programs, effective instructional strategies, classroom factors affecting student attitudes, and the role of computers in science courses

- conducted two meetings with Delaware state, local, and higher education staff to inform them of the RDIS materials and discuss ways of using the materials in inservice programs. Subsequently, RBS staff assisted state staff with the development of a "Did-You-Know" publication designed to inform Delaware science teachers of RDIS' findings. RBS staff also reviewed University of Delaware staff's plans to incorporate RDIS content into the science education methods curricula

- sponsored two meetings at RBS for educators from New Jersey, Delaware, Pennsylvania, and Washington, D.C. universities, museums, foundations, and zoos with interests in improving science education. These participants briefed each other on current activities, learned about the work of RDIS, and explored ideas for using and disseminating the science product to other educators in the region

- distributed 450 copies of Research Within Reach: Science Education to selected science educators in the region.

Research Within Reach: Secondary School Reading

To assist with the development of the secondary school reading document, RBS staff used the occasion of several reading conferences between January and May 1985 to obtain practitioners' questions. These conferences included: the Literature and Literacy Conference (Philadelphia), the New Jersey Reading Association Conference (New Brunswick), the national meeting of the International Reading Association (New Orleans), and a local chapter meeting of the International Reading Association (Newark, DE). At each of these meetings, RBS staff conducted sessions in which the RDIS process was explained and practitioners' questions were elicited. RBS staff presented these questions to RDIS staff for consideration in the development of the product. RBS staff also participated in a RDIS-sponsored meeting in Atlanta, in September 1985, at which the first draft of the document was reviewed and dissemination activities were discussed.

Upon its publication in November 1985, RBS staff plan to disseminate this product through established state channels and through the states' reading associations.

Outcomes

As a result of RBS' development and dissemination activities in support of RDIS' Research Within Reach documents, educators from state, local, and higher education staffs have been made aware of the latest research on oral and written communication, science, and mathematics. They have had the opportunity to contribute their knowledge to the development of these documents, and they have received, through RBS, turnkey training to enable them to assist other educators to effectively use the RDIS products. They have, in turn, conducted training activities which increased the understanding of other educators in the region of the contents of the RDIS publications and of ways of applying that content in their basic skills and science programs.

## REFLECTIONS ON THE EXCHANGE EXPERIENCE

RBS has completed its eighth year of contributing to state educational improvement activities. Its view of states and their role in educational improvement and its view of itself and how it can best contribute to state improvement efforts have evolved steadily over those years. This section summarizes RBS' current perspective on these matters. It is organized into three parts: perspectives on the states and educational improvement, perspectives on RBS and its services to states, and perspectives on conditions affecting the impact of states' and RBS' supporting activities.

### Perspectives on States and Educational Improvement

RBS' current perspectives on the states and their contributions to educational improvements can be summarized under four headings: state educational improvement activities, state processes related to educational improvement, common substantive themes of state educational improvement activities, and appreciation of differences among the states.

#### State Educational Improvement Activities

Over the last eight years, RBS has contributed to a wide range of state-initiated educational improvement efforts. The cases, drawn from the last three years' efforts, illustrate that range. Though each state improvement effort has its own unique combination of activities, RBS has come to see those activities as falling into three broad types.

First, state governments can establish new expectations regarding student learning outcomes and local educational practices. For example, they can specify skills students should master; require students to pass a test measuring those skills; require students to take and pass certain types of courses;

develop guidelines regarding course content; advocate certain planning, management, and instructional practices; and recognize teachers, schools, and programs which they believe are exemplary. These expectations can be embodied in law, state board of education mandates, departmental guidelines, state tests, and various kinds of state recognition programs. They can be articulated by governors, chief state school officers, state board members, and other state leaders.

Second, state governments can undertake a variety of activities such as the following to encourage local districts, schools, and staff to fulfill the intent of a new expectation.

- Prepare and disseminate information about the new expectations and how to meet them. Examples of this activity are state-sponsored television messages on the importance of parent involvement, and state-developed booklets about the competencies students should be able to demonstrate.

- Provide indepth staff development programs. Examples of this activity are academy programs on such topics as teacher supervision/ evaluation and models of effective teaching.

- Provide personalized technical assistance. Examples of this activity range from establishing a hotline to supporting on-site staff to providing technical assistance with respect to a particular improvement effort.

- Provide fiscal incentives. Examples of this activity are small grants to help districts carry out instructional improvement projects and the funding of new remedial programs.

- Provide support for local development/demonstration projects. For example, one state is supporting comprehensive urban school improvement projects, a second is supporting local technology projects, while a third is supporting instructional improvement projects.

- Monitor local practices. Examples of this activity range from state staff review of required documentation from local districts to on-site visits to verify district compliance with law and code.

- Threaten sanctions for low or non-performance. Examples of these sanctions are the withholding of a state-approved diploma for a student failing to meet course requirements or to pass a state test, and non-renewal of teaching licenses for teachers not meeting recertification requirements.

Third, state governments can provide general services, such as the following, which are supportive of local school improvement.

- Build and maintain networks of persons and agencies which share common school improvement interests and concerns (e.g., councils of superintendents, assistant superintendents for curriculum and instruction, IU directors). These networks are used to exchange information and experience, to identify potential problems, and to develop shared goals.

- Sponsor regular conferences and meetings to facilitate exchange of information and encourage the exploration of issues.

- Provide information services which facilitate the exchange of knowledge and experience.

RBS views many of the current state educational improvement efforts as primarily involving activities related to establishing new expectations (type 1) and to encouraging local educators to meet those expectations (type 2). RBS has found this typology useful for analyzing the character and scope of a given state effort. Such an analysis has helped RBS staff predict the potential impact of an effort (both the number of activities and the quality with which each activity is carried out appears to be related to impact). It has also enabled them to identify activities to which it might contribute and activities which it might encourage state leaders to initiate.

State Processes Related to Educational Improvement

Complementing RBS' view of state educational improvement activities is its view of the processes state leaders use to determine what educational improvement activities they will undertake. From RBS' perspective, these processes occur under two quite different circumstances. The first occurs within the context of existing state regulations, programs, and appropriations. Under those circumstances, state education agency leaders are the primary decision makers. They have the authority and resources, for example,

to update testing programs, revise guidelines for course content, design and implement staff development programs, or revise monitoring activities. In general, they undertake these activities in cooperation with representatives from associations, intermediate service agencies, and school districts. They frequently obtain counsel from other state-level decision makers (e.g., the governor, members of the state board of education, legislators). They also tap the expertise of institutions of higher education and organizations like RBS.

The second circumstance, when school improvement activities require new legislation, mandates, and appropriations, is quite different. The processes required for these purposes vary with each state and each issue; however, they can be conceptualized in terms of four identifiable phases. First, there is an exploration phase (Phase I) during which concerns are raised, alternative courses of action are considered, and information which might inform the process is gathered. Sometimes this exploration is personal, for example, when a new chief state school officer visits a number of schools and local education leaders across a state. Sometimes this exploration is public, for example, when legislative hearings are held to gather facts and opinions on an issue, or a governor appoints a task force to identify areas needing state leadership and action. Irrespective of how an issue is explored, the first phase culminates with the formulation of specific proposals for new state laws and regulations--proposals which suggest new expectations for districts, schools, staff, and/or students. Over the past few years, the state leaders who have most directed and controlled this phase of the political process have been the chief state school officers and the governors.

The second phase (Phase II) is the period of discussion and debate regarding a specific proposal. Depending on the content and nature of the

proposal, that discussion and debate may focus on the legislature, the state board, and/or the state education agency. Active in this process are the state-level interest groups (e.g., the associations of school boards, administrators, principals, teachers, parents, taxpayers). This phase comes to a close when formal action has been taken: a new law is passed, a new regulation is approved, or a new guideline is promulgated.

With a new expectation established, responsibility shifts to the state education agency (SEA). It is this agency which must help local districts and schools meet the intent of the new law, regulation, or guideline. Conceptually, it is useful to distinguish between SEA planning and implementation activities, though frequently they run parallel, or just flow into each other. The planning phase (Phase III) incorporates those activities which lead to decisions regarding what the SEA will do, what resources will be allocated, and who will be involved. The implementation phase (Phase IV) is concerned with carrying out those decisions. In these latter two phases, as before, SEA leaders generally involve others--for example, representatives of appropriate associations, intermediate service agencies, school districts, institutions of higher education, and/or R&D organizations like RBS.

Over the past three years (indeed, over the past eight years), RBS has found itself primarily contributing to state educational improvement efforts which have been carried out within the context of existing state regulations, programs, and appropriations (see Appendix A and cases 1, 2, 4, and 5). Yet, RBS has also had an opportunity to contribute to state educational improvement activities which have required new legislative mandates, state board regulations, and/or appropriations. Some of these opportunities were described in three of the cases.

- RBS staff contributed to Delaware's state plan for use of computer technology. That plan resulted in increased appropriations for computer-related activities (case 2).

- RBS staff contributed to Maryland policy makers' exploration of the role of incentives in teacher quality and to Maryland's committee developing new standards for teacher certification (case 3).

- RBS staff contributed to the plan for New Jersey's Urban Initiative which was adopted by the state board and which required additional appropriations (case 6).

Common Substantive Themes of State Educational Improvement Activities

Though each state has crafted its own agenda for educational improvement, RBS sees its four states pursuing common substantive themes. The following four themes have received the most attention over the past few years, and RBS believes they will continue to receive attention in the next several years.

- Improve students' basic skills achievement. All states seek to help local districts and schools improve students' basic skills performance by: (1) clarifying objectives and identifying effective instructional practices in the basic skills (i.e., reading, mathematics, and writing); (2) instituting testing programs to assess students' skills at selected grade levels, and in two states, requiring adequate performance as a prerequisite for high school graduation; and (3) monitoring the use of state and federal resources targeted to helping special needs students acquire the basic skills, and developing programs to help districts improve their use of those resources (e.g., Chapter 1, bilingual programs, some special education programs, and state compensatory education or remedial programs).

- Improve curriculum, instruction, and the use of educational technology. All states are providing leadership in other areas of curriculum and instruction by developing consensus on goals and objectives in each of the content areas; encouraging exchange of information about effective instructional approaches; providing guidelines, training, and other resources; and ensuring adequate assessment of student learning. They also establish course requirements for high school graduation. Over the last few years, the states have: (1) increased graduation requirements in science, mathematics, and other subjects, by increasing the required number of credit hours and by initiating honors programs or advanced levels of graduation certification; (2) revised standards and developed K-12 guidelines for many of the basic content areas; (3) provided training and support for the improvement of content-specific instruction through sponsoring academies and similar initiatives; (4) initiated projects to infuse

higher order thinking skills in the curriculum; and (5) initiated projects which help schools apply microcomputer technology in selected content areas, and, in three states, established microcomputer training centers for teachers.

- Improve the quality of teaching. All states are involved in and have initiated activities aimed at improving the quality of teaching. Some activities provide incentives which encourage good teachers to stay in the profession, and attract high quality college students to enter the profession (e.g., state-supported pay raises, career ladders, merit pay systems, and teacher recognition programs). Some activities are directed at improving the quality of new teachers (e.g., more rigorous standards for entry into preservice programs, new requirements for certification, the improvement of college courses, requirement of a formal induction period, and the creation of alternative routes to enter the profession for liberal arts graduates and adults interested in making a career change). A third set of activities is directed at improving the performance of current teachers and facilitating the termination of ineffective teachers (e.g., inservice programs, or programs aimed at improving teacher supervision and evaluation systems).

- Improve the effectiveness of schools at all levels. All states have considered the results of studies which have sought to identify those characteristics which differentiated high and low performing schools, when the socioeconomic characteristics of their students were held constant (e.g. Brookover, Beady, Flood, Schweitzer, & Weisenbaker, 1979; Edmunds, 1979; Rutter, Maughan, Mortimore, Ouston, & Smith, 1979; Wellisch, McQueen, Cariere, & Duck, 1978). Encouraged by their findings, the states have initiated a number of related activities including Delaware's School Standards and Monitoring Process, Pennsylvania's Long-Range Planning Guidelines, Maryland's Commission on Secondary Schools and local Elementary Excellence projects, and New Jersey's Urban Initiative and pilot School Effectiveness Program.

All of the cases presented are directly related to these themes.

By identifying such common substantive themes, RBS has been able to develop knowledge bases and collect resource materials in anticipation of what it may be asked to contribute to several states' educational improvement efforts.

Appreciation of Differences Among the States

RBS sees its states undertaking similar types of educational improvement activities which involve similar decision-making, planning, and implementation processes, and which are directed towards similar substantive ends. However,

RBS has also come to appreciate the differences among its four states. These differences include the size and complexity of their educational systems, the size of their state education agency and the kind of relationship its leaders have with the local school districts, and the way the states' current agendas for educational improvement have been established. Below is a brief review of each of the states it serves.

- Delaware is a small state with approximately 111,315 elementary and secondary students of which 91,406 are enrolled in public schools. The public school system is organized into 19 districts which operate 167 schools. There are approximately 5,436 teachers employed by those districts.

  The state education agency has 67 staff. Its leadership works closely with the 19 school district superintendents. The state has instituted a comprehensive testing program to monitor student basic skills achievement; it also conducts monitoring visits to each school building every five years. It expects local schools and districts to make improvements based on testing and monitoring results. Its staff also provides an ongoing program of inservice for interested schools and districts.

  In 1983-84, the lieutenant governor (now governor) headed a task force which set forth 75 recommendations for improving education. Currently, selected recommendations are being implemented, for example, graduation requirements, curriculum standards, and standards for certification.

- Maryland has approximately 819,191 elementary and secondary students of which 682,155 are enrolled in public schools. The public school system is organized into one city and 23 county school districts, which operate 1,266 schools. There are approximately 37,437 teachers employed by these districts.

  Maryland has had stable state educational leadership since 1977; its SEA has a staff of 394. It has developed a close working relationship with the 24 district superintendents. Under that leadership, Maryland has identified a set of competencies which students are to achieve before graduation, established a testing program to assess their attainment, and worked with the districts to ensure that all students have the opportunity to acquire the required competencies. In addition, the state has initiated a multi-year program to encourage local use of effective teaching models. It has an ongoing program to strengthen course content. It conducts academies each summer aimed at helping principals to provide more leadership in the area of instruction. It is currently involved in activities aimed at improving the quality of teachers and the effectiveness of high schools.

- New Jersey has approximately 1,336,559 elementary and secondary students of which 1,147,841 are enrolled in public schools. The public school system is organized in 593 districts which operate 2,294 schools. There are approximately 73,262 teachers employed by those districts.

  In the late 1970s and early 1980s, New Jersey's educational improvement activities were driven by a state Supreme Court decision which ordered the legislative and executive branch to define and implement a "thorough and efficient" system of education and to revamp how the state finances education. During that period, the state initiated a minimum basic skills test and a school improvement process known as T&E.

  In 1983, a new governor and chief state school officer extensively reorganized the state education agency, which currently has a staff of approximately 619. They have also instituted a multi-faceted educational improvement program which includes: establishing a more rigorous basic skills testing program, raising high school graduation requirements, planning a program target on the 56 urban districts in the state, increasing its monitoring of schools and districts, and creating an alternative route to becoming a teacher.

- Pennsylvania has approximately 2,132,733 elementary and secondary students of which 1,736,500 are enrolled in public schools. The public school system is organized into 500 school districts which operate 3,600 schools. There are approximately 102,150 teachers employed by those districts.

  Pennsylvania has had three Secretaries of Education since the current governor took office in 1980. Each has been involved in reducing the size of the state education agency, which has lost over one-third of its staff positions and now stands at approximately 667. In the early 1980s, the state undertook two major initiatives. One encouraged districts to institute long-range planning for school improvement at the building level, while the other sought to revamp teacher education.

  In 1983, the governor with his second Secretary of Education set forth an agenda of educational reform entitled "Turning the Tide." It included increased requirements for high school graduation; the institution of a basic skills diagnostic testing program; initiatives to encourage districts to review and revise policies and practices related to attendance, discipline, homework, teacher supervision, and evaluation; an initiative to stimulate business-school partnerships; and continuation of efforts to improve teacher education.

As these descriptions suggest, the four states are dramatically different in size. For every public school student in Delaware, there are approximately 8 in Maryland, 13 in New Jersey, and 21 in Pennsylvania. And the states

mpare similarly in numbers of school buildings and numbers of teachers. With respect to school districts, Delaware and Maryland have organized themselves into a small number of districts, 19 and 24, respectively. This structure allows state and local education leaders to sit around the same table almost monthly to consider issues their educational systems face. In contrast, New Jersey and Pennsylvania have 593 and 500 districts, respectively. These numbers present state educational leaders with complex communication and monitoring problems. To address them, New Jersey has a system of 24 county offices which is designed for these purposes, and, in addition, it has established three Resource Curriculum Service Units to provide technical assistance in support of state priorities. On the other hand, Pennsylvania has a system of 29 intermediate units which are governed by their member districts, but which do help with communication between state and local leadership.

Besides these structural differences, the states differ in the stability of their state educational leadership. Delaware and Maryland have had stable leadership, which has enabled these leaders to identify, plan, and implement long-term educational improvement efforts, and to involve local educational leaders in the process. In contrast, New Jersey and Pennsylvania have experienced significant changes in leadership and in the organization and staffing of their state education agencies. Most recently, they have also experienced their governors playing a dramatically more central role in setting the state's educational improvement agenda. RBS sees these differences as having a significant impact on how long a state maintains an educational improvement effort, on the range of activities it undertakes, on the quality with which those activities are conducted, and, therefore, on the extent to which those efforts affect local educational practice.

## Perspectives on RBS and Its Services

NIE's original guidelines for the R&D Exchange, and a related study (. t Associates' study of NIE's general purpose dissemination projects), define RBS' Exchange from a dissemination perspective--a perspective which was reflected in the description of RBS' approach in Section I of this report. Based on feedback received from state leaders,* RBS has learned that they view the Regional Exchange project from quite a different set of perspectives. On the one hand, they see the RBS Regional Exchange project as a unique resource; on the other, they see its existence to be a judgment on their capability. This part describes both perspectives.

### RBS' Regional Exchange as a Resource

State leaders' view of RBS as a resource is made concrete through the tasks they ask the laboratory to perform. These tasks can be described in both process and content terms.

RBS has been asked to provide the following services to states.

- Information services. RBS staff have collected information pertinent to a specific state leader's task, summarized that information in a form appropriate for that task, and presented the summary in person to the state leader.**
- Planning assistance. RBS staff have helped state leaders design comprehensive school improvement programs as well as more limited state educational improvement initiatives.

---

*RBS supported two studies of its activities. In 1980, Diane Whitney shadowed RBS Exchange staff for three months. Her study described the kinds of activities performed by RBS staff, the dilemmas staff faced in their daily work, and factors influencing what staff did. The study concluded with a list of implications. In 1984, Sheila Rosenblum interviewed state leaders with whom RBS had been working. In a memorandum to staff, she identified issues which she thought the laboratory needed to consider as it planned future state assistance activities. This section draws heavily on the findings of those studies.

**The activity of collecting, organizing, and summarizing information about the results of current educational R&D is a service in its own right, but it is also an activity which supports all other services.

- Implementation-related services. RBS staff have helped state staff with the design and conduct of orientation and staff development programs aimed at helping local educational leaders implement new practices. RBS has also helped state staff with the development of specific resource materials which will support local implementation. Finally, RBS has helped state staff design and provide technical assistance in support of local implementation.

- Evaluation/research services. RBS staff have designed and conducted studies aimed at providing information which will help state leaders plan, implement, and refine state educational improvement programs.

In addition, states see RBS as a "convener," an agency which brings together state staff from across the region to consider research-related topics, developing educational issues, and the effects of current state educational improvement efforts.*

Figure 4 summarizes the kinds and amount of assistance RBS provided with respect to the eight cases. The figure shows that, in most cases, RBS has provided multiple types of services.

In terms of content, RBS has found that 13 domains of current knowledge and practice are most relevant to present state educational improvement efforts. These domains fall into three clusters. The first cluster is made up of those domains which address classroom and school practices which directly affect students.

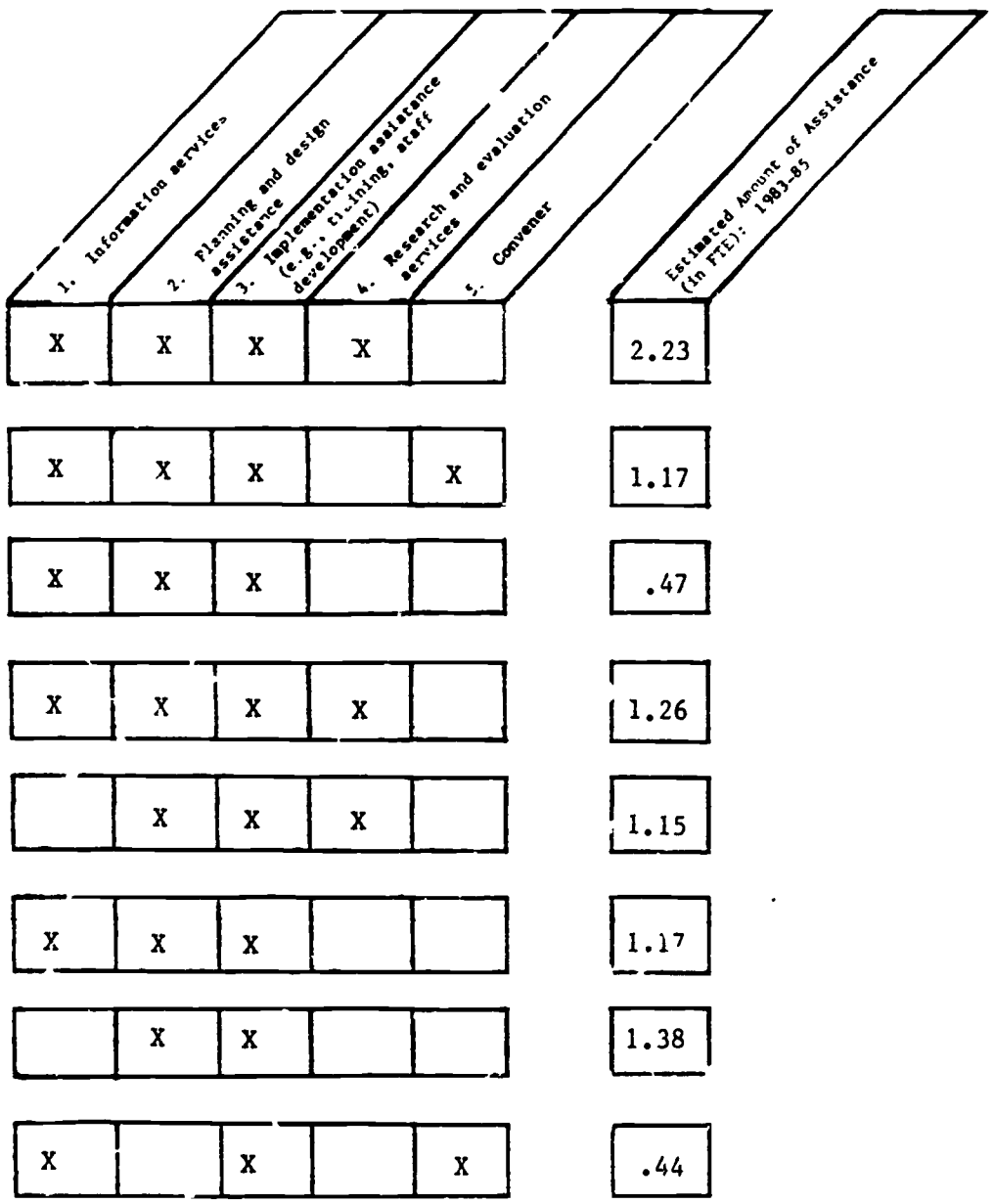
- Literature on effective teaching and effective classrooms--for example, the work of Kounin, Brophy, Good, Stallings, Evertson, and Fisher, among others, who have identified characteristics of effective teaching and effective classrooms; and the development work of the Texas R&D Center, SWRL, RBS, and numerous NDN projects which have sought to design educational practices consistent with that work.

- Literature on strategies for adapting educational programs and instruction for children with special needs--for example, Bamberg's analysis of successful and unsuccessful remediation practices; Jennings , Roueche and Snow's, Fassler's, and Early's writings on the program requirements, training, planning, cross-course integration,

*The 1984 study reported that state staff wanted RBS to increase the number of meetings it sponsored for them.

Figure 4

KINDS AND AMOUNT OF ASSISTANCE PROVIDED BY RBS



testing, and record-keeping aspects of successful remedial programs; the work of Wang and Reynolds on individualized education for failing students; the work of Certo, Voltz, and Madden and Slavin on integrated education for handicapped students; the work of Ben-Zeev, Cummins, Modiano, Valdes, and Wong-Fillmore on students with low English proficiency and on second language learning.

- Literature related to specific content areas--for example, the research cited in Research Within Reach syntheses which the R&D Exchange have collaboratively developed regarding the teaching of reading (Weaver), mathematics (Driscoll), and oral and written communication (Holdzkom).

- Literature on educational technology--for example, software reviews from EPIE Pro/FILES, and MSDE's MIRN project; descriptions of specific applications from NDN and the National Science Foundation; meta-analyses related to the use and effects of microcomputers in instruction from Burns and Bozman, and Kulik, Bangert and Williams; longitudinal studies by ETS (Ragosta) and Merrimack Education Center.

- Literature on effective schools--for example, the work of Brookover, Lezotte, Edmonds, Austin, and Rutter, among others, who have investigated the characteristics of high and low performing schools and have built a case that schools do make a difference.

The second cluster is made up of those domains which are concerned with school policies, processes, and structures which can influence classroom and school practice.

- Literature on teacher evaluation/supervision--for example, the work of Darling-Hammond, Wise, and McGreal on successful teacher evaluation, and the related works of Sergiovanni, Sweeney and Manatt, Bickel and Artz, Goldsberry, and Bridges regarding principals' leadership, clinical supervision, team approaches to supervision, and the realities of supervising the marginal teacher; Grimsley and Bruce; and Squires, Huitt, and Segars on how supervision relates to instructional improvement.

- Literature on adult learning and effective inservice--for example, the work of Andrews, Orlich, Little, and Joyce which summarizes current practice, and the ways in which different inservice strategies result in different outcomes.

- Literature on school and district management--for example, the work of Cummings and Cook (an NDN management program), and of Willower and Fraser, Hannaway and Sproul, and Erickson which examines current practice in educational administration.

- Literature on public/private partnerships in education--for example, McNett's profile of school/business collaboration, Schilit and Lacey's

resource guide and planning manual on exemplary types of school/business partnerships, Jackson's booklet on how to form partnerships, and Chaffee's overview of partnership models.

The third cluster is made up of those domains dealing with strategies and techniques that external agents (including state governments) can use to affect district, school, and classroom practice.

- Literature on organizational development and organizational change--for example, the work of Trist, Handy, English, Ackoff, Aiken, and Hage which examines socio-technical systems, the dynamics of relationships between the individual, the organization, and external pressures, and the interactions among the technological, cultural, and political dimensions of organizations.

- Literature on technical assistance and on the role of external/internal "linkers" in facilitating knowledge use--for example, the work of Moore, Seiber, Louis, Fullan, and Cox which demonstrates the importance of the human agent in helping school and district staff use the results of educational R&D.

- Literature on research and evaluation methodology and practice--for example, the work of Fink and Kosicoff, and the state departments of California and Georgia which presents practitioner-oriented syntheses; and the work of Miles, Yin, Guba, and others which explores effective methodology combining qualitative and quantitative approaches.

- Literature on federal education programs and their effects--for example, SRI's study of the National Diffusion Network, Rand's study of four federal change agent programs, Abt's study of the R&D Utilization Program, The NETWORK's study of dissemination programs, and NTS' study of State Dissemination Capacity Building Projects.

## RBS' Regional Exchange as a Problem

Though state leaders see RBS as a source of process help and content expertise, they also perceive the very existence of the Exchange project as a judgment on their capability. For them, the existence of the project implies that states do not have the capacity to stay abreast of educational R&D, and that even when they do, they do not utilize the results of educational R&D when they develop new educational policies, or design and implement educational improvement programs. Second, for them, the goals of the project

appear to communicate the expectation that states have to have educational improvement efforts. Third, those goals also appear to communicate the expectation that state leaders should not only be open to a federally-funded resource, but should be willing to commit time and energy to planning ways to use that resource productively. Thus, state leaders can exhibit at times both an approach and an avoidance disposition to a regional exchange. This disposition is only somewhat moderated by state-exchange collaborative efforts which are, in their terms, successful.

## Perspectives on Outcomes and on the Conditions Affecting Them

Knott and Wildavsky (1980) proposed seven standards for knowledge utilization: reception, cognition, reference, effort, adoption, implementation, and impact. RBS has used these standards to posit three levels of outcomes for its work with states, and an analogous three levels of outcomes for states' work with school districts and schools. First, RBS has tried to increase state leaders' awareness and understanding of educational R&D which may have implications for the design and implementation tasks in which they are engaged. Second, assuming success in achieving the first outcome, RBS has tried to help state leaders modify or develop policies, guidelines, programs, and resource documents, so that they reflect current R&D findings. Finally, assuming some success with the second outcome, RBS has tried to help state leaders modify such state practices as the assistance they offer schools and districts, the staff development programs they conduct, and the way they monitor school and district performance.

Analogously, states can seek, through their educational improvement efforts, a similar set of outcomes. They can seek to increase school and district staff awareness and understanding of what is known, for example,

about effective teaching, effective classrooms, and effective schools. They can encourage schools and districts to modify or develop policies and plans based on those understandings. And, finally, they can encourage schools and districts to modify current practices in ways which reflect what is known.

Figure 5 summarizes for the eight cases the types of outcomes which each effort has achieved. The actual scope of these achievements were described in each case.

The remainder of this part examines four sets of conditions which RBS believes most affect the kinds of outcomes achieved and the scope of impact of particular state educational improvement efforts. First, there are such conditions as the following, which exist within states.

- Extent to which state leaders make educational improvement a priority of their administration. State leaders (governors, chiefs, SEA middle managers, legislative leaders) differ considerably on the emphasis they place on educational improvement. RBS has been fortunate to work with four states which have a history of providing leadership for educational improvement which goes well beyond the recent spirit of reform.

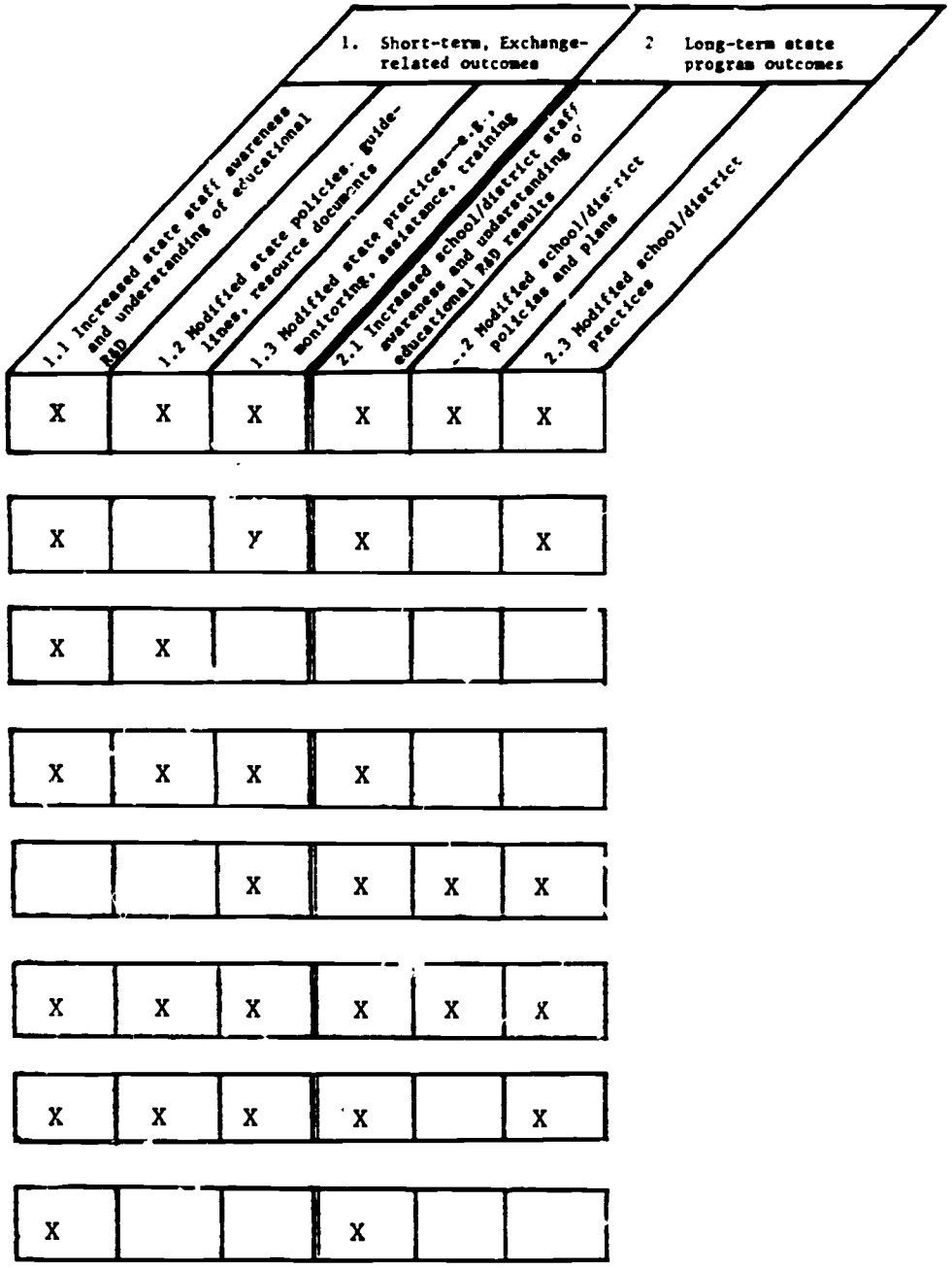
- Extent to which state leaders are able to create the management conditions for an effective improvement effort. State leaders have had varying success in both obtaining and focusing resources and staff needed to initiate significant improvement efforts. They have also had varying success in maintaining efforts for a sufficient length of time to have an impact. The Abt study's general conclusion was that states rarely succeed in creating these conditions, and thus end up conducting essentially "symbolic" activities. RBS' states have experienced these difficulties; however, in contrast to Abt's findings, each have managed to undertake one or more educational improvement efforts which have had notable impact.

- Extent to which there is stable state leadership. A condition which is closely related to the one just described is the stability of state leadership. As noted earlier in this section, RBS works with two states which have had stable leadership and two which have not. It is RBS' experience that a state's ability to initiate and sustain multi-year improvement efforts is affected by the stability of its leaders.

- Extent to which state educational improvement efforts establish clear and defensible standards or expectations for local educators. It is the nature of the political process to favor standards or expectations which either reflect current practice or are sufficiently ambiguous

Figure 5

TYPES OF OUTCOMES



to allow considerable local discretion. RBS' states have, in several instances, developed standards and expectations which have been relatively precise and which, in addition, have been defensible on empirical grounds. Those improvement efforts which have produced such standards and expectations seem to have had significant impact on local practice.

- Extent to which state educational improvement efforts use multiple strategies for encouraging local action to meet expectations. Over the past ten years, there has been considerable growth in the knowledge of educational change and how external agents, like state governments, can support it. Each of RBS' states has used each of the primary strategies for affecting local action; each has also mounted efforts whose scope and diversity of methods were sufficient to affect significant change. Yet, from a regional perspective, the latter are difficult for most states to mount.

- Extent to which states design their educational improvement efforts as collaboratives. There are two general approaches state leaders take to designing their educational improvement efforts. One is a top-down, regulatory-focused approach which emphasizes the authority and bureaucratic standards of the educational system. The other is a more collaborative approach through which states try to develop a shared commitment to a common goal and to provide the leadership, assistance, and incentives which ensure the contributions of all members of the educational community. Any given improvement effort can incorporate both approaches. It is RBS' perspective, however, that state educational improvement efforts which incorporate the collaborative approach are generally more successful at harnessing local commitment and resources. For reasons of structure, tradition, or leadership disposition, some of RBS' states find it easier to include a collaborative approach in their improvement efforts.

- Extent to which states are open to outside resources. Closely related to its disposition to use a collaborative approach is a state's disposition to use outside resources. State leaders vary in the extent to which they use outside resources and seek knowledge, as they design and implement educational improvement efforts. From RBS' perspective, this disposition, and the incentives which sustain it, affect how state leaders use a resource like RBS.

The second set of conditions affecting impact is related to the status of the R&D knowledge base. For some of the educational improvement efforts which states are undertaking, there is a considerable knowledge base (e.g., basic skills improvement, instructional improvement); for other efforts, there is little accumulat knowledge (e.g., policies and programs which will increase

the quantity of qualified teachers in the 1990s). The extent to which there is a knowledge base that speaks to a given state educational improvement effort can significantly influence the extent to which RBS can contribute to that effort.

Third, there are conditions within the laboratory which affect the character of the relationship. These conditions are primarily related to the extent to which appropriate staff, in terms of knowledge and skill, can be assigned at the time and at a level of effort which will be responsive to state interests and needs. As suggested by RBS' organization of the Exchange project, it has used a strategy of having a stable team work with each state, and to supplement each team with staff from other projects. The current arrangement facilitates ongoing needs sensing and negotiations regarding services to given states. It also has the potential of giving state leaders access to the full range of RBS' staff and other resources, though in reality the schedule of work of other projects determines which staff can be assigned to state tasks.

Fourth, there are conditions external to the relationship. The cases illustrate three external influences: agendas established by national leaders (e.g., the National Commission on Excellence in Education, Secretary Bell's Chapter 1 initiative), incentives aimed at stimulating state and local action (e.g., discretionary funds for cooperative Chapter 1 program improvement projects), and resources (e.g., Research Within Reach publications). It has been RBS' experience that such external conditions can activate state and local energies, provide a focus for those energies, and stimulate improvement efforts whose scope, intensity, and duration result in an impact on local practice.

## RECOMMENDATIONS FOR THE FUTURE

This report has described eight of the 31 major state and regional educational improvement activities on which RBS has worked over the past three years. It has also described RBS' view of states and their role in educational improvement, and RBS' views of itself and the services it provides in support of state educational improvement activities. Finally, it has described some of the conditions affecting the impact of state and RBS activities. Given NIE's and RBS' plans to continue providing research and development-based assistance to state leaders, this section considers the implications of RBS' experiences and perspectives for the future assistance effort. This discussion is organized into two parts: implications for federal leaders and implications for laboratory leaders.

### Implications for Federal Leaders

Like state governments, the federal government sets expectations for education-related agencies and undertakes a variety of activities to encourage them to meet those expectations. The federal government has set forth its expectations for regional exchanges in its Requests For Proposals, which have specified the clients, listed appropriate activities, and stated the desired outcomes. The federal government has encouraged regional exchanges to meet those expectations primarily through monitoring activities and related reporting requirements.

Two of the case studies provide specific examples of other ways in which the federal government has provided leadership. In the Chapter 1 program improvement case, the U.S. Secretary of Education made program improvement a priority, provided incentive grants from his discretionary funds, and

encouraged collaborative projects involving state and local Chapter 1 staff and technical assistance projects like the regional exchanges. Though the Secretary's grants were only for one year, they provided a sufficient incentive for six states, two regional exchanges, and the Chapter 1 technical assistance center to undertake the collaborative development of a process which is being adopted and implemented by several of the participating states.

By funding the Research and Development Interpretation Service (RDIS) and by informally encouraging RDIS to involve the regional exchanges in the development of the Research Within Reach publications, the federal government encouraged a cooperative effort which has brought to the attention of educators throughout the nation current research regarding the teaching of reading, oral and written communication skills, mathematics, and science.

These experiences suggest two recommendations for federal leadership.

1. Use a greater variety of strategies to encourage laboratories to meet the expectations which have been established for their state leadership assistance projects.

This report has described the variety of strategies states are using to encourage local districts, schools, and staff to fulfill the expectations set forth in law, regulations, and state leadership's priorities. To date, the federal government has primarily used a monitoring approach to encourage laboratory staffs to attend to its expectations. State example suggests that the federal government could do more. For example, it could foster sharing and discussion of successful projects, it could support follow-up training and technical assistance to help one project replicate another project's successes, and it could provide fiscal incentives for such exchange. Through such activities, the federal government would add a more proactive and positive approach to helping laboratories achieve federal intents for state assistance activities.

2. Provide leadership and incentive funds for multi-state collaborative improvement projects.

The Chapter 1 and RDIS cases illustrate other ways in which federal leadership can be exercised. In the first, the federal government identified a need and provided some incentive dollars for collaborative projects which addressed that need. In the second, the federal government, by funding RDIS supported collaborative dissemination nationwide of selected research findings. In both cases, federal leadership plus modest grants stimulated significant collaborative activity which was funded primarily by state, local, and laboratory resources.

## Implications for Laboratory Leaders

The case studies and related discussion in this report suggest how states can affect educational improvement and how laboratories can support those state activities They also suggest the outcomes state educational improvement activities can achieve and some of the conditions which can affect the nature and scope of the outcomes. Thus, this report provides laboratory leaders with examples of what is possible.

Given this perspective, two recommendations for laboratory leaders can be framed.

1. Use the knowledge and perspectives gained from these case studies in negotiations with state leaders.

The report presents a number of conceptual frameworks for viewing state educational improvement activities. There is a framework of state interactions (see figure 3, page 16), the list of activities states can undertake to help local educators meet new expectation's (see page 64), the statement of outcomes from a knowledge utilization perspective (see figure 5, page 80), and the list of conditions which can influence the outcomes that can be

achieved and the scope of their impact (see pages 79-81). All of these can be used by laboratory leaders as they negotiate with state leaders how the laboratory can best support their educational improvement priorities. They can be used to clarify a state leader's intentions. They can be be used to clarify the nature and scope of the outcomes that are desired. They can be used to suggest general strategies and specific activities which the state could undertake. They can be used to suggest management conditions which state leaders need to create to ensure a productive effort. And, finally, they can be used as criteria against which the potential of different state educational improvement activities can be assessed. RBS has found that its use of these frameworks has affected its negotiations with state leaders in three ways. First, it has become increasingly selective regarding the state priorities it agrees to support. Second, it has encouraged a reduction in assistance activities when the potential impact of a state priority is reduced. Third, it has led to more differential assignments of its resources by both priority and state. RBS believes these outcomes are positive ones and should be encouraged.

2. Continue to support documentation and assessment activities which expand understanding of how states can best affect the quality of local educational practice, and how laboratories can best assist them.

This report reflects understandings which RBS has developed as a result of its documentation activities and of studies it has conducted at the request of state education agencies (e.g., studies related to Maryland's School Improvement Through Instructional Process program), the two studies it sponsored of its own activities, and its participation in the Abt Associates' study of NIE's general purpose dissemination assistance projects. It is clear from this work that researchers, educational leaders, and policy makers are

only beginning to understand how states can best affect the quality of local educational practice.* It is also clear that they are only beginning to understand how laboratories can best assist state leaders.

Therefore, it is recommended that laboratories continue to improve how they document their assistance to state leaders, and that they continue to sponsor third-party assessments of their services to state leaders. It is also recommended that laboratories continue to encourage and support state efforts to document and evaluate their educational improvement activities. Finally, it is recommended that laboratories, given their regional perspective, consider conducting studies which examine from local perspectives the comparative advantage of alternative state educational improvement activities. The knowledge and understanding gained from these activities--particularly, if conducted by laboratories across the country--should help state and laboratory leaders design and conduct more effective educational improvement activities.

*It is RBS' perspective, that current understanding of how states can best affect local education practice is only influencing the design of a small number of their current educational improvement activities.

LIST OF MAJOR PRODUCTS RELATED TO THE EIGHT CASES

1. Encourage Schools to Implement More Effective R&D-based Instructional Processes (Maryland)

Conference Reports:

- Instructional Leadership Conference: Evaluation, Spring 1982
- Instructional Improvement: Conference Proceedings, October 1982
- Instructional Leadership Conference: Local Education Agency, May 4, 1983
- Instructional Leadership Conference: Maryland State Department of Education, May 5, 1983
- School Improvement Through Instructional Process (SITIP) Summer Institute, July 1983
- Instructional Leadership Conference: SITIP, May 1984
- Supervision: Conference Proceedings, October 1984

Evaluation Reports:

- Instructional Improvement in Maryland: A Study of Research in Practice. Executive Summary, October 1982
- Instructional Improvement in Maryland: A Study of Research in Practice, October 1982
- Instructional Improvement in Maryland: Impact on Educators and Students. Executive Summary, January 1984
- Instructional Improvement in Maryland: Impact on Educators and Students, January 1984
- SITIP Case Studies, October 1984
- Maintaining Instructional Improvement: SITIP 1984-1985, September 1985

Training Material:

- Instructional Improvement: A System-wide Approach, March 1982

Presentations:

- Planning: Its Evolution through Knowledge Utilization. AERA, April 1983
- Instructional Improvement: Roles and Responsibilities in Statewide Change. AERA, April 1983
- Impact of Instructional Improvement: A Statewide Program. AERA, April 1984
- Teachers as Instructional Leaders. AERA, April 1984 (summary and paper)
- Aligning Staff Development with Implementation Strategies. AERA, April 1985 (summary and paper)

2. Increase Schools' Use of Computers as an Instructional Resource (Delaware)

- State Plan for the Use of Computers in Education (K-12) for Delaware School Districts, June 1984
- Using Microcomputers for Instruction of Mathematics, Social Studies, Language Arts: Red Clay Consolidated School District Microcomputer Inservice Program, June 1984
- Using Computers for Instruction: Some Considerations, October 1984

3. Improve Teacher Quality (Maryland)

- Rewarding Teachers: Issues and Incentives, July 1983
- The Well-Managed Classroom. A Presentation Outline, April 1984
- Maryland Criteria for Beginning Teachers. Research References, August 1985
- Maryland Criteria for Beginning Teachers. Content Validity Survey, October 1985

4. Improve the Quality of Local Teacher Supervision/Evaluation Systems (Pennsylvania)

- Summary of Discussion and Recommendations of Science and Mathematics Supervision Groups. Pennsylvania Department of Education Science and Mathematics Leadership Seminar, April 1984
- Presenter's Resource Book. Pennsylvania Department of Education's Supervision/Evaluation Academy, September 1984

- A Description and Critical Analysis of Effective Teacher Supervision/ Evaluation Systems, October 1985

5. Improve Educational Programs for Delinquent and Disruptive Youth (Delaware)

   - A Report of Educational Improvements at Delaware State Youth Corrections Facilities, November 1983
   - Competencies Assessment Test: Reading, Writing, and Mathematics, August 1984
   - Improving Delaware Youth Rehabilitative Services. Final Report, November 1985

6. Improving the Quality of Education Provided by Urban Schools (New Jersey)

   - Implementing the "Effective Schools" Research. Pre-Seminar Reader, May 1983
   - Planning for the Implementation of Operation School Renewal, August 1984
   - The Urban Initiative Sourcebook. A Discussion of the Literature and A Directory of Exemplary Practices and Programs, August 1985

7. Improve the Effectiveness of Local Chapter 1 Programs (Multi-State)

   - Chapter 1 Program Improvement Guide, October 1984
   - Chapter 1 Program Improvement Instruments and Report Form, October 1984
   - Chapter 1 Program Improvement Resourcebook for Team Trainers, October 1984

8. Increase Educator's Awareness and Understanding of Research Related to Teaching the Basic Skills and Science (Regional)

   - Improving Writing Skills. Portfolio for New Jersey Department of Education Workshop, January 1984
   - Research Within Reach: Science and Mathematics. Portfolio for Turnkey Training Workshop, March 1985
   - Research Within Reach: Oral and Written Communication and Reading. Portfolio for Turnkey Training Workshop, April 1985
   - Science Education Workshop. Shippensburg Curriculum Conference, July 1985