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ABSTRACT

This paper describes an instructional improvement approach which aims to assist educational systems to enhance their capabilities to plan and implement effective improvements in their basic skills programs, and illustrates how research on implementation and dissemination is used in the design and development of the approach. Four elements of the approach are detailed: (1) a 4-phase instructional improvement cycle, (2) a strategy for collaborative development and support of the improvement cycle in use, (3) an evaluation design for determining the effectiveness of the implemented approach, and (4) a staff development program designed to develop in staff the ability to use effectively all the elements of the approach. Remaining sections of the paper discuss the perspectives that helped shape the implementation process, note research used in designing the implementation and dissemination strategies, illustrate how elements of the approach reflect that research, and indicate the progress of the implementation and dissemination of that approach. References are provided. (FM)

A BASIC SKILLS INSTRUCTIONAL IMPROVEMENT PROGRAM: UTILIZING RESEARCH TO FACILITATE IMPLEMENTATION AND DISSEMINATION

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Introduction

Research for Better Schools, Inc. (RBS), a regional educational laboratory located in Philadelphia, is working with state, intermediate, and local educational agencies in a number of school improvement efforts. One of these efforts is developing an approach that focuses on the utilization of research to improve basic skills instruction. The purpose of this paper is to illustrate how research on implementation and dissemination is used in the design and development of the approach. The brief overview of the instructional improvement approach below is followed by a description of the organization of the remainder of the paper.

The goal of RBS is to help Delaware, New Jersey, and Pennsylvania improve educational programs in their elementary and secondary schools. RBS's basic approach in achieving this goal includes collaboration with agencies at all levels of the educational systems in the three states to develop their capabilities to plan, implement, and support local school improvement. Pursuant to this goal, the instructional improvement approach under discussion aims to assist the educational systems to enhance their capabilities to plan and implement effective improvements in their basic skills instructional programs. A careful study of statewide improvement plans and operations led to the observation that although state accountability systems indicate which students need to improve their achievement in specific content areas, the systems do not indicate the kinds of curricular or instructional modifications that need to be made, or even that may be expected, to improve the students' achievement. Since

research on teaching that permits such diagnosis of instruction is now emerging, RBS elected to pursue the development of an approach that would assist educators' ability to identify and make needed improvements in classroom conditions and processes that will lead to gains in student achievement in basic skills.

The main elements of the approach are: (1) a four-phase instructional improvement cycle, (2) a strategy for collaborative development and support of the improvement cycle in use, (3) an evaluation design for determining the effectiveness and impact of the implemented approach, and (4) a staff development program that is designed to develop in staff the ability to use effectively all the elements of the approach.

The four-phase instructional improvement cycle is a simple problem-solving paradigm that enables educators to use R&D findings to identify and exploit instructional improvement opportunities that exist in individual classrooms. The cycle calls for collection of classroom data, comparison of classroom data with a data base that relates classroom processes to student achievement, decisions about what and how to modify instruction, and implementation of planned modifications. Since the cycle is iterative, evaluation of the effectiveness of the modification is intrinsic to the process.

The concepts of systemwide collaboration and the dissemination strategies that have evolved are explained further in the fourth section of this paper.

The evaluation design, which was planned for use by educators, is described in a paper by Rim and Segars (1980).

The staff development program is based on two sets of materials: (1) improvement cycle materials that include the technical information, training, and processes related to the improvement cycle; and (2) leadership materials that include the information and processes related to systemwide collaborative development, maintenance, dissemination, and evaluation of the approach.

The role that RBS plays in building the approach includes conceptualizing and developing initial methods, procedures, and materials (see Huitt & Rim, 1980). Collaborating educational agencies and personnel contribute to the planning and development of the elements of the approach as well as provide the crucial field testing and feedback to guide its revisions. RBS also provides field support to the educators participating in the development projects utilizing the approach. (A more detailed rationale and overview may be found in Helms [1980].)

The remaining sections of this paper discuss the perspectives that helped shape the implementation process, note some of the research used in the design of the implementation and dissemination strategies for the approach, illustrate how elements of the approach reflect that research, and, finally, indicate the progress of the implementation and dissemination of the approach.

Perspectives

The way in which the instructional improvement approach is implemented is influenced greatly by RBS's mission and its role as a regional educational laboratory, by the laboratory's knowledge of the overall record of utilization and dissemination of research in education, and by the laboratory's past experiences in the implementation and dissemination of educational innovations. These influences--together with a view of the educational system that holds each level of the system partially responsible for the conditions at the level immediately under its jurisdiction and a view of teaching as problem solving--helped shape the improvement approach.

The RBS mission emphasizes assistance to the educational systems in the region and the building of local capabilities. The laboratory works closely with and is responsive to the state educational agencies (SEAs) and intermediate service agencies (ISAs) in the region. The SEAs and ISAs are interested in limited development (or demonstration) efforts, but they are concerned about the ways and means of serving a larger number of sites. Neither the SEAs nor RBS has the resources necessary to provide the thousands of schools or even the 1,126 districts in the region with the staff development that a problem-solving method of instructional improvement entails. The press to disseminate, compounded by limited human and financial resources, necessitates an approach that develops and counts on local capability. After an initial emphasis on development sites for piloting and obtaining feedback, efforts must shift quickly to the training of trainers.

SEA → DISTRICT → PRINCIPAL → TEACHER → LEARNER

→ is responsible for arranging the conditions of the →

Figure 1. The educational hierarchy.

This commitment to work with SEAs, and the view of the educational system suggested in Figure 1, influenced the initial strategy of development and dissemination. The educational system is seen as a hierarchy, with each level partially responsible for the conditions of work of the subordinate level. It is recognized that teachers do not have control of all the factors related to classroom processes. (For example, time allocated to a subject may be controlled by building- or district-mandated schedules that sometimes are enforced by bells and class changes.) Similarly, a principal's ability to provide staff development time is facilitated or constrained not only by district budgeting but also by state inservice credit policies and state policies regarding reimbursement for staff development time. This view of educational administration suggested that efforts to improve instruction might well be frustrated if building, district, county, and even state educational agencies were not actively involved. The commitment to work with SEAs and this view of educational administration suggested that the instructional improvement approach should involve participation from all levels of the educational system; this was confirmed by the experiences of the author and other RBS staff members in the development and implementation of the Pennsylvania School Improvement Program (PSIP, one of the seven NIE-funded R&D utilization projects). The commitment to

work with SEAs and the decision to involve all levels of the educational system further suggested an initial implementation strategy to involve first SEAs, then ISAs and LEAs, and, finally, individual school buildings and teachers.

All those involved in the initial planning and design of the instructional improvement effort were very much aware of two challenges that might render the best of RBS's technical efforts useless. First, the literature indicated that although many educational innovations had been attempted, only a small proportion of them were successful (Berman & McLaughlin, 1975; Orlosky & Smith, 1972). Indeed, the initiation of an instructional improvement approach that required local use of research findings would be an innovation for most, if not all, involved; it was clear that the successful implementation of this approach presented a challenge. The second challenge concerned the perceived need, described above, to impact large numbers of schools and teachers. The task of disseminating an instuctional improvement approach required, RBS staff felt, attention from the outset. The laboratory's earlier experiences in the development and dissemination of a variety of instructional programs for students and administrators reinforced this conviction. Since the thrust of the instructional improvement approach was research utilization, RBS staff felt it appropriate to seek direction on implementation and dissemination from the existing research on topics such as implementation, educational change, inservice or staff development, research utilization, and dissemination. Thus, a third decision on implementation and dissemination was reached, namely, that the implementation and

dissemination of the instructional improvement approach required early attention and the plans for implementation and dissemination should be guided by existing research.

These perspectives, then, suggested that the instructional improvement approach be implemented in a manner that (1) provides for participation by all levels of the educational hierarchy; (2) develops local capability to use research, relying on a turnkey training scheme for dissemination; and (3) reflects existing research on topics such as implementation, educational change, staff development, and research utilization. As it happened, the information and directions gained from the research did not alter RBS's conviction about the merits of the first two aspects, systemwide participation and local capacity building. The next section of this paper illustrates some of the research findings that were used to guide the process and materials suggested for implementing and disseminating the instructional improvement approach.

Data Sources

The commitment to utilize research to facilitate implementation and dissemination of the instructional improvement approach led RBS staff to research on a variety of subjects. It is clear from the literature that knowledge utilization designed to result in a change in behavior also depends on the user's willingness and capability to use available knowledge (Berman & McLaughlin, 1974; Fullan & Pomfret, 1977; Sieber, Louis, & Metzger, 1972). The research was reviewed for the purpose of ascertaining implementation methods and characteristics of innovations that would facilitate the creation of a supportive educational environment. Early in the work, the research on educational implementation and inservice education was reviewed. The review of the literature on change, implementation, staff development and research utilization continues and concentrates almost exclusively on studies and syntheses in the field of education. The Rand studies, especially volumes IV and VIII, reviews by Fullman & Pomfret (1977), and Emrick and Peterson (1977) were among the many sources used in this area. The intent of this section is not to report on all the research sources utilized but to briefly note some of the sources and findings that had special implications for the instructional improvement approach. The discussion of research on implementation is presented first, followed by a discussion of research related to dissemination. How these implications were utilized is discussed under methods, in the next section of this paper.

Research on Implementation

The research on implementation is organized by one of the many lists of change factors that researchers in the area of change have developed. The list suggested by Pincus and Williams (1979) seems appropriate to this organization for several reasons. First, it focuses on the process of planned innovation. If, as Berman and McLaughlin (1975, p. 16) suggest, "the predictors of effective implementation are likely to lie in . . . implementation strategy rather than in the educational treatment or technology itself," the focus on process is probably in keeping with RBS's purpose. Second, the list is relatively brief; it consists of five factors--a zone of protective tolerance, a leadership component, a planning and delivery system, a method of deriving benefits, and a need to maintain stability. Finally, the factors are such that research from the areas of knowledge utilization and staff development are easily accommodated. After a brief description of each of these five factors, several research findings related to the factor are reported.

1. Need for a zone of protective tolerance. The conditions in a district must be favorable to change. Although effective educational change does not require broad-based support, at least there must be neutrality (Pincus & Williams, 1979).

   School systems, Pincus (1974) notes, are bureaucracies, and if innovations are to be successful, they must be perceived by the system as nonthreatening to the status and organization of the bureaucracy. Innovations that require major changes in bureaucratic structure or method are not favorably received. Of interest to the innovation being discussed is the Rand study finding that a project's outcomes are not determined according to whether that project was initiated by the teaching staff or by district administrators (Berman & McLaughlin, 1977, p. 8).

The principal's attitude is important to an innovation's success. Berman and McLaughlin's (1977) report indicates that few projects in which the principals were inclined unfavorably scored high on any outcome measures. Some projects with indifferent principals did well; projects with actively supportive principals were most apt to score high on outcome measures.

The importance of teacher commitment in effecting change has been discussed at length (McLaughlin & Marsh, 1978). Since teacher commitment is influenced substantially by the attitudes of district personnel, it seems important to obtain administrative support and participation at the outset, both at the district and building levels (Berman & Pauly, 1975, pp. 54-59; Lipham, 1977). Active involvement of administrators and teachers in the development process also seems to increase teacher commitment (Fullan & Pomfret, 1977). Another factor affecting teacher commitment is the educational promise of the innovation and the opportunity for change that is offered to teachers; it seems the wider the scope of the innovation conceptually, the more likely it is to be implemented (McLaughlin & Marsh, 1978).

Innovative efforts also foster teachers' ownership and commitment, if they encourage teacher development or redesign available materials (Berman & McLaughlin, 1977). Additionally, Doyle and Ponder (1977-78, p. 1) have noted the importance of teachers' early decisions about the practicality of new innovations, describing "the practicality ethic as a key link in the knowledge utilization chain in schools."

2. Need for a leadership component. A person or a group of persons must recognize that change is possible and must provide leadership in initiating and implementing the change (Pincus & Williams, 1979).

Pincus (1974) remarks that "researchers disseminate results through journal articles and reports; practitioners learn through briefings, meetings, and informal discussions." And, information alone does not seem likely to generate the implementation of innovations (Emrick & Peterson, 1977); continuing support and leadership must also be provided. provided.

Lipham (1977) points to the key role the administrator--especially the building principal--has in bringing about change and stresses the need to provide training for principals in competencies such as the creation of facilitative environments. In addition, the Rand study results (Berman & McLaughlin, 1975) support the notion of staff development for middle managers. Berman and McLaughlin (1977, p. 128) make special note of the need for principals to be active in the implementation of complex comprehensive innovation, such as the one under discussion in this paper.

3. Need for an appropriate planning and delivery system. Methods must be developed to provide the benefits of the innovation to those persons concerned, whether students, parents, teachers, or administrators. According to Pincus and Williams (1979), this may be accomplished through the vertical involvement of several levels of the educational system (e.g., teachers, principals, and administrators), or it may be the horizontal involvement of only one level, usually at the top.

In any innovation there is a need to provide the users with the understanding and technical skills required. This training must, at the same time, avoid the appearance of a "deficit" model (McLaughlin & Marsh, 1978) of inservice. In order to use research, teachers need to acquire special skills, such as classroom observation procedures, allocation decisions, comparison of data, hypothesizing possible changes, and location of resources. These skills are complex and require guided practice in clinical settings as well as group instruction. A recent article by Joyce and Showers (1980), reviewing the research on teachers' acquisition of teaching skills and strategies, indicates that nearly all teachers can learn new skills given certain conditions. Joyce and Showers (1980, pp. 384-5) conclude that the most effective training activities will "combine theory, modeling, practice, feedback, and coaching to application. The knowledge base seems firm enough that we can predict that if those components are in fact combined in inservice programs, we can expect the outcomes to be considerable at all levels." The report on effective inservice by Lawrence (1974) also suggests directions for inservice. Noted as successful are inservice programs that place teachers in an active role, that allow teachers to participate as helpers and planners, that are linked to an overall school effort rather than a "one-shot" program, and that facilitate teacher sharing and mutual assistance. Additionally, Lawrence found that teacher attitudes and behaviors are more likely to be influenced by school-based inservice programs than by college-campus inservice courses. Furthermore, school-based programs conducted by local supervisors and administrators are more effective than school-based inservice conducted by outside consultants.

There is some support for the notion that delivery systems need to be described clearly in materials. In a synthesis of five studies on educational dissemination and change, Emrick and Peterson (1977) conclude that materials need to be developed to describe and implement a delivery system; the quality and availability of such materials seem to play central roles in supporting and maintaining instructional improvement efforts.

4. Need to derive benefits. Pincus and Williams (1979) note that it is important that innovators determine whether or not their primary goals have been attained. In some cases, however, early success with secondary benefits may divert the innovators from assessing their achievement of the primary goal.

Berman and McLaughlin (1977, p. 155) state that the formal evaluations required of federally funded projects are seldom taken seriously by the responsible school district officials. Other than this comment, little research literature in educational innovation deals directly with this element. Many researchers in the field of change in education and other social sciences recommend planned, user-focused evaluation. Thomas Fletcher (1979, p. 159) suggests that the primary purpose of evaluation should be for the user of an innovation or program and that evaluation should be ongoing so that the programs can be adjusted or tuned in process.

5. Need to maintain stability. Because innovations can change very rapidly, it is important, according to Pincus and Williams (1979), for a district to plan and take positive steps to prolong stability.

The Rand study report (Berman & McLaughlin, 1975) notes that such plans and actions need to establish channels of communication, collaboratively determine objectives and goals with a representative group of participants, and establish planning as a continuous function.

Volume VII of the Rand study (Berman & McLaughlin, 1977) reports on characteristics of innovations and the innovation processes used with projects continued after federal funding ended. What is striking about the set of characteristics is their similarity to the characteristics listed in items 1-4 above. Well-conducted staff training, including feedback and support, teacher participation in project decisions, and a supportive school principal are among the factors common to continued projects. Clear project goals were important to continuation, especially for projects attempting a broad scope of change. Surprising, perhaps, is the hypothesis that projects requiring extra effort on the part of staff resulted in more teacher change. The study also notes that in those instances where projects became integral parts of district, school, and classroom operations, school administrators viewed this process of institutionalization as one of "remobilization and reimplementation"; the administrators realized that their "early, active, and continued attention" was needed (p. 179).

These are some of the findings that have influenced the design of and implementation strategies for the instructional improvement approach.

Research on Dissemination

Once the instructional improvement approach has been developed and implemented in initial sites, the approach, no matter how worthy, is

likely to remain in those initial sites unless special and early attention is given to dissemination of the approach. The approach is not likely to become a local capability in the near term through a process of natural permeation (i.e., by natural assimilation into the professional education milieu), which, according to Clifford (1973), is perhaps the most common avenue for new knowledge to move into practice. If school districts and schools are to utilize effectively the instructional improvement approach, it will be necessary to plan for and deliberately foster their acquisition of this improvement capability.

A review of the literature on dissemination suggested three issues that need to be addressed in planning for dissemination of the instructional improvement approach. The first is the transportability of the approach, which is of greater scope and complexity than many innovations. A second issue concerns the barriers to change found in school systems; the barriers seem to be particularly effective against innovations sponsored by external agents (Sieber, Louis, & Metzger, 1972). The third concern is logistical (i.e., attaining receptivity and managing the local development of improvement capability in many districts, schools, and classrooms).

Transportability. If an innovation is to be disseminated, it must be capable of being implemented in sites other than the original development sites. At times, "transportability" has been equated with "replicability" (Klein & Hutchins, 1975). The intent in this discussion, however, is closer to "exportability" (Klein, 1974) or the more recently used term, "adaptability." That is, the extent to which the critical elements of an

innovation are capable of being implemented in other sites. Fullan and Pomfret (1977) note two characteristics related to transportability, "explicitness or plans for explicitness" and the "complexity or degree and difficulty of change required by an innovation" (p. 368). These two characteristics are discussed below.

In order for an innovation to be used in a new site, the users must have access to knowledge about the innovation that makes explicit its intended use and their roles in using the innovation. Studies by Berman and McLaughlin (1975), Emrick and Peterson (1977), Moore et al. (1977), and Stearns and Norwood (1977) all indicate the need for support materials. The Emrick and Peterson study and the study by Moore et al. showed that the quality and sufficiency of materials contributed to the success of change agents who were charged with disseminating innovations.

Fullan and Pomfret (1977) note that explicitness does not need to be highly structured at the outset, as long as there is a plan for arriving at explicitness during initial implementation of the innovation.

Three types of complexity--structural complexity, treatment complexity, and the complexity of integrating an innovation into ongoing procedures of the school or district--are identified in Berman and McLaughlin (1975). These three types of complexity reportedly have different effects on outcomes. The study defines an innovation as structurally complex if it attempts to span many grade levels or requires a great deal of coordination across grades and levels. Structurally complex projects generally attempt too much too soon.

The second type of complexity, treatment complexity, appears to have the characteristics of a double-edged sword. Fullan and Pomfret report that "innovations requiring complex changes in teachers' behavior" were difficult to achieve and require special planning. RBS's own experience with IPI products reflects the finding of others (Gross, Giacquinta, & Bernstein, 1971; Solomon, Ferritor, Heann, & Myers, n.d.) who have noted that changes in administrative procedures and use of materials are easier to achieve in dissemination sites than are changes in behavior or role. Berman and McLaughlin (1975), however, note that innovations requiring only small changes or narrow treatment did not lead to broad-based or enduring change.

The final type of complexity discussed by Berman and McLaughlin (1975) involves the amount of change in funding and organizational or instructional patterns required by an innovation. Innovations necessitating new funding and organizational patterns require strong school and district support. Innovations that require changes in instructional patterns are more successful if they include teacher training emphasizing new skills and behaviors that are related to the teachers' ongoing classroom responsibilities (Cole, 1971; Crowther, 1972; McLaughlin & Marsh, 1978).

Barriers to change. An educational innovation's availability and transportability do not guarantee its adoption or its implementation and incorporation. Pincus (1974), Emrick and Peterson (1977), and Drucker (1973) point out ways in which the marketplace of schools--public service institutions--differ from that of the competitive market. The high level

of resistance to change in education (Miles, 1975; Sieber, 1975; Zaltman, Florio, & Sikorski, 1977) and the relatively low level of searching for solutions outside the district (Berman & McLaughlin, 1975; Sieber, 1974) also have been discussed in the literature. Two factors are addressed in the discussion of barriers to change:

1. The need to provide awareness of and receptivity to an innovation;
2. The need to provide for the implementation and eventual incorporation of an innovation at dissemination sites.

The need to provide awareness in certain ways is documented in the literature. Government-supported efforts to increase the use of R&D products (e.g., the Project Information Packages [PIPS], the National Diffusion Network [NDN], and the R&D Utilization Projects) evidence a perceived need for conducting awareness activities for educational products and processes so that they may be implemented. Research reports of these and other efforts (Berman & McLaughlin, 1975; Emrick and Peterson, 1977) have pointed out the need to bring clear information to school practitioners. The reports of the NDN study (Emrick, Peterson, & Agarwala-Rogers, 1977) and the study of the Pilot State Dissemination Project (Sieber, Louis, & Metzger, 1972) indicate that personal contacts are probably required even to gain school practitioners' attention to information.

Although receptivity to such information is largely a function of the target organization's climate (Paul, 1977; Zaltman et al., 1977), the literature suggests several other influences or conditions that affect receptivity. The perceived legitimacy of the information bearer, or change

agent, varies with the target organization, the agent's relationship to that organization, and the information being delivered (Paul, 1977; Zaltman et al., 1977). If an innovation is perceived as irrelevant to the practitioner's needs or goals, receptivity is reduced (Berman & McLaughlin, 1975; Paul, 1977). Berman and McLaughlin's (1975) findings on the opportunistic reaction of schools indicate that although "seed money" is successful in inducing districts to behave receptively, it did not lead them to implement or incorporate innovations.

The methods of implementing and eventually incorporating an innovation at a dissemination site are the same as those used in original development sites. The five critical factors (i.e., a zone of protective tolerance, a leadership component, an appropriate planning and delivery system, a method of deriving the benefits, and maintaining stability) need to be attended to in the dissemination sites. The literature also indicates that among the most crucial of an innovation's characteristics is the need for each implementation to be characterized by mutual adaptation (Berman & McLaughlin, 1975; Emrick et al., 1977; Fullan & Pomfret, 1977), thus the need to provide each new (dissemination) site with a "redevelopment" experience.

Logistics. By itself, RBS cannot develop the improvement approach collaboratively with all teachers in all districts in the tri-state region; nor would that be consistent with the laboratory's role. The SEAs and ISAs have limited personnel also, and cannot by themselves implement and directly support the instructional improvement approach in all the schools in the region.

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Dissemination to large numbers of sites frequently has been attempted by mailing out or delivering the materials to each intended user. The weakness of this approach to dissemination and the need for personal interactions are well documented (Glaser, 1973; Louis, 1971; Sieber, 1974; Stearns & Norwood, 1977). The logistics problem therefore requires persons knowledgeable in the instructional improvement approach in order to assist in dissemination.

The logistics problem is complicated further by the fact that the instructional improvement approach is not a simple innovation. As was noted above, the approach requires mastery of some sophisticated skills, and entails changes in teachers' behavior and changes in the roles of the principal and the LEA participants. Thus, the instructional improvement approach requires ongoing staff development for multiple levels (teachers, principals, LEA, ISA, and SEA personnel). The knowledgeable disseminator of the improvement approach cannot sell and run; the disseminator needs to be available to nurture the implementation of the approach over time.

These are some of the findings on dissemination that helped shape the planning for dissemination of the instructional improvement approach.

Methods

The perspectives and research findings discussed above helped shape the four elements of the approach to facilitate its implementation and dissemination. Because each element of the approach provides several characteristics or processes that facilitate implementation or dissemination, the discussion that follows is organized by the elements of the approach rather than the Pincus factors for implementation or the concerns for dissemination.

The Four-Phase Instructional Improvement Cycle

Characteristics of the cycle that facilitate implementation and characteristics that facilitate dissemination are discussed, respectively, below.

The first two phases of the four-phase improvement cycle constitute a needs assessment. Each teacher can identify the level of a condition or process in his or her classroom and, based on comparable data from a research study, decide whether he or she wants to engage in an improvement effort for that condition or process. The decision one teacher makes and the change he or she selects to implement are not necessarily prescribed for other teachers. Indeed, a school where the improvement approach is well implemented may begin to assume the characteristics of a teacher center--a place where teachers seek resources to help them with

their individual classroom needs. In allowing and facilitating individual diagnosis and prescription, the cycle assures that the inservice is relevant to teachers' unique classroom situations.

The cycle also meets criteria found beneficial to implementation in that it addresses a broad concern but attempts to accomplish the goals through relatively brief, ongoing support activities. Furthermore, the instructional improvement cycle is designed to utilize the teachers' clinical knowledge of the classroom, school, or district. The teachers decide whether a certain process or condition should be modified, the extent of that modification, and the method by which the modification is made. Inservice then is not based solely on what other educators believe is useful but rather on teachers' considerations of their own classroom data.

The instructional improvement cycle also supplies teachers with information on the extent to which their modifications have had the effect intended. This provision for feedback is consistent with recommendations for effective inservice given by Lawrence (1974) and Joyce and Showers (1980). The improvement cycle focuses teachers on classroom processes and conditions and student achievement, which are the primary goals of the instructional improvement approach.

Several characteristics of the four-phase instructional improvement cycle should facilitate dissemination of the approach. For example, the instructional improvement cycle is not to be represented as a solution to a problem but rather can be viewed as a vehicle for improvement. The approach therefore

should not be considered the solution to a nonexistent problem--a view that often condemns innovations from the outset (Havelock, 1970; Zaltman et al., 1977). Aspects of the four-phase instructional improvement cycle serve as solutions to the treatment-complexity dimension of the transportability problem. Implementation of the cycle requires a conceptually broad, not narrow, change in participants' behavior; however, all of the skills, roles, and responsibilities are related to the relatively simple four-phase instructional improvement cycle that enables new participants to comprehend quite readily the overall process. Additionally, the improvement cycle need not be implemented by all district or school staff at one time. Thus, the structural complexity of the approach can be kept simple.

Systemwide Collaboration

The four-phase instructional improvement cycle described above is designed for use by teachers. The RBS instructional improvement approach includes more than the improvement cycle, however. It involves the collaboration of SEAs, ISAs, LEAs, principals, teachers, and, at this time, RBS staff in the development, delivery, and ongoing application of the four-phase cycle. The word "collaboration" is used to describe a working relationship in which the expertise each person brings to a task is recognized and respected by others. Leadership in such relationships shifts among the participants according to the nature of the need for and the appropriateness of each party's expertise. The ways in which the

various levels of the educational system became involved in the implementation and the way in which the benefits of collaborative development are made available to dissemination sites are discussed.

Implementation. Although the paragraphs below describe the process RBS staff followed in identifying and working with development sites, it should be understood that the method RBS followed is also the method it recommends to SEAs, ISAs, LEAs, or schools who wish to implement the approach. For purposes of the remainder of this paper an implementation of the instructional improvement approach will be referred to as a project. Thus, there are many projects--all utilizing the same instructional improvement approach. Two other terms also need explanation here. Development sites, or development projects, are those projects that collaborate with RBS in the initial development of the approach. These projects receive direct field support from RBS staff; teacher staff development sessions in these projects are frequently led by RBS staff. Dissemination projects are implemented by local leaders trained (possibly by RBS) in the approach. RBS staff do not lead teacher staff development sessions in dissemination projects and only rarely attend the teacher sessions in dissemination projects.

First, RBS staff, over what was frequently an extended period of time, oriented SEA personnel and in two cases planned with the SEA to identify and orient ISA personnel. This step was repeated, with RBS (and in some instances SEA personnel) orienting and planning with the ISA to identify and orient LEAs. The process continued to the school level,

where the principal and possibly a teacher planning group worked with the LEA on an orientation for teachers. At any level, the choice to continue or not to continue existed; if a district chose not to participate, a school orientation was not made. Thus, before a teacher was oriented, support was secured from the principal and the LEA, ISA, and SEA. This process allows each level to verify that its goals and objectives are compatible with the improvement method, which is an important consideration in establishing a zone of protective tolerance.

Ideally, a similar planning strategy is continued for each of the phases associated with the instructional improvement cycle. That is, prior to a teacher meeting, there is a meeting with the ISA (and possibly the SEA) to discuss the materials, strategy, and agenda. After input and planning at the ISA level, the planning is conducted at the LEA level, and then again at the school building level.

The procedures that are in fact followed vary somewhat from the general pattern described and from project to project. Two deviations are relatively common. First, active participation from most SEAs has been limited, but all SEAs have been kept informed of work in their states. As more sites are engaged in the process and as the states begin to realize the enormity of the task of providing assistance to the districts, schools, and classrooms that do not meet certain student achievement standards, the SEAs' own interest and participation seem to grow. A second difference is that the number of planning meetings is frequently reduced by planning at the ISA and district, district and school, or ISA, district, and school levels simultaneously.

In development sites, staff development for ISA, LEA, and school building personnel is accomplished both through their participation in planning sessions and in their observation of RBS staff modeling (i.e., demonstrating) the staff development. As the ISA and LEA personnel review initial materials (for purposes of suggesting revisions, planning agendas for teacher sessions, and possibly preparing for some role of their own in the session), they become familiar with the content of the materials. They later see an RBS staff person model the improvement approach, with supportive materials, at the school site. This strategy allows RBS personnel early feedback on materials and processes and provides training for the development of local capability at a site at the same time as an initial set of "turnkey," or dissemination, agents is being trained.

One other aspect of the project implementations should be noted. At no time are any RBS funds used for teacher release time or for ISA or LEA staff time. Each project is implemented with locally obtained funds or resources. Some schools have used inservice funds available to their district from the ISA. In two cases, SEAs approved inservice credit for participating teachers and administrators in the project outside of school hours. One school is beginning to utilize inservice time set aside by the district that in the past has been used for a series of "one-shot" inservice programs. Every attempt is made to keep required resources at a minimum, which should aid receptivity of the approach. Although implementation of the approach will necessitate some changes in behavior (e.g., systematic observation), it does not in and of itself require new

student curricular materials or processes. Any changes in instructional procedures or changes in materials will be the result of a teachers' decision to make such changes. Although the minimal cost of implementation may increase receptivity, the fact that implementation of the instructional approach will rely upon existing resources and funds--no seed money is provided by RBS--may lower receptivity. Nevertheless, this procedure should increase the likelihood that if the approach is implemented it will be maintained.

The reasons for the systemwide collaborative planning strategy are many. First, such a strategy assures the active support of the various levels of the educational hierarchy. The collaborative development strategy recognizes the bureaucratic structure of the syst m, and permits each member of that system to play out his or her accustomed role in giving sanction and providing support for the instructional improvement approach. A second major aspect of this strategy is that, as individuals participate in the planning efforts, they develop a sense of ownership of the improvement approach. The collaborative planning efforts help to establish a local capability for leadership in the delivery of the improvement approach, and the involvement of each level may provide additional stability to the project. All of the project concerns are not vested in one person. When RBS withdraws from development projects, and in projects where RBS will never participate, the need for local capability to deliver the technical and organizational support for the process is met, in part, by this chaining or linking of levels.

The systemwide planning strategy also recognizes that the conditions and processes of instruction that a teacher establishes are shaped in part by school building conditions and district or state policies or procedures over which the teacher has little or no control but which the principal, district, or state may be able to influence. The multilevel planning and participation also build channels of communication. The concerns and needs of one level can be communicated and are more likely to be addressed in situations where the recognition of needs and rationale for requests emerge from a common endeavor.

Dissemination. Collaborative development appears to be the least transportable element of the approach. It may be assumed that once the approach has been created collaboratively in the development projects, it will merely be replicated. This is not the intent. Nor does RBS intend that the materials generated in the development projects only be duplicated for dissemination sites. Rather, those responsible for dissemination are advised that each project is to be considered a redevelopment effort; that is, at each level, planning and review of prototype materials and procedures (from development projects) should occur. The participants in each SEA, ISA, LEA, and building should review and then adapt the materials and procedures for their own circumstances. Thus the planning, review, and refinement processes modeled in the development projects are to be continued at the dissemination projects.

One advantage of this continued collaborative, multilevel development is that it provides for mutual adaptations, the feature of innovation

found to be so critical for the implementation and incorporation. Involving people from the school, district, and ISA also helps to build the critical mass of participants necessary to sustain the momentum for innovation.

Evaluation

The evaluation design (described in Rim and Segars, 1980) was shaped by the desire to enable educators to evaluate their own instructional improvement projects without outside assistance. Every effort was made to keep the methodology simple, to keep time and cost at a minimum, and to respond to educators' concerns and criteria for success. The evaluation design does assist with the element of implementation that Pincus referred to as a method for deriving the benefits. The design includes change in student achievement as a measure of the effectiveness of the instructional improvement approach, thus focusing attention on a primary objective of the approach. The design also focuses attention on the impact of the approach. If the approach is not disseminated or is not maintained, information as to why this is the case is obtained and will be helpful feedback for guiding implementation and dissemination strategies.

Staff Development

If teachers are to utilize the four-phase instructional improvement cycle, they need to understand and become skilled in the methods needed for data collection, comparison, selection, and implementation. Implementation of the instructional improvement approach thus requires staff development for teachers.

The instructional improvement approach aims not to prescribe for practitioners but to develop a local capability to use research so that the practitioners' instructional decisions and acts are informed by the research, as well as by their values and circumstances. Local capability, as used here, means that each principal can maintain the approach with his/her own staff with minimum reliance on outside resources. Also, each district must be able to develop the capability to initiate and maintain the improvement approach in each of its schools. Similarly, each ISA must be able to implement and maintain the improvement approach in each of its districts. In addition to development of local capability, systemwide collaboration is part of the approach. It is not possible to achieve such local capability and systemwide collaboration if only teachers receive staff development from outside experts; staff development is needed for project leaders as well as for teachers.

The materials and training procedures employed to develop local capability to use all elements of the approach are described below. First the initial materials used in training are discussed, and then staff development for teachers and for project leaders is discussed. In keeping with the focus of this paper, the descriptions emphasize characteristics of the staff development that facilitate implementation and dissemination.

Materials. Research on implementation and dissemination evidence the need for materials that clearly describe an innovation and an associated delivery system (Berman & McLaughlin, 1975; Emrick & Peterson, 1977; Moore et al., 1977). RBS staff prepare initial training materials for the instructional improvement cycle, and realizing that training

in leadership and collaborative development skills is equally as important, RBS also prepares leadership materials that outline the planning and responsibilities that each level of the hierarchy must undertake in order to implement the approach. The explanations of the critical elements of the instructional improvement approach and the roles required by it that are included in the improvement cycle and leadership training materials are one way in which the concern for explicitness (to facilitate transportability) is addressed.

The improvement cycle materials are designed to transmit the information needed to plan and execute all the processes included in the instructional improvement cycle. Materials for teachers briefly present needed information and provide practice opportunities, forms, and short summaries of literature for reference purposes; materials for leaders include considerably more support. These materials are written as guides and suggestions for participants to adapt them to their local circumstances. Aspects that are technically critical to the process, such as observation instruments and reference graphs, are flagged so that users will not make changes that could destroy the integrity of the system.

Obviously, certain refinements or revisions made by an adapting site could seriously jeopardize the integrity of the research used in the instructional improvement approach or the associated improvement cycle materials. For example, a site may decide to "simplify" the method by interpreting all of the instructional variable relationships with student achievement as either positive linear relationships (more is better) or

negative linear relationships (less is better). There can be no complete protection from this risk, but training by modeling and institute training (described below) will emphasize the reasoning behind the process and the dependent relationship between, say, the data collection instruments and the graphs. In some cases, the form of technical training may avoid the problem of poor technical training. For example, observation training that utilizes videotapes and includes specified criteria for mastery reduces the risk of inadequate training. Still, disseminators must understand the importance of using videotapes until participants have reached criteria, and they also must understand the consequences of ignoring such criteria. The risks are real, but RBS believes that the need to provide for mutual adaptation is great enough to warrant the accompanying risks.

RBS will address some of the concerns related to implementation in the leadership materials that describe suggested roles and functions for SEA-, ISA-, LEA-, and school-level participants. The materials are being designed to attend to the five elements (a zone of protective tolerance, a leadership component, a planning and delivery system, a method of deriving the benefits, and maintenance of stability) identified by Pincus and Williams (1979). The materials will deal with organizational concerns (such as scheduling and locating resources), skills individuals can use in conducting the improvement approach (paraphrasing techniques, clinical supervision skills, etc.), and skills leaders can use to maintain and refine the improvement approach (e.g., techniques for evaluating

the effectiveness of the approach). The materials will not attempt to cover topics that have been treated extensively elsewhere. The materials will indicate, however, how and why certain skills (such as clinical supervision skills) may be useful in the improvement approach, and they will direct leaders to a number of available resources for these topics.

The leadership materials will suggest roles for principals and district, ISA, and SEA personnel that provide for needed leadership in the instructional improvement approach and that are consistent with each individual's role and status in the existing educational hierarchy. The materials also are being designed to aid in establishing a delivery system for the project, as they convey the information and skills necessary for participants to plan and execute the delivery of the instructional improvement approach. Some of the roles, resources, and functions of personnel in the instructional improvement approach will intentionally not be defined explicitly by the materials; this will permit participants to adapt the method to their particular circumstances. The materials will describe the necessary resources or roles and give alternative suggestions as to how they may be provided or carried out. These details will not be prescribed fully for participants, allowing the method to be adapted and integrated with the existing policies, resources, values, and structures of the school district, LEA, ISA, or SEA involved. What will not be made explicit in the materials will be flagged for users so that plans to make explicit these procedures, policies, and values will be part of the implementation. Thus, project leaders at each level of the educational system will use their

knowledge of their conditions, values, and expectations to establish a flexible and appropriate system for their circumstances. In addition, they will be encouraged to involve influential persons at each level--for example, SEA (professional association members), ISA and LEA (board members), and school (PTO members)--in order to build a broad-based local constituency.

The leadership materials will give special attention to building, district, and state concerns about the effectiveness of the improvement approach. Benefits of the improvement approach should include increased knowledge of critical elements in instruction, changes in the conditions and processes of instruction so that they more nearly match those found to produce high student achievement gains, and, finally, increased achievement. Although the four-phase instructional improvement cycle itself provides feedback on the second of these elements (change in conditions or processes), one part of the leadership training will assist LEAs and ISAs to assess the effectiveness of the approach with respect to student achievement.

Staff development for teachers. The staff development for participating teachers is centered around the understandings and skills necessary to put into operation the four-phase instructional improvement cycle. An understanding of the variables being examined, mastery of the data collection method, and the understanding necessary for comparison of the teachers' classroom data with data from research are important aspects of the staff development program. The staff development materials also provide

suggestions and guidance in selecting modifications that are logically related to the variable being considered for improvement and assist teachers in developing a procedure for monitoring their implementation of the intended modification. (This is suggested to assure that some modification is indeed in place, prior to the teacher taking a second reading on the classroom variable under consideration.)

The selection phase may, depending on the strategy a teacher selects, involve additional staff development. A teacher may elect, for example, to learn more effective techniques for discipline by attending a course offered at a local teacher training institution. Another teacher, in the same school, may elect a very different modification (say, a change in seating patterns) that requires no additional staff development.

As was noted above, the staff development necessary for the improvement cycle is to be provided by local project leaders; this facilitates systemwide collaboration and the development of local capability while providing what research on inservice says is a highly effective plan for inservice (locally led and classroom focused). Several other features of the improvement cycle that enhance the associated inservice are noted on pages 19-21.

Initial materials and strategies for the staff development sessions are found in the improvement cycle materials previously described. The improvement cycle materials were developed for use in relatively short staff development sessions held throughout the school year. Although the use of materials in these settings does not reduce the overall complexity

of the skills to be learned, the skills are introduced at a manageable rate. The materials facilitate ongoing, school-based inservice, conducted by local supervisors, that combines theory, practice, and feedback.

Time and materials (costs) are always of concern. Although teacher, principal, and district supervisor time is necessary for the staff development associated with the approach, every attempt is made to keep the time and materials to a minimum. Once teachers have mastered the data collection techniques associated with a variable, the remaining time requirements for the approach are quite modest. Time sometimes can be found by changing priorities and using some inservice or planning time already available in the school and district. Frequently, time can be made available for the improvement approach by using the time already set aside for a series of "one-shot" workshops.

Staff development for project leaders. Two forms of training are being used by RBS to provide staff development for project leaders. In development projects, RBS personnel "model," or demonstrate, much of the content incorporated in the staff development materials. In order to train a larger number of leaders in a shorter period of time than is permitted by modeling in development projects, institutes have been initiated. These institutes, or academies, are designed to facilitate training of local leaders who wish to become improvement project leaders. The power of both of these methods of training can be multiplied by using a strategy whereby leaders trained and experienced in the approach train other potential leaders. Each of these processes--modeling, institutes, and turnkeying--are described further below.

In development projects, staff development for SEA, LEA, and school building personnel is accomplished both through their participation in planning sessions and in their observation of RBS staff modeling (i.e., demonstrating) the improvement approach. As the ISA and LEA personnel review the initial improvement cycle materials (for purposes of suggesting revisions, structuring meeting agendas, and possibly preparing for some role of their own in the meeting), they become familiar with the content of the improvement cycle materials.

These planning sessions also involve attention to the leadership aspects of project implementation. Since RBS does not provide resources for teacher release time, the participating ISA, LEA, and building must plan for, and then seek, their own resources. Local leadership also witnesses the planning for and actually carries out many of the leadership functions described in the leadership materials. Strategies for building support within the ISA, LEA, and building are also discussed in these meetings, as well as the planned transfer of project leadership to local participants and strategies for diffusion to other staff or buildings. Thus, both the improvement cycle materials and the leadership materials are presented in a modeling process.

The large number of ISAs, LEAs, and schools in the region requires that training for disseminators of the instructional improvement method be carried out more rapidly than is permitted by the modeling process in development sites. For this reason RBS has developed and, just recently, initiated staff development institutes. These institutes are scheduled

to allow for both group classroom training and practical experience in implementing the improvement approach in a school. After learning the technical and leadership skills for a phase, institute participants implement that phase of the instructional improvement cycle in a school in their own region. This implementation may include sessions conducted in the presence of an institute leader. Prior to implementing a phase of the instructional improvement approach, participants also may visit development projects or view and critique videotapes of instructional improvement sessions held at various levels (ISA, LEA, or building planning meetings, or a teacher session). Institutes may be structured so that each ISA participant attends sessions with a supervisor from the district where the improvement approach is to be implemented; it also may be possible to include building leaders from the district in some of the institute sessions.

SEAs, ISAs, teacher training institutes or teacher centers may sponsor institutes. Sponsorship by a teacher training institution may provide additional incentive, however, in the form of course credit, or additional resources to instructional improvement efforts (e.g., resource personnel for certain school or classroom improvements, assistance with classroom observations from undergraduates in a practicum experience, etc.).

In fact, the logistics problem is solved only partially by RBS participation in the two methods of training leaders, modeling and institutes. Since the approach requires the development of local capability, a turnkey strategy, participants teaching potential participants, is also useful in solving the logistics problem.

In development sites where local leaders are trained by modeling the leaders are expected to sustain the project and train other personnel in the improvement cycle and leadership aspects of the approach. ISAs, LEAs, and principals in development sites were asked to make two commitments: they would participate in planning and training sessions so they could be trained, and they would provide training to other LEAs, principals, or teachers. RBS made every effort to make clear, at the outset, that direct assistance from RBS would fade as local leaders acquired the necessary skills and experiences. A person trained by his or her participation in a development project or an institute is expected to model for others. For example, once an ISA person has developed the skills, understandings, and local capability necessary for the improvement approach with one person in a district (by working collaboratively in a development school), the ISA person may then turn to work with another district or another ISA. Meanwhile, the district person collaboratively develops the approach with other schools in the district and maintains the improvement approach in the original school site. Similarly, once a principal has worked with a district person to develop collaboratively the approach in his or her school with some of the staff, he or she can maintain the approach in the school, gradually involving the remainder ot the staff.

The turnkey strategy also can be used in conjunction with institutes. For example, once an ISA person has been trained in an institute (or in a development project), the ISA person may continue the dissemination effort by holding institutes for other LEA and building personnel. The RBS

experience with the Pennsylvania School Improvement Program indicates that ISA personnel are hesitant to hold institutes for LEAs on a process with which they have not had sufficient personal implementation experience. The institutes for ISAs could serve as a model for an ISA institute for LEA and building personnel provided that part of the curriculum of the institute for ISAs focused on ways, means, and content for such second-level institutes. In this way, the institutes also can be turnkeyed from ISAs to LEAs and from LEAs to buildings.

Status

What has been accomplished? What are the results of this use of research to guide implementation and dissemination of the instructional improvement approach? These questions are addressed in this section of the paper. The status report is organized by the two elements of the approach, systemwide collaboration and staff development, that are of special interest given the focus of this paper. The status of the other two elements, the four-phase cycle and the evaluation design, are discussed by Huitt and Rim (1980) and Rim and Segars (1980), respectively.

Systemwide Collaboration

Instructional improvement projects involving teachers, principals, and LEA and ISA personnel have been in existence for approximately sixteen months. During both the 1978-79 and 1979-80 school years, teachers from schools in four districts were involved in development site activities. Dissemination projects were established during the 1979-80 school year. At present, there are teachers from six schools, along with building, district, and ISA personnel, involved in these dissemination sites. Two of these schools are in a district with a development site, and the remaining three are in an ISA and district not collaborating in a development site. Urban, rural, and suburban schools are represented in both development and dissemination sites.

Although a number of new dissemination projects are anticipated for the 1980-81 school year, RBS has not yet devoted any serious amount

of attention or energy to dissemination. The dissemination efforts RBS is engaged in are the result of requests from the field. The efforts are expected to yield valuable information about the planned dissemination strategies. An institute now under way for SEA and LEA staff in Maryland* is expected to result in several operating instructional improvement projects. One or two institutes for ISA and LEA personnel in western Pennsylvania are being planned for August 1980; it is anticipated that these institutes will also result in dissemination sites.

Frequently, the requests to RBS to conduct such institutes have come from the field as a result of awareness activities RBS has carried out. Four issues of a newsletter, Instructional Improvement News, have been distributed to participants and key SEA and ISA personnel in Delaware, New Jersey, and Pennsylvania. In 1978 and 1979, RBS also hosted a conference on basic skills instruction for participants and key SEA personnel. Presentations at these conferences, as well as at conferences sponsored by other agencies, have also generated interest and support.

The collaboration of some of the SEAs with these projects has not yet reached the level that was intended. Where this is true, it seems that this is, at least in part, a reflection of the transition (from a regulatory role to a role of educational leadership) that the SEAs are undergoing. During this period, RBS is in communication with

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*Although Maryland is not now officially served by RBS, RBS has received a limited amount of funding to explore the possibility of including Maryland in the laboratory's service region. The institute mentioned here is one of the activities being conducted in Maryland.

the SEAs and they are kept informed about the approach and project activities. There have been expressions of support from individuals within SEAs, and there have been no unfavorable reactions to the work with ISAs.

Although the degree of participation of the ISA, LEA, and school principal varies from project to project, systemwide collaboration is in evidence. Teachers have initiated changes that require school- and district-level approval and support. For example, one district revised its scheduling of compensatory and special (art, music) programs to establish longer blocks of time when classroom instruction in basic skills would not be interrupted by such pullouts; this change involved district-level decisions and impacted instruction at all elementary schools within the district. In two districts, project participants submitted proposals for their staff development to the state inservice agency and received approval for granting course credits to participating teachers. All of the projects are utilizing existing time and financial resources to participate, which is the result of collaboration and a sense of ownership.

The sense of commitment and ownership is also evidenced by plans current participants are making for continuing and disseminating the approach. One ISA linker organized a consortium of districts that have submitted a Title II proposal to fund the training of district-level personnel in eleven LEAs. Another district with a development project school and two dissemination schools has submitted a proposal for state funding that would facilitate training of elementary school principals and some district supervisors not already participating in the project.

Systemwide collaboration does require constant attention. RBS's experience in development projects suggests that keeping personnel at all levels engaged in the projects requires the attention and planning of all involved. For example, in one of the urban LEAs in which a development site has been in existence for eighteen months, a third superintendent is to be hired. Each new superintendent must be oriented to the project and at the same time encouraged to feel ownership for the project. Although this may be an unusual situation, the need to attend to and nourish collaborative relationships seems clear. RBS's experience suggests, however, that the strategy is necessary and is worth the effort.

Although each project utilizes the four-phase improvement cycle, each project is unique. In some schools, teachers make the observations of student engaged time that are part of the data collection effort; in other schools, the principal or a curriculum specialist makes these observations. The sequence, ordering, and number of observations made during the year also vary. Funding for teacher release time or for inservice credit provisions varies from project to project, as does the climate for volunteerism and participative decision making. Although the leadership materials stress voluntary participation at all levels, some participants, especially teachers, participate as the result of persuasion--persuasion that ranges from low- to high-key. In some projects an entire school faculty has been involved from the outset; other project schools have only some of the teachers involved. At one development school, several teachers, along with the principal, are using the RBS staff modeling

experiences as staff development for their own dissemination of the approach to other faculty members. These are but a few of the ways in which the existing projects differ.

The collaborative process involved in some of these projects has been observed by RBS staff whose major assignment is the documentation of the various school improvement efforts currently under way at RBS. One of these reports, a case study written by a participant-observer of the basic skills instructional improvement approach (Donner, 1980), describes both initial design and development activities at RBS and field experiences at some of the project sites. Two other reports (Firestone & Corbett, 1979; Herriott & Firestone, 1979) discuss the activities of three RBS school improvement efforts, including the basic skills instructional improvement approach, from the perspective of the change process (e.g., the importance of school context, the influence of linker behavior, etc.).

Staff Development

The status of the staff development materials and of training efforts, both for participating teachers and project leaders, is described below.

Materials. Initial instructional improvement cycle materials have been developed for the student engaged time variable. The materials for project leaders include suggested strategies, agendas, and outlines for teacher staff development sessions, as well as videotapes and exercises that permit leaders to ascertain whether or not teachers can meet specified criteria in using the data collection techniques.

Initial materials for use of the four-phase cycle as applied to two opportunity-to-learn variables, prior learning and criterion relevant instruction, are now being developed.

The research, as well as the experience of the instructional improvement projects, suggests that attention should be paid to the processes and skills needed to provide necessary staff development and to establish and maintain the type of systemwide collaboration that is proposed. Initial leadership materials for SEA, ISA, LEA, and building participants are being designed to facilitate development of this capability. This development task requires experience with development projects to identify necessary topics and avoid duplication of already existing leadership programs. As discussed above in the section on methods, a framework for these materials has been established; but few of the materials have been developed, however. Initial versions of the materials will be used and tested in some of the forthcoming institute sessions and in development projects.

Staff development for teachers. More than fifty teachers have participated in the staff development activities for student engaged time, and approximately fifteen teachers are now engaged in the staff development related to the context variables of prior learning and criterion relevant instruction. As reported in Huitt and Rim (1980), teachers have had little difficulty in learning the observation technique for engaged time. The activities have been well received by teachers; most report that the inservice treats them as professionals, brings teachers and supervisors together, and impacts instruction.

Staff development for project leaders. To date, almost all project leaders have received their inservice through participation in development projects. Two of four trained ISA participants at present are modeling the approach for a district or school that is not a development site. Two of nine trained district personnel are assuming increasing responsibility for the training of teachers in their district.

Staff development is provided for project leaders as a way of building local capability. Perhaps the least successful of the efforts to establish local capability has been the effort to have building principals assume responsibility for their teachers' staff development. Some building principals have not been responsible for staff development and seem hesitant to assume this responsibility. These principals are accustomed to staff development that is arranged by the district and led by an outside expert, frequently from an ISA or a college. The staff development for the instructional improvement approach must continue to stress the rationale for changes in perceptions and roles for the ISA, LEA, and building principal. At the same time, it is recognized that the day-to-day demands on building principals are extremely time-consuming. If ways can be found to make the principal's leadership of inservice less demanding of his or her time, the approach may be more successful in this area. At present, RBS is exploring the possibility of preparing more of the inservice for teachers on videotape; this may reduce the amount of preparation time for principals.

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