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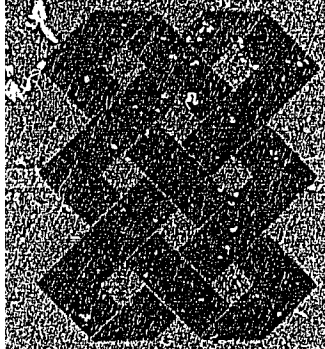
ABSTRACT

The objectives of the Pennsylvania School Improvement Program (PSIP), funded by the National Institute of Education from 1976 to 1980, were to help schools analyze basic skills needs and improve student performance through the use of research-based programs and techniques. The data uncovered the need to improve instructional management, improve staff communication, individualize instruction, expand the range of supplemental materials, assist slow learners, provide inservice training on teaching strategies, articulate curricula, and provide instruction for teachers on how to assist students in applying skills in new situations. As a result of PSIP activities, 196 staff members were trained in a problem-solving approach to school improvement. Initial data on students indicate a trend toward better scores on standardized tests. During the course of the project several resource materials and strategies for program improvement were developed. The primary resource product is a three-volume handbook of strategies for curriculum development that is designed for use by school consultants. (JEH)



Pennsylvania School Improvement Program

Executive Summary

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Department of Education
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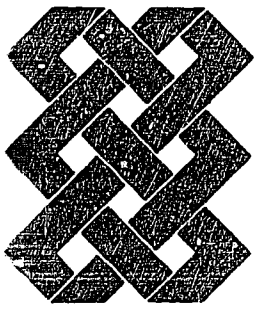

Pennsylvania
School
Improvement
Program

Executive Summary

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The Pennsylvania School Improvement Program

An Executive Summary

I. BACKGROUND

The Pennsylvania School Improvement Program (PSIP), one of seven research and development utilization (RDU) projects funded by the National Institute of Education (NIE) to increase classroom use of research and development products, operated from July 1976 to January 1980.

The federal government had spent billions of dollars funding research and development of educational products and processes, though few of these R&D products were widely used in schools. The RDU projects were expected to help schools use a problem-solving approach to curriculum improvement that would ultimately result in the installation of R&D products in the schools.

PSIP Model

PSIP was designed to take schools through a structured problem-solving process to identify target areas for improvement in reading and mathematics and to plan and implement curriculum improvement in these areas.

The overall objectives of PSIP were: (1) to help schools analyze basic skills needs and (2) to help schools improve student performance in basic skills through the best available programs and techniques produced by research and development.

Originally the Pennsylvania School Improvement Program linked the Pennsylvania Department of Education, Northwest Tri-County and Colonial Northampton intermediate units, and research and development (R&D) agencies with ten pilot school districts. The research agencies are (1) Research for Better Schools, (2) Research and Information Services for Education and (3) the Learning Research and Development Center.

The basic structure of PSIP was built on the idea that an intermediate-unit person serving as an educational extension agent could facilitate two-way communication between a local school and sources of R&D outcomes and products. This "linker," supported by a team of persons from the R&D agencies, provides technical assistance to a site. This team is called, for PSIP purposes, a school assistance team (SAT). The SAT works cooperatively with a building-level local action team (LAT) made up of teachers, the principal and perhaps a consultant specialist to analyze both student and program needs and then to select and implement an R&D outcome that meets these needs.

There were four major phases in the PSIP process: (1) needs assessment, (2) knowledge consolidation, (3) selection and (4) implementation. Each phase incorporated structured LAT/SAT workshop activities and follow-up carried by the linker. This sequential process resulted in the upgrading of the LAT members' skills in the use of needs analysis techniques to improve instruction, in the documentation of priority areas for improving the basic skills program, in reviewing available instructional options and in implementing education strategies.

The PSIP model and process were tried through three distinct phases during the 43-month funding period. The first year involved the development of the original concept of the IU linker and the SAT team providing on-site technical help to building-level action teams. During the developmental phase two intermediate units (one linker in each IU) and nine school districts (one school building in each district) participated. There was intense, on-site involvement of the R&D agency persons backing up the IU linkers. The first year saw the development and field-testing of workshops in the PSIP Curriculum Improvement Process. The field-testing modules for these workshops were incorporated into a *Linker's Handbook* for use during the second year of PSIP.

During the second, or demonstration year of PSIP, the R&D agencies moved away from intensive, on-site involvement to the development of linker resource materials and to linker training activities. During this demonstration year the two original IU links were maintained and 13 school districts/schools participated. In addition, potential linkers from three other IUs monitored the process.

The last 18 months of PSIP saw the school improvement program extended to seven intermediate units and 29 school districts. The revised PSIP phase was characterized by refinements to and adaptations of the original process and model to meet the needs of each IU and its participating schools.

At the end of its funding period, PSIP was characterized by a structured school improvement process, directed by an IU linker, that during one school term brought a school from needs assessment to an approved plan for implementing a school improvement activity.

The PSIP Process

The PSIP process that evolved from the 43 months of field activities in 29 school districts maintained the basic elements of needs assessment, knowledge consolidation, selection and implementation. This process was refined and modified to become cost-efficient and flexible in allowing for the unique characteristics of each local site. PSIP is now characterized by a structured but more flexible, process which includes clearly defined responsibilities for both the linker and the local action team and an abundance of appropriate resource materials for the linker's optional use. The involvement of external agencies at the sites was reduced to a minimum. Schools enter the project voluntarily because they feel a need to improve curriculum. A set of specific milestones critical to a site's progress in the School Improvement process has been defined.

The milestones refer to the critical activities that must occur to ensure access as a school level-team progresses through the structured process for school improvement. The milestones are reached in four stages.

PRELIMINARY ACTIVITIES FOR SCHOOL IMPROVEMENT

Preliminary activities include three milestones: (1) identification of a priority area, (2) school commitment to participate and (3) preliminary planning for PSIP.

NEEDS ASSESSMENT

Needs assessment activities include four milestones: (1) problem within priority area defined, (2) student needs identified, (3) program needs identified and (4) summary of student, program and staff needs prepared.

SELECTION

Selection activities include two milestones: (1) identification of a set of alternate programs or products that meet needs, (2) selection of a program to be installed or, if all programs are rejected, entering a curriculum development process.

IMPLEMENTATION AND EVALUATION

Implementation and evaluation activities include four milestones: (1) development and approval of an implementation and evaluation plan, (2) installation of a program or product, (3) evaluation of impact of the program or product and (4) program decisions based on the evaluation.

II. PSIP — THE FINDINGS

The PSIP process offers opportunity and direction to participants and recipients. It is a viable curricular improvement strategy. It is a school improvement process. The evaluation findings from PSIP reveal that schools have common problems and that the school improvement process is affected by certain factors.

Common Problems Identified

In general the schools involved in PSIP were aware of the problems within their school for an average of four years. However, until PSIP there had been no focused effort to analyze these problems and to design solutions. The PSIP data show that 10 common problems cut across all 29 schools: (1) need for instructional management system, (2) staff communication, (3) need to individualize instruction, (4) limited range of supplement materials, (5) problems of the slow learner/underachiever, (6) inservice to generic teaching strategies, (7) lack of articulated curricula, (8) student motivation, (9) need for an overall integrated curricula and (10) how to teach for student mastery of skills so students can apply them in new situations.

Factors that Affect the School Improvement Process

Schools that completed the PSIP process and implemented, or expect to implement, a change in the schools' curriculum had the following characteristics: (1) the local action team represented the total school staff in terms of experience, training, age and tenure; (2) strong leadership existed within the local action team; (3) the principal was active on the local action team; (4) the linker had access to resource materials and resource persons; (5) there were structured workshops for the local action team; (6) there was good communication with total school staff; (7) the central office gave strong administrative support; (8) school boards were supported by the central office; (9) school boards supported the PSIP involvement; (10) there was a history of cooperation at the site; and (11) specific roles and responsibilities were defined for both the local action team and the linker.

The data support the importance of these factors above in moving a school successfully through the PSIP process. The PSIP linker-LAT combination could not function successfully without strong LAT leadership, principal involvement, central office support, staff communication and LAT role-definition, etc.

Variations in site characteristics did influence the rate of a school in the process. In those sites where LAT leadership was weak or the principal involvement was token, the process took longer. Staff communication levels did not significantly affect the progress of a site because the PSIP process included built-in internal staff-communication activities. The clarity of LAT-role definition also appeared to influence the effectiveness of the process. In schools where the LAT knew its roles and responsibilities, there was steady progress. However, it should be noted that the key to successful school improvement is the PSIP model's use of trained linkers and resources in a structured way. Because all other variables or site characteristics were present before entry into PSIP, the PSIP model appears to be the catalyst that moved a school to install a curricular improvement in response to an identified need.

On the basis of the information generated within PSIP, it is apparent that an external agent can successfully direct a school to use a problem-solving, decision-making approach to school improvement. The PSIP model assures that this external agent is adequately trained and backed by both the appropriate materials and human resources needed to provide effective leadership for school improvement.

A profile of the consultant skills that effective linkers need was produced during this project.

III. PSIP – IMPACT AND OUTCOMES

General Impact

The basic objectives of PSIP were to provide schools a strategy to analyze their educational programs in relationship to research-based processes for curricular improvement. Although it is too soon to measure the success of PSIP in terms of better student performance in basic skills, some intermediate goals of the project have already been achieved. One of the goals reached was to establish strong linkages among Pennsylvania's educational agencies. A second was to make the state's intermediate units better disseminators of a problem solving process. This has happened. The third objective was to encourage high-level involvement of teachers and administrators with the educational R&D community to make classroom improvements. This was demonstrated. Everyone involved in PSIP has learned a great deal from the experience. Much of what has been learned and documented promises to be of value to people reviewing research of the use of R&D outcomes.

PSIP purported to accomplish certain goals, and it did just that! Despite the challenges of the unique conditions of each local school district where it was implemented, the project was successful in the following ways: (1) a network of resource agencies helped schools or performed other project-related tasks; (2) linking agents from intermediate units coordinated the services provided to schools and school districts; (3) training and technical assistance served both those who provided school-based services and school personnel; (4) the project dealt directly with schools or school districts; (5) the school improvement activities were supported at the site by a local decision-making group known as a local action team; and (6) there was a "knowledge" base of validated educational research and development products identified and used in the selection process.

The PSIP experiences in 29 districts supported the validity of the PSIP model. A team of resource persons working with a school LAT through an IU linker in a problem-solving approach to curriculum improvement *does result in change* at the local level. Improvements have been accomplished in (a) communications, (b) teacher involvement, (c) program planning, (d) teaching methods, (e) problem-solving, (f) reaching target groups and (g) morale and school reputation.

Impact and Outcomes in School and IUs

As a result of PSIP activities in Pennsylvania 196 professional staff persons in 29 school districts have been trained in a problem-solving approach to school improvement. Eighteen schools in these districts have implemented curricula changes in 387 classrooms affecting 387 teachers and 8,594 students. The 387 classrooms range from kindergarten to ninth grade. In addition eleven schools are in the final phases of PSIP and will continue beyond its termination date, so that by the end of the 1979-80 school term all 29 school districts will show PSIP outcomes at the classroom level.

The effects of PSIP upon student achievement in basic skills are not available at this time. However, initial data on students indicate a trend toward better scores on standardized tests. Teacher judgment also supports this favorable trend.

The IUs that participated in PSIP have linkers who have expertise in helping school districts improve curriculum. In addition the PSIP process has been applied widely in content areas beyond basic skills, both in the IUs and in the school districts.

Serendipitous Outcomes

There were many unanticipated effects of PSIP. First, in all of the participating IUs the PSIP model/process has been adapted and modified by IU staff in a variety of ways. Second, the PSIP experiences of school district staff have opened up new career positions in the districts, redefined teacher roles and responsibilities and broadened professional interactions beyond the confines of the LEA. Third, staff communication has improved in all of the LEAs. Fourth, school boards have learned to respect teacher input, and teachers and principals have developed new relationships. Fifth, while going through PSIP, teachers and principals became aware of current research on teaching and immediately began to modify their practices. Many more unanticipated outcomes could be listed, but one stands out: the linkage role is a major responsibility of IU curriculum coordinators.

Resource Materials

During the course of the project several resource materials and strategies for program improvement were developed. A catalog *(Resources for Educational Program Improvement)* was prepared by the National Institute of Education to describe in detail the sixty products developed by all seven of the projects.

PSIP generated nine resources which were used during the life of the project. A brief description of those nine resources follows:

Title	What it is/how it was used
1. The linker's handbook for curriculum improvement strategies, Vol. I-III	Principal resource guide for implementing the program improvement strategy used in the project.
2. Intrinsic analysis training manual	an instructional manual to teach schools how to analyze curriculum materials
3. Curriculum analysis: an aid to selection, adaptation and implementation of curricula	Paper describing the process outlined in the Intrinsic Analysis Training Manual (See #2)
4. Consultant/linker knowledge and skills inventory	self-assessment tool for linkers and consultants
5. Ready resource file for linkers	compendium of articles and information keyed to skills and knowledge linkers need
6. A synthesis of research in basic skills	Provides schools with information about effective instructional practices based upon research
7. Bridging the gap: defining the role of research and development in meeting local curricular needs	AERA presentation by Pennsylvania linkers describing their jobs and their project
8. The researcher: working with linking agents to bring research to schools	AERA paper discusses relationship between R&D professionals and linkers
9. Checklist for the PSIP school improvement process	a checklist of the critical milestones and activities to be completed by a school level team as its progresses through a process for school improvement

IV. COMMENTS ON SUCCESSFUL SCHOOL IMPROVEMENT

On the basis of the PSIP experiences, it is apparent that there are certain elements critical to successful school improvement. The district and the school must be committed to participation in the problem-solving approach to decision-making. Both human and material resources must be provided to enhance the process. The fact that change is not easy and takes time must be accepted by the participants.

Schools must be ready for the school-improvement process. They must not only commit themselves but agree that improvement is needed, that internal leadership will support the process and that staff time will be made available.

Successful school improvement must be targeted both in terms of the curriculum and the administrative unit (preferably the school building). The involvement of a representative team of teachers in problem-solving, plus strong support from the building principal and the central office, is a must. Both internal and external linkers are needed to nudge the school teams when the process bogs down.

On the basis of the PSIP data it is apparent that the largest amount of time is needed for needs assessment activities. This phase uses 50 percent of the allotted time for the total process, regardless of the total time period available. Selection activities use 30 percent of the time allotted; and planning for implementation and evaluations takes up the remaining 20 percent.

Successful school improvement is efficient when a linker is involved and when a structured problem-solving process backed by an accessable resource based is used by the linker.

In conclusion, the novice "school improver" would benefit by using the following reminders developed during the PSIP experience.

Checklist of Reminders for School Improvement Activities

The following 13 reminders are to be viewed as approaches, directions or considerations which should be given some attention before or during a major school improvement effort. The reminders have been documented in the research literature and reflect the findings of the Pennsylvania School Improvement Program.

REMINDERS

(1) School readiness: Assess the "climate for changes" in a school.

(2) Administrative Commitment: Assure school board and administration support of the program.

(3) Leadership: Identify school staff person responsibility for coordination; consider involvement of external facilitator.

(4) School as the Target: Aim program at the school building level rather than the district level.

(5) Focus the Direction of Program: Select program priorities and concentrate on those areas (i.e., motivation, reading comprehension).

(6) Teacher Involvement: Plan for representative involvement of teachers when school/curriculum changes are decided.

(7) Community Involvement: Plan for representative involvement of community and parents, particularly at implementation stage.

(8) Effective Communication: Arrange for extensive use of existing communication channels to share program progress and direction.

(9) Structured Problem-Solving Process: Follow a proven structured process but maintain flexibility to accommodate unique school needs.

(10) Pertinent School Data: Obtain existing school-related data such as long range plans, previous evaluations, EQA, community surveys, etc.

(11) Student Achievement Date: Obtain or generate student achievement data from standardized or teacher-made tests, grades or other data sets.

(12) Potential Solutions: Identify relationship with agencies (i.e., RISE, EPIE, PDE) with resource bases containing potentially useful products or practices.

(13) Resource Commitments: Have resources committed (teacher time and money) to support completion of analysis and planning for program implementation.

PSIP PARTICIPANTS

School Districts/Schools

Central Green S.D.
East Franklin Elementary School

Jamestown Area S.D.
Jamestown Elementary School

Warren S.D.
Lander Elementary School
Scandia Elementary School

Northwestern S.D.
Northwestern Elementary School

North East S.D.
Earle C. Davis Elementary School

General McLane S.D.
James W. Parker Middle School

Erie Catholic Diocese
St. Boniface Elementary School

Girard S.D.
Rice Avenue Middle School

Crawford Central S.D.
Crawford Third District Elementary School

Penncrest S.D.
Randolph-East Meade Elementary School

Warwick S.D.
Warwick Middle School

Lampeter-Strasburg S.D.
Martin Meylin Jr. High School

Pequea Valley S.D.
Pequea Valley Sr. High School

Annville-Cleona S.D.
(Districtwide K-12; all schools)

Palmyra Area S.D.
Palmyra Area Middle School

Bethlehem Area S.D.
Donegan Elementary School

Nazareth Area S.D.
Lower Nazareth Elementary School

Bangor Area S.D.
Five Points Elementary School

Pleasant Valley S.D.
Polk Elementary School

East Stroudsburg S.D.
Smithfield Elementary School

Pen Argyl S.D.
Wind Gap Elementary School

Delaware Valley S.D.
Delaware Valley Middle School

Saucon Valley S.D.
Reinhard Elementary School

Marion Center Area S.D.
Marion Center Elementary School

Blairsville-Saltsburg S.D.
Blairsville-Saltsburg Jr. High School

Williams Valley S.D.
Williams Valley Elementary School

Minersville Area S.D.
Minersville Elementary Center

Blue Mountain S.D.
Blue Mountain Middle School

Tri-Valley S.D.
Tri-Valley Elementary School

PSIP PARTICIPANTS

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Research and Development Agencies

Learning Research and Development Center, University of Pittsburgh
Research and Information Services for Education
Research for Better School, Inc.

Intermediate Units

Intermediate Unit 1
Midwestern Intermediate Unit 4
Northwest Tri-County Intermediate Unit 5
Lancaster-Lebanon Intermediate Unit 13
Berks County Intermediate Unit 14
Colonial Northampton Intermediate Unit 20
Arin Intermediate Unit 28
Schuylkill Intermediate Unit 29