DOCUMENT RESUME

ED 099 456 UD 014 693

AUTHOR Foat, Classie M.
TITLE Selecting Exemplary Compensatory Education Projects for Dissemination Via Project Information Packages. Report No. UR-242.
INSTITUTION RMC Research Corp., Los Altos, Calif.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Office of Planning, Budgeting, and Evaluation.
REPORT NO RMC-UR-242
PUB DATE Aug 74
NOTE 58p.

EDRS PRICE MF-$0.75 HC-$3.15 PLUS POSTAGE
DESCRIPTORS Case Studies; *Compensatory Education Programs; Disadvantaged Youth; Economically Disadvantaged; Educational Research; Information Dissemination; *National Surveys; *Program Evaluation; *Research Methodology; Success Factors; Teaching Methods; Underachievers

ABSTRACT

This report is the third technical report submitted to the U. S. Office of Education in connection with a study the overall purpose of which was to choose up to eight successful education programs serving underachieving, poor children and to design "Project Information Packages" for each of them. These Project Information Packages were to serve as vehicles for disseminating successful reading and math programs to schools where current practices are less successful. The purpose of this report is to describe the methodology used to select the successful approaches for packaging and to provide a listing of all candidate projects showing why some were rejected and others accepted. Results indicate that of the approximately 2000 approaches initially screened for this study, 136 were selected as possible candidates for packaging. A detailed analysis of the 103 projects which forwarded evaluative and descriptive documents resulted in the selection of six projects for packaging. Over half of the candidates for this study were rejected for failure to meet the effectiveness criterion. The six projects selected for packaging clearly met all of the established criteria and provided ample evidence to support their effectiveness. Even these projects, however, had serious deficiencies in their evaluations. In all cases it was necessary to obtain and reanalyze raw test score data before firm conclusions could be drawn. (Author/JM)

RMC Report
UR-242

SELECTING EXEMPLARY COMPENSATORY EDUCATION PROJECTS FOR DISSEMINATION VIA PROJECT INFORMATION PACKAGES

Classie M. Foat

August 1974

Prepared for
U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education/Office of Planning, Budgeting, & Evaluation

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view of opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

2/3

RMC Research Corporation
Los Altos, California

ACKNOWLEDGEMENTS

The author wishes to acknowledge the following persons for their assistance in the data collection and analysis process for this report.

Donald P. Horst
Diane Nelson Jones
Ann McCormick Piestrup
G. Kasten Tallmadge

Dr. Tallmadge read the complete draft and made many useful suggestions in revising this report.

C.M.F.

TABLE OF CONTENTS

LIST OF TABLES

Table

INTRODUCTION

This report is the third technical report submitted to the U. S. Office of Education in conjunction with Contract No. OEC-0-73-6662 entitled, "The Development of Project Information Packages for Effective Approaches in Compensatory Education." The overall purpose of the study was to choose, in conjunction with the Office of Education, up to eight successful education programs serving underachieving, poor children and to design "Project Information Packages" for each of them. These Project Information Packages, which described project management and teaching procedures, were to serve as vehicles for disseminating successful reading and math programs to schools where current practices are less successful.

The purpose of this report is to describe the methodology used to select the successful approaches for packaging and to provide a listing of all candidate projects showing why some were rejected and others accepted. The criteria used to select projects for packaging were developed during Task I of the contract effort and are reported elsewhere (Tallmadge & Horst, 1974). This report should be consulted for a full discussion of the selection criteria and underlying rationales. Briefly, however, each candidate project was reviewed with respect to the following criterion dimensions:

Relevance. Projects serving underachieving poor children in grades K through 12 aimed at producing cognitive achievement benefits in reading and/or math.

Availability. Ability of investigators to obtain enough information to validate the project's success and analyze it in sufficient depth.

Accessibility. Documentation of procedures, results, and costs

available; personnel cooperative; can be visited for validation.

Acceptability. Conformity to Office of Education policy on dissemination; operational in public schools; not primarily a single, commercial product.

Cost. Recurring costs under $400 per pupil (subsequently modified to $475) plus start-up costs not to exceed $1,000 per pupil.

Replicability. Major components of personnel, materials, hardware, and environments can be duplicated. Development of major hardware, facilities, or training institutions not needed.

Effectiveness. At least two "instances"[1] showing evidence of educationally and statistically significant effects on achievement.

Educational significance. Achievement gains at least one-third of a standard deviation greater than expectations based on national norms or control group scores.

Statistical significance. No more than one chance in 20 ($p \leq .05$) that the observed gains could be due to chance.

Assuming that a sufficient number of projects could be found which met all of the above criteria, consideration would also be given to:

Variety. Difference in instructional strategy, breadth of target population served, subject matter focus, etc.

For a variety of reasons, as the study progressed, the following additional criteria were imposed:

1. An instance, here, may be defined as a single-group evaluation. More than one such instance must have shown positive results before a project would be considered.

- Support by USOE funds - project must previously have been, or currently be, receiving assistance from a USOE agency such as Right to Read, Title I, Title III, etc.

- Conformance to federal guidelines - project receiving USOE funds must not violate established criteria, regulations, and guidelines.

Finally, Bilingual programs, Follow Through programs, and programs sponsored by the Bureau of Indian Affairs were not to be included in the study.

Only six projects could be found which met these criteria. They were: (1) High Intensity Tutoring, Highland Park, Michigan; (2) Intensive Reading Instructional Teams, Hartford, Connecticut; (3) Programed Tutorial Reading, Davis County, Utah;[2] (4) Project Catch-Up, Newport Beach, California; (5) Project Conquest, East St. Louis, Illinois; and (6) Project R-3, San Jose, California. No claim is made that these six projects are the six "best" projects in the country. Other, equally effective projects may exist but, of those which came to light during the course of a rather extensive nationwide search, only these six had adequate empirical evidence to support their success.

2. Programed Tutorial Reading was developed at Indiana University and has been successfully implemented in a variety of sites across the country. Its effectiveness, for the purpose of this contract effort, was validated at the Davis County site. The other five projects were validated at the sites where they were originally developed.

THE SEARCH

Originally, it was not the intent of this study to undertake a wide-scale search for successful projects similar to that which characterized the Wargo, Campeau, and Tallmadge (1972) study. Candidate approaches were to be identified through USOE-provided lists of projects previously identified exemplary by other investigators. An initial list of twenty-three promising approaches was provided by the U. S. Office of Education at the onset of the project. It was assumed then that most, if not all of the projects to be packaged, would come from that list. Unfortunately, only three met the established criteria, and the search had to be extended to include other lists of exemplary projects, nominees from state- and federal-level agencies, projects included in the 1971 and 1972 Ed Fairs, and projects identified through personal professional contacts. It is estimated that prior to the selection of the final six projects, the original list of twenty-three grew to well over 2,000 projects.

The initial screening process began with a weighing of the project against the prerequisite criteria of grade level, content area, target population, and number of evaluation "instances." Briefly, a project was considered a "possible" candidate for packaging if (1) its approach was aimed at producing reading or math benefits, (2) if its approach was used with "target" (as defined within the guidelines of Title I) children in grades K through 12, and (3) if the approach was evaluated more than once. In most cases, information from the original nomination source centered around content area and grade level information with brief project descriptions and one- or two-line statements of the evidence of success and availability. Projects which clearly did not appear to meet the prerequisite criteria were eliminated from further consideration. Occasionally, enough information was available at this juncture to eliminate projects for other reasons as well. Some, for

example, were easily recognizeable as single commercial projects (e.g., Alpha One, PLAN) and others were clearly not USOE-funded. Of the approximately 2,000 approaches reviewed, 136 (about 6.8%) remained in the study for follow-up data collection and were considered viable candidates for packaging.

DATA COLLECTION PROCESS

The first step of the data collection process entailed obtaining telephone numbers, addresses, and names of project directors or persons thought to be closely affiliated with each candidate project. In some instances, this information was readily available from the original nomination source. In a large number of instances, however, it had to be obtained through calls to information operators, telephone directories, person-to-person calls to the LEA Superintendent's office, and through educational directories such as Patterson's, Schools and School Personnel. Again, every effort was made to verify the existence of the project and identify the contact person. Only four projects had to be excluded from consideration because the contact person could not be identified within the time constraints of the data collection task.

Once the contact person, phone numbers, and addresses were located, phone call or letter contacts were made to the designated person(s). All candidates in the initial pool were telephoned to expedite the receipt of information. Later, however, letter contacts were made with increasing frequency. In both letters and telephone contacts, the purpose of the study was discussed and descriptive and evaluative information with respect to the project selection criteria were requested.

More than 394 phone and letter contacts were made to the 136 projects during the data collection process. These contacts included the sending of acknowledgement letters to the 62% of the projects initially responding, and final contact letters and post cards to those projects not responding after a two-month waiting period. Many additional follow-up calls were made to projects thought to be among the final candidates for packaging to collect raw data and/or to fill information gaps.

Useful information was received from 103 or 76% of the projects contacted. Four other projects also responded but only to indicate that

they had been or were about to be terminated or that no project information was available. No responses were obtained from the remaining twenty-nine projects (21%) although four of these had indicated through the return post card that information would be forwarded.

SELECTION PROCEDURES

As promotional literature, descriptive information, and/or evaluation reports were collected, each of the remaining 136 projects was reviewed by one or more members of the research staff. The initial review entailed reading the evaluative and descriptive literature noting which of the established selection criteria appeared to have been met and which were not met by the project. Often it became clear at this point that projects were not suitable for packaging.

Projects which survived the initial screening were subjected to a further in-depth review and analysis. Unfortunately, the information available on projects was typically inadequate and inconclusive. For this reason, formal review meetings were held periodically involving the entire research team. At these review meetings, all information on file for each project was summarized in terms of the selection criteria and, upon the consensus of the group, each approach was placed into one of four separate categories: (1) information not yet received, (2) unlikely, (3) low priority, and (4) likely (or possible). Those projects grouped into the "no information" category were re-grouped after information was received into one of the three remaining groups.

Programs were placed into the "unlikely" category only when one or more of the selection criteria was clearly not met. They were not considered further for packaging. Included in this category were Bilingual programs, Follow Through programs, projects already packaged, projects requiring substantial architectural changes to school buildings, and projects still in the developmental stages. Also included in the "unlikely" category were those projects for which evaluative data were absent, scanty, or uninterpretable.

Those projects which were considered "low priority" were projects which appeared to meet the preliminary screening criteria but which

presented one or more evaluation or packaging problems. In many instances, data were inconclusive, not particularly promising, and would have required massive reworking before valid inferences could be drawn. Other projects were placed in the low priority category because charismatic leadership appeared to be essential to their success, because the economic interests of project developers were threatened by the type of packaging to be undertaken, or because the nature of the project suggested the need for excessively expensive packaging techniques or media. Each low priority project was reviewed in considerable depth by the research staff, and every effort was made to salvage as many projects as possible.

After each review meeting, efforts to obtain additional information were focused on those projects in the "high priority" or likely category. Contacts were immediately made to request more extensive evaluative and descriptive data. As these data were received, it was always necessary to conduct some reanalysis to satisfy the requirements of the validation process described in the Tallmadge and Horst (1974) report. Arrangements were finally made to site visit projects which survived this level of scrutiny in order to make final validity checks to collect complete and final information on project methodology.

Although eight project directors were contacted by telephone, and arrangements for site visit dates and times were mutually agreed upon, only seven projects were visited. One visit was cancelled at the last minute because analysis of raw data received three days prior to the scheduled visit indicated that the established criterion of educationally significant achievement gains was not met.

In all instances, it was made clear to the project directors that the final selection of their program was not only dependent upon the outcome of the final evaluation but also upon the approval of the project by the USOE Dissemination Review Panel members.

Prior to the site visit of each project, all documents previously received were again reviewed and specific questions related to the

development of a Project Information Package were prepared for each site. The procedure used to develop questions entailed examining the available documentation as it related to each of the nine components of the projected Project Information Package, and identifying gaps or areas of missing information. Questions were then designed to obtain the missing data. In addition, specific questions related to the criterion of effectiveness were developed for verification of program effectiveness and, in some instances, for in-depth analysis of raw data.

To obtain the desired information, arrangements were made for interviewing the project director, principals, teachers, instructional aides, students, and all other persons instrumental in the operation of the program, including district personnel and evaluators as needed.

Each site visit team consisted of one statistician and one research analyst from the RMC Research staff and one person from Learning Achievement Corporation. The visits usually started at the beginning of each school day and consumed three or four consecutive days. Copies of all materials thought to be relevant to the overall description of the program were requested, including samples of teacher-made materials, schedules, memos to staff members, PERT charts, and sample tests. Special emphasis was placed upon collecting information relevant to project management, personnel roles, and student roles in addition to instructional strategy. Cassette tape recorders were carried along for documentation and later review. Once the project was approved by the USOE Dissemination Review Panel, photographers were sent out to respective sites to photograph essential elements of the program for developing the Project Information Package.

Of the seven projects site-visited, one had to be rejected because it did not stand up under close scrutiny. In this instance, a detailed examination of raw data on site visitation revealed that test scoring irregularities had substantially inflated the apparent gains resulting from the project.

In toto, project selection was a continuous activity throughout the first eight months of the contract period. The initial selection, Project Catch-Up, was chosen during the third contract month. High Intensity Tutoring, Project Conquest, and Programed Tutorial Reading were selected during the fifth contract month. Project R-3 and Intensive Reading Instructional Teams were selected during the seventh and eighth contract months, respectively. Each of these projects was written up for and subsequently approved by the USOE Dissemination Review Panel before the end of the ninth contract month.

SUMMARY OF RESULTS

Of approximately 2,000 approaches initially screened for this study, one hundred thirty-six (6.8%) were selected as possible candidates for packaging. A detailed analysis of the 103 projects which forwarded evaluative and descriptive documents resulted in the selection of six projects for packaging. It was not possible to find eight projects which met the established criteria as was originally intended.

Appendix A reports the results of weighing each candidate approach against the established project selection criteria. Table I summarizes the frequency of rejections for each of the criteria. In examining both Appendix A and Table I, it should be remembered that rejected projects were examined only until a reason was found for rejecting them. Individual projects might have failed to meet several criteria, but no attempt was made to look for multiple deficiencies. The summary data, for this reason, do not necessarily reflect the frequency with which specific deficiencies exist. What they reflect is solely the frequency of occurrence of "first-noticed" deficiencies.

As indicated in Table 1, over half of the candidates for this study were rejected for failure to meet the effectiveness criterion. This reason for rejection must not be taken as an indication that the projects were unsuccessful—or even that they failed to produce cognitive achievement benefits. As is stated in the Tallmadge and Horst (1974) report, "What is rejected is not the project but the evaluation data which, if the decision-tree process has been carefully followed, have been shown to be inadequate as a basis for reaching any conclusion regarding project effectiveness [p.11]."

The six projects selected for packaging clearly met all of the established criteria and provided ample evidence to support their effectiveness. Even these projects, however, had serious deficiencies in their evaluations. In all cases it was necessary to obtain and reanalyze

TABLE 1

Summary of Reasons Projects Were Rejected

Readon for Rejection	Frequency	Percentage
Effectiveness	52	54%
Relevance	17	18%
Availability	11	11%
Bilingual	8	8%
Replicability	2	2%
Conformance to Guidelines	2	2%
Cost	2	2%
USOE Support	2	2%
Follow Through	1	1%
Total	97	100%

raw test score data before firm conclusions could be drawn.

Appendix B contains project descriptions (models) which were submitted to the U.S.O.E. Dissemination Review Panel for each of the six projects selected for packaging. While this sample of projects provides too small a data base for making generalizations, it is interesting to note how little the projects had in common. Pupil-teacher expenditures ranged from approximately $75 (High Intensity Tutoring, considering both tutors and tutees as program beneficiaries) to $468 (Project Conquest). Instructional strategies ranged from very highly structured (Programed Tutorial Reading) to completely unprescribed (Project Catch-Up). Instruction was provided by highly trained specialists (Intensive Reading Instructional Teams), by paraprofessionals (Programed Tutorial Reading), and even by fellow pupils (High Intensity Tutoring). Success was observed from grades K (Catch-Up) through 9 (R-3).

It is clear from the above that there is no single key to success in compensatory education. What characteristics make the selected projects work while so many others fail can only be the subject of speculation at the present time.

APPENDIX A

DISPOSITION OF PROJECTS EXAMINED IN DEPTH

DISPOSITION OF PROJECTS EXAMINED IN DEPTH

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Dougherty County School District Albany, Georgia	Elementary through high school remedial reading and math	Inadequate evidence of effectiveness
Bilingual Education Project Albuquerque, New Mexico	Elementary through high school Spanish and English literacy program	Outside project scope; Bilingual program
Cooperative Education Service Agency (CESA #8)	Elementary remedial reading and math	DISTAR program; all project materials copyrighted and sold by a single commercial concern
Model Early Childhood Learning Program Baltimore, Maryland	Piaget-type preschool; heavy parent participation	Outside project scope; age level 3-7
Project SEED, (Special Elementary Education for the Disadvantaged) Berkeley, California	Elementary remedial math	Not available; privately owned
Cooperative Individualized Reading Bridgeport, Connecticut	Elementary remedial reading	All project materials copyrighted and sold by a single commercial concern

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Mathematics Remedial Skills Program for Optional Assignment of Title I Pupils Brooklyn, New York	High school remedial math	Inadequate evidence of effectiveness
Comprehensive Reading and Math Program (formerly called PLUS Program) Buffalo, New York	Elementary remedial reading and math	Inadequate evidence of effectiveness
Project H.E.E.L.D. (Help Eliminate Early Learning Disabilities) Central Point, Oregon	K-1; remedial reading and math	Primarily a DISTAR program; project materials copyrighted and sold by a single commercial concern
"I" (Interdisciplinary) Project for the Handicapped Cherry Creek, Colorado	High school reading and math special education	Outside project scope; does not serve disadvantaged children
Juan Morel Campos Bilingual Center Chicago, Illinois	Elementary school TESL	Outside project scope; Bilingual program
Clarkston Community Reading School Project Clarkston, Michigan	Elementary remedial reading	Inadequate evidence of effectiveness

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Diagnostic Reading Clinic Cleveland, Ohio	Elementary remedial reading	Inadequate evidence of effectiveness
Title I Reading Program Corbin, Kentucky	Elementary and high school remedial reading	Not available, project staff unwilling to cooperate
Programed Tutorial Reading Davis County, Utah	First grade reading	Met all selection criteria
Success in Math Through Aural Reading (Project SMART) Daytona Beach, Florida	Elementary remedial math	Inadequate evidence of effectiveness
Metropolitan Youth Education Center Denver, Colorado	High school drop-out prevention entire curriculum	Inadequate evidence of effectiveness
Diagnostic Teaching Center Project Denver, Colorado	Elementary remedial reading and math	Inadequate evidence of effectiveness
Reading Diagnostic and Remediation Program Dover, Delaware	Elementary remedial reading	Inadequate evidence of effectiveness

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Project Conquest East St. Louis, Illinois	Elementary remedial reading	Met all selection criteria
Project PEGASUS (Personalized Educational Growth and Achievement; Selective Utilization of Staff) East Tuscaloosa, Alabama	Elementary reading	Outside project scope; children served mainly middle SES children
Remedial Reading Labs El Paso, Texas	Elementary and high school remedial reading (English)	Outside project scope; Bilingual program
After School Math Program Erie, Pennsylvania	Junior high school math	Not replicable; project closely tied to calculating equipment no longer manufactured
Summer Television Arithmetic and Reading Program Evansville, Indiana	Elementary summer school reading and math	Not replicable; project requires network broadcasting
Remedial Reading Flagstaff, Arizona	Elementary and high school remedial reading	Inadequate evidence of effectiveness
Tarrington School District Goshen County, Wyoming		Inadequate evidence of effectiveness

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Emerson Elementary School Project Granite City, Illinois	Elementary school reading	Outside project scope; children served are not disadvantaged
Systems Approach to Individualized Instruction Grants Pass, Oregon	Elementary school reading and math	Outside project scope; does not serve underachieving children
Project LEM (Learning Experience Module) Hackensack, New Jersey	Elementary school reading and math	Outside project scope; does not serve underachieving children
Higher Horizons 100 Hartford, Connecticut	High school complete freshman curriculum	Inadequate evidence of effectiveness
Intensive Reading Instructional Teams Hartford, Connecticut	Elementary remedial reading	Met all selection criteria
High Intensity Tutoring Center Program Highland Park, Michigan	Middle school remedial reading and math	Met all selection criteria
Communications Improvement Project Holt, Michigan	Elementary remedial reading	Inadequate evidence of effectiveness

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Hawaii English Program Honolulu, Hawaii	Entire curriculum across grade levels	Project still under development; inadequate evidence of effectiveness
Nanakulu Intermediate School Interest Curriculum Honolulu, Hawaii	Junior high school reading and math	Inadequate evidence of effectiveness
Huntsville Elementary Reading Program Huntsville, Alabama	Elementary remedial reading	Inadequate evidence of effectiveness
Learning to Learn Program Jacksonville, Florida	Preschool and kindergarten reading, math, etc.	Outside project scope; preschool and kindergarten program
Intensive Learning Program Kansas City, Missouri	Elementary school remedial reading and math	Project not in compliance with Title I guidelines
Project UPLIFT Kansas City, Missouri	Elementary school remedial reading	Inadequate evidence of effectiveness
Continuous Progress Program Kingstree, South Carolina	Elementary entire curriculum program	Inadequate evidence of effectiveness
BUENO (Bilingual Bicultural Program) La Puente, California	Elementary ESL	Outside project scope; Bilingual program

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Project INSTRUCT (Instructional System Teaching Reading Using Continuous Progress Technology) Lincoln, Nebraska	Elementary remedial reading	Outside project scope; children served are not disadvanteged
Criterion Reading Instruction Project Linden, New Jersey	Elementary remedial reading	Inadequate evidence of effectiveness
Action Reading Little Silver, New Jersey	Elementary remedial reading	All project materials copyrighted and sold by a single commercial concern
111th Street School Los Angeles, California	Elementary reading	Project not in compliance with Title I guidelines
Individualized Mathematics Learning System Project #1029 Los Angeles, California	High school remedial math	Inadequate evidence of effectiveness
Project STAR Los Angeles, California	Elementary reading	Inadequate evidence of effectiveness
Soto Tutorial Program Los Angeles, California	Elementary and junior high school reading	All project materials copyrighted and sold by a single commercial concern

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Model Schools for Model Cities Los Angeles, California	High school reading and math	All project materials copyrighted and sold by a single commercial concern
Re-Ed School Louisville, Kentucky	Elementary, junior high, and high school behavior modification	Outside project scope; serves emotionally disturbed children
Reading Clinic Lyford, Texas	Elementary remedial reading	Inadequate evidence of effectiveness
Early Childhood Preventive Curriculum Miami, Florida	First-grade reading	Excessive per-pupil expenditures
Liaison Teacher-Returnee Counselor Project Milwaukee, Wisconsin	High school counseling	Outside project scope; serves delinquent teenagers
The Pyramids Reading Program Minneapolis, Minnesota	Elementary and junior high school remedial reading	Inadequate evidence of effectiveness
Remedial Reading Labs Mishawaka, Indiana	High school remedial reading	Inadequate evidence of effectiveness

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Project STAY Moore, Oklahoma	Elementary interdisciplinary	Excessive per-pupil expenditures
Mountain View High School Mountain View, Calif.	High school reading and math	Inadequate evidence of effectiveness
Project Learning Disabilities New Orleans, Louisiana	Elementary remedial curriculum	Outside project scope; serves children with perceptual motor disabilities
Remedial Reading Program Newport, Rhode Island	Elementary, junior, and senior high school reading	Inadequate evidence of effectiveness
Project Catch-Up Newport Beach, Calif.	Elementary school remedial reading and math	Met all selection criteria
College Bound New York, New York	High school English and math	Inadequate evidence of effectiveness
Harlem Preparatory New York, New York	High school entire curriculum	Outside project scope; serves former dope addicts, jail inmates, unwed mothers, etc.
Homework Helper New York, New York	Elementary and junior high school reading	Inadequate evidence of effectiveness

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Junior High School Summer Institutes New York, New York	Junior high school reading and math	Inadequate evidence of effectiveness
P.S. 11 (More Effective Schools) New York, New York	Elementary remedial reading	Inadequate evidence of effectiveness
P.S. 91 New York, New York	Elementary remedial reading and math	Inadequate evidence of effectiveness
Reading Reinforcement IV North Adams, Mass.	Elementary reading program	Inadequate evidence of effectiveness
Pupils Advance in Learning Northglenn, Colorado	Junior high school reading	Inadequate evidence of effectiveness
Orbit II Program Oberlin, Ohio	Elementary reading and math	Outside project scope; serves above-average pupils
High Intensity Learning Centers Omaha, Nebraska	Elementary through high school reading	All project materials copyrighted and sold by a single commercial concern
Cross-Age Teaching Ontario, California	Elementary and junior high school reading and math	Outside project scope; serves above-average children

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Dale Avenue Early Childhood Education Center Project Paterson, New Jersey	Pre-school and elementary entire curriculum	Inadequate evidence of effectiveness
Early Prevention of School Failure	Kindergarten motor-coordination emotional-sound development	Outside project scope; serves pre-kindergarten children with speech, hearing, vision, language problems, etc.
Television Reading Program Philadelphia, Pennsylvania	Middle school reading	Inadequate evidence of effectiveness
Drop-Out Prevention Pine Ridge, South Dakota	High school reading and math	Outside project scope; Bilingual program
Project SOLO Pittsburgh, Pennsylvania	High school mathematics	All project materials copyrighted and sold by a single commercial concern
Transition Room Pittsburgh, Pennsylvania	Elementary reading	Inadequate evidence of effectiveness
Remedial Reading Program Poguaque, New Mexico	Elementary school reading	Outside project scope; Bilingual program
Follow Through Portageville, Missouri	Elementary school behavior analysis	Outside project scope; Follow Through program

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Program for Reading Development Portland, Oregon	High school reading	Inadequate evidence of effectiveness
Project Regional Rural Reading (RRR) Red Oak, Iowa	Elementary reading	Inadequate evidence of effectiveness
Hoover Elementary School Rapid Learning Center Redwood City, Calif.	Elementary and junior high school reading and math	Inadequate evidence of effectiveness
LASER Program (Learning Achievement Through Saturated Educational Resources) Riverside, California	Elementary school reading and math	Inadequate evidence of effectiveness
Math Laboratory Riverside, California	Junior high school math	Outside project scope; not USOE supported
Remedial Reading Laboratory (often referred to as Sherman Indian High School Project) Riverside, California	High school remedial reading	Inadequate evidence of effectiveness
Robbinsdale, Minnesota Learning Centers Robbinsdale, Minnesota	Elementary reading, language, arts, and math	Inadequate evidence of effectiveness

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Corrective Reading Roxbury, Maine	Elementary school learning disabilities	Outside project scope; serves handicapped, emotionally disturbed children
Learning to Learn Through Reading Sandy, Utah	Elementary school reading program	Inadequate evidence of effectiveness
Operation Prime Salt Lake City, Utah	Junior high school remedial reading and math	Inadequate evidence of effectiveness
Title I Program for School Year 1971-72 Salt Lake City, Utah	Elementary, junior, and senior high school reading and math	Inadequate evidence of effectiveness
Benjamin Franklin Junior High School Demonstration Program San Francisco, California	Junior high school remedial math	Inadequate evidence of effectiveness
Computation Skills Training San Diego, California	Military	Outside project scope: military program
Project R-3 San Jose, California	High school reading, math, and social studies	Met all selection criteria

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Educational Service Center San Mateo, California	High school language and math	Inadequate evidence of effectiveness
Tutorial Program Savannah, Georgia	Elementary, junior, and senior high school English, math, and social studies	Inadequate evidence of effectiveness
Rooms of 15 St. Louis, Missouri	Elementary remedial reading, language, and arithmetic	Inadequate evidence of effectiveness
English Rotation Project Thompson, Georgia	Junior high school reading	Inadequate evidence of effectiveness
The Bilingual Program Tucumcari, New Mexico	Elementary school reading (including English and Spanish) program	Outside project scope; Bilingual program
Model Schools for Model Cities Watts, California	Junior and senior high school reading and math	All project materials copyrighted and sold by a single commercial concern
Project Success for Specific Language Disabilities Wayne, Nebraska	Elementary language motor perception	Outside project scope; project serves children with speech and other motor and perception disabilities

Project Title/Location	Primary Characteristics	Reason for Rejection/Selection
Title I Project of Adams County School District 50 Westminister, Colorado	Elementary reading and math	Inadequate evidence of effectiveness
Armijo Bilingual Bicultural Program West Las Vegas, New Mexico	Elementary reading and math; Bilingual	Outside project scope; Bilingual program
Corrective Reading Wichita, Kansas	Elementary and junior high school reading	Inadequate evidence of effectiveness

APPENDIX B

PROJECT DESCRIPTIONS OF THE SIX PROJECTS SELECTED FOR PACKAGING

PROJECT TITLE: Project R-3

LOCATION: San Jose, California

PROGRAM AREA: Disadvantaged children; reading and mathematics

SOURCE AND LEVEL OF FUNDING: California statute AB-938 (Demonstration Programs) $208,000 for FY 1973. Right to Read funding for dissemination purposes.

PROGRAM START DATE: February 1967

BRIEF DESCRIPTION OF PROJECT:

Goals and Objectives

The main objective of Project R-3 is to upgrade essential reading and mathematics skills. By deeply involving the students in classroom games and simulation, the program seeks to motivate students to achieve in learning experiences—to make them ready to learn, to make learning relevant, and to reinforce positive attitudes and behavior.

The objective specific to the reading component of Project R-3 is to raise students' mean scores on a standardized reading test by one and one half months for every month the participants are in the program.

Context

Project R-3 began in February 1967 as a special program for disadvantaged, underachieving eighth-grade students. In the following year, a second wave of eighth graders entered the program and the first eighth-grade students went on to a newly-developed ninth-grade curriculum. During the Spring of 1970, the project began to accommodate all of the seventh-grade students and temporarily dropped the eighth and ninth grades. Since 1970, the strategy has been to begin the R-3 curriculum with seventh graders and to continue the program with the same students during their eighth and ninth grades. Now in its eighth year of operation, Project R-3 serves approximately 250 eighth graders largely of Mexican-American background and from predominantly disadvantaged economic backgrounds with underdeveloped reading and mathematics skills. These same students participated in Project R-3 as seventh graders and will continue in the program as ninth graders.

Program Description

The R-3 project emphasizes a curriculum that interrelates reading and mathematics with reinforcement through gaming/simulation, intensive

involvement, and extensive parental involvement. Each eighth-grade student participates in a three-period core of reading, mathematics, and social studies/R-3 classes which are taught by project staff. Physical education and two elective subjects such as bachelor living, art, or music comprise the remainder of the students' program and are taken with the regular school staff. All of the students are grouped heterogeneously into classes of approximately 20 students. Each class reflects the achievement range of the entire eighth-grade population and has approximately equal distribution of boys and girls. One certificated teacher and one instructional aide teach each R-3 class.

In both reading and mathematics classes, emphasis is placed on individualized instruction. Utilizing a diagnostic-prescriptive approach, teachers write weekly contracts on Mondays for each individual student and collect them on Fridays. Although the contract is basically the same for the entire group, each student is allowed to move through the assignments on his contract at his own rate and is graded on the amount he accomplishes in relation to his capabilities. Use of the contract varies from week to week. Sometimes assignments are left open to see how well the class works. During this time the teachers use the teaching style they feel most comfortable with and will benefit the group most. At other times assignments are not open and each individual is assigned a specific group of tasks to complete. The teacher and aide are thus free to work with individuals or small groups of students.

The core of Project R-3 is the social studies/R-3 class sessions. During these classes, skills and concepts learned in the reading and mathematics classes are reinforced and utilized in simulated real-world situations. The R-3 curriculum consists of over 450 day-by-day activities in gaming/simulations and one or two intensive involvements—extended field trips of two or three days' duration. There is a diversity of subjects and titles which are organized into themes for each grade level (7th grade: Perceiving Our World; 8th grade: World of Work; 9th grade: Governing Our World). The gaming/simulation materials were designed jointly by the San Jose Unified School District, the Education Systems group of Lockheed Missiles and Space Company (now Technicon Education Systems), and consultants from California State University at San Jose. Each gaming/simulation is keyed to either a mathematics or reading objective or both such that the teachers can coordinate the R-3 activities with those of the reading and mathematics classes. The intensive involvement activities are a series of learning experiences built around a particular theme and include one or more gaming/simulation activities. These two- or three-day involvements require that students and project staff travel to a locale suitable to the activities. The chief objective is to break down the structured role in which the solitary teacher stands in front of a seated group of passive students. Classroom activities are built on the experiences of the students after the return from an intensive involvement.

An important component of Project R-3 is parent involvement. Every

effort is made to involve parents in all phases of the project and regular home visitation by project staff is essential. Parents are invited to visit classrooms and observe and participate in learning activities; Spanish-speaking personnel are available to assist them at school. Parents are also encouraged to go to the intensive involvement sites. Dinner meetings for parents, students, and program personnel are held periodically to review progress to date and plan for the future.

Personnel for the project include the director, an assistant director/resource teacher, and the instructional staff which consists of three mathematics teachers, three reading teachers, three social studies/R-3 teachers, and nine aides. Two of the teachers in each subject matter area "belong" to the school and serve the grade level they normally teach. They return to regular routines the following year while the remaining R-3 staff follows the pupils from grade to grade. All teachers and aides are given a brief period of pre-service training and in-service training throughout the year.

With the exception of the materials developed for the R-3 classes, the intensive involvement, and some of the mathematics contracts, the project makes use of a variety of commercially available materials. Any available standard published materials, especially those emphasizing individualized instruction, can be adapted to teach the subject matter strands of reading and mathematics.

Costs

Annual per-pupil replication cost is estimated at $443 (substantially less than the San Jose budget due to extensive dissemination activities there). Salaries of three district teachers are covered by district funds as are classroom facilities, basic classroom books, and audio-visual materials. While the original Project R-3 start-up costs were quite large, replication costs would be minimal since the gaming/simulation materials are available to replicating sites at no cost.

PROJECT TITLE: Project Catch-Up

LOCATION: Newport Beach, California

PROGRAM AREA: Disadvantaged children (Title I); reading and math

SOURCE AND LEVEL OF FUNDING: Title I, $105,000

PROGRAM START DATE: 1966

BRIEF DESCRIPTION OF PROJECT:

Goals and Objectives

Children scoring in the lowest quartile on reading or mathematics standardized tests will achieve 1.5 months reading gain per month of instruction, and 1.0 months math gain per month of instruction.

Context

Two average size cities, Costa Mesa and Newport Beach, with a total population of 133,375 make up the Newport-Mesa Unified School District and provide it with 26,500 children. In these Orange County communities in Southern California, there are great contrasts in wealth, with some families representing the famous fortunes in the nation and with some families existing below the level of poverty. Of the 37 schools within the district, seven participate in Title I. The Title I schools contain the vast majority of low income families as well as the largest percentage of minority groups. Although Newport-Mesa is neither an agricultural nor a manufacturing area, the district has become an immigration center which draws families from the Near East, from every country in South and Central America, from Japan, China, and Mexico. Twenty percent of the children in the Title I schools are Chicaco; 5% are Oriental.

Program Description

Project Catch-Up is designed to provide remedial instruction in reading and arithmetic to disadvantaged children in schools serving low socioeconomic level suburban areas. Children are selected for participation on the basis of educational need—most recently the criterion for educational need was scoring in the bottom quartile on standardized achievement tests.

The project was originated, using Title I funds, in the Newport-Mesa school district in South California. Now in its seventh year of operation, Project Catch-Up has served several thousand racially and ethnically heterogeneous children in preschool through grade 8.

A major emphasis is placed on the diagnosis of learning problems through extensive use of criterion-referenced tests. Learning experiences are individually prescribed and are provided by a special staff of certificated part-time teachers and instructional aides in a special "laboratory" environment.

Each project teacher is responsible for no more than 18 children, while instructional aides work with 10 and perform essentially the same roles as the teachers. Each teacher or aide works with two to three children at a time for approximately 20 minutes a day. The children are taken out of their regular classrooms at times when neither reading nor math is being taught.

The laboratories are large, attractive, and replete with high-interest materials which serve, along with other characteristics of the project, to elicit a positive attitude in participating children. It is clear that they enjoy the project and experience little, if any of the stigma that is often associated with remedial programs. Developing a positive attitude toward self and project is also the objective of several special events such as a Mexican Fair put on each year by the Title I children for the entire school.

The project's instructional personnel are held responsible for the achievement gains of the pupils which are expected to equal 1.5 grade-equivalent months per month in reading and 1.0 months per month in arithmetic. They are free to use whatever teaching techniques they wish in order to achieve these objectives and are given exceptional administrative support in the form of immediate processing of requests for materials, supplies, and equipment, Some materials currently in use for reading instruction include the Random House Criterion Reading Program, System 80, Open Court, Lippincott Alphabet, Scholastic Library, and instructional games. Mathematics curricular materials include Sullivan Programmed Learning, System 80, SRA Math Kit, Cyclo Teacher, Singer Kits, Scott Foresman, as well as flash cards and number games.

Personnel and management are clearly central to the project's success. The Project is run only in the morning when both teachers and pupils are fresh. The instructional staff is carefully recruited to bring not only a wealth of experience and teaching skill to the project, but warmth and understanding as well. Aides are selected in an appropriate racial and ethnic mix so as to provide special support for minority children and for those whose families do not speak English.

While the project does not have a formal career ladder for aides, their professional growth and development is strongly encouraged. The success of this effort is clearly evidenced by the large number of aides who have moved up into increasingly responsible positions.

During the 1972-73 school year, 636 children participated in the project. Six of the seven Title I schools in the project serve preschool

through fifth-grade children and feed into a junior high school which serves grades six through eight.

In 1972-73, there were 40 staff members, 16 of whom are bilingual. Each laboratory was staffed with from one to three teachers; most laboratories had instructional and parent aides.

In-service training was held for all personnel for a week before school started and one afternoon a month throughout the year. Topics included project philosophy—that every child can succeed—test administration, publisher demonstrations on use of new instructional media, consultants speaking on cultural issues, and sharing of ideas. Teachers and aides new to the program have more extensive training, including matching materials to objectives, selecting new materials, and demonstrations of techniques by a master teacher.

Parents are involved in several ways. They are invited to advisory board meetings monthly in each school where they plan cultural enrichment activities, learn about the program, and ways of encouraging learning at home through simple games and books. The parents have actively supported the program when continued funding was in question. The chairman of the advisory board meets with the project director monthly to offer suggestions and review reports. Parents who are able, may spend one morning a week helping in the laboratory. Some parents have learned to speak and read English through this participation.

Costs

The yearly budget for seven schools, some with two laboratories, was $105,000. The school district provides basic supplies, furniture, clerical support, and a portion of the project director's salary. The project director coordinates all federal funds for the district and uses State bilingual funds for the program serving Spanish speaking children.

Start-up costs for each laboratory serving approximately 64 children are $2,200. The total per-pupil expenditure in 1972-73 was $392. Eighty percent of costs were for salaries and a very small percentage of that was used for clerical services.

PROJECT TITLE: Programed Tutorial Reading Project

LOCATION: Multiple; Originated at Indiana University, validated at Davis County, Utah

PROGRAM AREA: Disadvantaged children (Title I); reading

SOURCE AND LEVEL OF FUNDING: ESEA Title I, $120,000

PROGRAM START DATE: September 1965

BRIEF DESCRIPTION OF PROJECT:

Goals and Objectives

Objectives and goals specific to the Programed Tutoring project are:

A. To provide tutoring in beginning reading to disadvantaged first graders on a one-to-one basis as a supplement to conventional classroom teaching.

B. To implement a highly structured technique of individualized teaching which makes it possible for persons with limited education and work experience to effectively supplement beginning reading with first graders.

Context

The Programed Tutorial Reading Project was first used in the Indianapolis Public Schools in 1965 but was the product of several year of prior research and development conducted at Indiana University. The program is currently employed by all 42 Indianapolis schools which qualify for Title I funds and by many other Title I schools throughout the country. The program has been successful with economically disadvantaged children in rural, urban, and suburban localities and from a multiplicity of ethnic backgrounds including Black, Mexican-American, and Caucasian. The validation site, Davis County, Utah, is a semi-rural setting with only a small percentage of the total population falling below the federal poverty line.

Program Description

First graders in the bottom quartile in reading are tutored on a one-to-one basis by carefully trained tutors for 15 minutes each day as a supplement to regular classroom teaching. The tutors are nonprofessionals who range in talent and experience from paraprofessional teacher aides to community volunteers or parents. They are trained to respond in precisely

prescribed ways to student actions in a highly structured learning situation. No major alteration of existing facilities is required for the program. Children leave their classrooms and go to another part of the building for tutoring sessions which are held in any available area where the tutor can work with the child. This area is isolated from passers-by and may be a separate room, a lighted cloakroom, or a carrel in the hallway.

The pattern of teaching used by the tutor was developed by Douglas G. Ellson at Indiana University. The teaching strategy employs many of the elements of programed instruction: frequent and immediate feedback, specified format, and individualized pace. However, whereas programed instruction has often employed errorless or near-errorless learning, with many cues at first, followed by a fading of cues, the tutorial program proceeds in the opposite manner with minimal cueing at first, followed by increasing prompting until the child can eventually make the correct response.

Through the use of eleven different Item Programs, a Lesson Program, and a Master List, the tutoring behavior of each tutor is carefully controlled. These components are systematically programed such that any decision made by a tutor is limited to judging the correctness of a reading response or the appropriateness of an answer to a question. The Item Programs which incorporate a series of test-teach-test steps specify in detail how to teach.

The Lesson Program tells the tutor the sequence in which items in the lesson are to be presented and reviewed with each child. After the first run through all items in the lesson, the sequence of successive items is determined by each child's individual pattern of success or failure on items in the first run. A Master List tells the tutor the order in which lessons are presented to the child. The general pattern is determined by the sequence of materials presented but the pattern is cyclical: several sight-reading lessons are followed by a few comprehension lessons and word analysis skills then the cycle is repeated.

Reinforcement is an important part of the instructional strategy. When following the Item Programs, the tutor is instructed, following a child's correct response, to Reinforce and go to STEP. . . Specific phrases which can be used by the tutor are suggested. Only positive reinforcement through verbal priase or social approval gestures such as a pat on the arm are used.

The materials in the tutorial program are available from seven publishing companies: Scott Foresman; Houghton Mifflin; Harper & Row; Ginn & Company; Holt, Reinhart & Winston; McMillan; and Bank Street Readers. These materials, which come in the form of a kit, have been designed for use with the same pre-primers and primers used in the regular classroom. The kit includes a Tutor's Guide which specifies the teaching procedures in detail for the tutor and which contains the

the Master List, a Comprehension and Word Analysis Book for teaching comprehension and word analysis skills, a word list, record sheets, and cover cards. Any one of the kits can be purchased for less than $30.00.

Personnel required for the tutorial program vary from one or two individuals to an entire supervisory staff and tutors depending on the number of children requiring tutoring. One tutor can accommodate three children in one hour giving each child 15 minutes of intensive individualized tutoring. With two tutors a supervisor is needed. The responsibilities of the supervisor include training of tutors, maintaining the quality of tutoring, serving as liaison person among the project, tutors and school personnel, and helping with administrative duties. As a rule of thumb, supervising thirty tutors in six inner-city schools is considered a full-time responsibility. The organization of such a project could also include a professionally qualified part-time director and a part-time supervisor who may have experience as a tutor and demonstrate administrative ability, but need not necessarily have professional qualifications.

The training of tutors by the supervisor requires approximately 18 hours of group instruction supplemented by supervised training on the job. Fifteen hours of training are given before the beginning of the school year. Three additional hours are given during the first two months of tutoring.

Costs

The annual per-pupil cost in the tutorial program ranges from $150 to $250 depending upon the rate of pay to the tutors and suprvisors in the program. Personnel costs which include all administrative and clerical assistance account for approximately 98% of the total budget.

PROJECT TITLE: Intensive Reading Instructional Teams

LOCATION: Hartford, Connecticut

PROGRAM AREA: Disadvantaged children (Title I); Reading

SOURCE AND LEVEL OF FUNDING: Developed under ESEA Title I, currently State-supported, $177,215

PROGRAM START DATE: September 1965

BRIEF DESCRIPTION OF PROJECT:

Goals and Objectives

A. Seventy-five percent of the participants will show month-for month reading achievement gains.

B. IRIT pupils will increase their independent reading during the period of instruction.

C. Pupils will be able to relate the sound to the symbol of all letters with an accuracy of 70%.

D. Pupils will be able to identify rhyming words with an accuracy of 80%.

E. Pupils will be able to read orally with reasonable fluency and answer comprehension questions at their level.

F. Pupils will read a good variety of reading materials and show gains in vocabulary development.

Context

Hartford, the capital of Connecticut, is an urban community covering 17.4 square miles with a metropolitan population of approximately 800,000. The community is about 46% Black, 38% Anglo, and 16% Puerto Rican. English is a second language to many Puerto Ricans in the community, and a non-standard dialect is prevalent among the Blacks.

The IRIT program serves children from Hartford's 6 "validated" schools (schools where the mean annual income per family is no more than $4,000). Students attending these schools live in neighborhoods characterized by extensive public housing projects and steadily deteriorating, crowded living conditions. In 1969, nearly half of the children came from families receiving public assistance and 70% qualified for state and city financial aid.

A large segment of the parents who were employed had few marketable skills, with many holding unskilled and semi-skilled jobs.

The schools range in enrollment from approximately 300 to 1,800. Most encompass kindergarten through grade 8, but some run only through grade 4 and others through grade 6. The average class size is 25, and the student-teacher ratio is 25 to 1. The average IQ of the students as measured by the Lorge-Thorndike Test is about 90. The average per-pupil expenditure for regular school programs was $856 during the 1968-69 school year.

Program Description

The IRIT program is focused primarily on third-grade children, but also serves some fourth- and a few second-grade children. There are three Title I-funded centers, each of which operates in three ten-week cycles per year. Forty-five children are served at each center during each cycle.

An IRIT team consists of three teachers each having a separate, open space classroom and each specializing in one of the following three reading areas: (a) decoding, (b) vocabulary and comprehension, and (c) individualized reading. The 45 children are divided into groups of 15 at the beginning of a cycle. Each group spends an hour with each teacher every day. The IRIT instruction consumes the entire morning of the school day and the program teachers spend the afternoons (a) preparing lessons and keeping records for each of the 45 children, (b) making new instructional materials, (c) coordinating with other IRIT teachers in their own and other centers, (d) coordinating with classroom teachers, and (e) participating in professional development and training sessions.

The 45 children for a single cycle are all chosen from a single school. For one or two of the cycles, children come from the schools in which the centers are located. For the remaining cycles, children are bused from other Title I schools. Children are nominated for participation by their regular classroom teachers with the final selection being made by the IRIT staff. The criteria for nomination/selection include the following: (a) children should be reading both below grade level and below expectation, (b) children should not be in ESL, Bilingual, or IIC programs, and (c) children should have good attendance records and be able to work successfully and cooperatively in an intensive type of program.

Each center is staffed by a team leader who is a certificated reading specialist, two team teachers who are certificated reading teachers, and a half-time secretary. In addition, there is a half-time project director who has overall responsibility in all operations, visiting each team at least weekly. This person organizes and participates in training sessions and exercises final authority on teaching methods and materials.

Each IRIT team has considerable autonomy. Members are expected to exercise skill and imagination in developing teaching methods, producing original materials, and selecting commercial materials. Each team controls a budget for purchasing equipment and materials.

IRIT uses a flexible, largely individualized approach employing a wide variety of commercial materials supplemented by many teacher-made materials, displays, and modifications to commercial materials. Guidelines for each of the three reading instructional areas have been developed and are provided to new IRIT teachers, but the primary responsibility for choosing appropriate instructional strategies rests with the individual teachers. Specific provisions have been made so that each teacher receives inputs from (a) the project director through informal visits and formal training sessions, (b) other members of the IRIT center team through daily contact, (c) members of the other IRIT teams through regularly scheduled meetings, (d) the children's regular classroom teachers through meetings and written communications, (e) reading consultants from the sending schools through regular meetings, and (f) parents through informal visits and irregularly scheduled gatherings.

Costs

The 1972-73 budget for three Intensive Reading Instructional Teams was $177,215. These three teams served 405 pupils from six schools for an average cost of $438 per pupil. Project costs included salaries for three reading consultants, six teachers, and two secretaries, plus part of the project director's salary. Also included were funds for the purchase of materials, supplies, and new equipment. The school district provided three classrooms and a small office space for each team.

Start-up costs could be expected to average $25 to $50 per student more for the first year, depending on the specific items of equipment ordered. The primary factor in estimating costs for replicating locations is teachers' salaries, with three consultants/teachers required for each 135 pupils.

PROJECT TITLE: High Intensity Tutoring Centers

LOCATION: Highland Park, Michigan

PROGRAM AREA: Disadvantaged children (Title I); reading and math

SOURCE AND LEVEL OF FUNDING: ESEA Title I, $108,000

PROGRAM START DATE: September 1970

BRIEF DESCRIPTION OF PROJECT:

Goals and Objectives

Objectives specific to the HIT reading program are:

A. Highland Park sixth and seventh grade tutees enrolled in the HIT Center reading programs will develop a greater knowledge of words by the end of their assignment to the program as indicated by a gain of one year or more on the reading subtest of the Wide Range Achievement Test.

B. Highland Park seventh and eighth grade tutors enrolled in the HIT Center reading program will develop a greater knowledge of words by the end of their assignment to the program as indicated by a gain of one year or more on the reading subtest of the Wide Range Achievement Test.

Objectives specific to the HIT mathematics program are:

A. Highland Park sixth grade tutees enrolled in the HIT Center arithmetic program will increase their ability to employ arithmetic computational procedures by the end of their assignment to the program as indicated by a gain of one year or more on the arithmetic subtest of the Wide Range Achievement Test.

B. Highland Park seventh and eighth grade tutors enrolled in the HIT Center arithmetic programs will increase their ability to employ arithmetic computational procedures by the end of their assignment to the program as indicated by an increase of one year or more on the arithmetic subtest of the Wide Range Achievement Test.

Context

Highland Park is a city within a city, bounded on all sides by the City of Detroit. It covers 2.5 square miles of concentrated residential area, the second most densely populated in Michigan per square mile, with 35,444 inhabitants and 12,412 families. In the city of Highland Park,

the ethnic composition is approximately 50% Black, 47% White, and 3% other ethnic minorities. However, the pupil population of the school system does not equate the ethnic diversity of the community. The school population is 95% Black with the remaining 5% being Arabic American, Chinese American, and others. The composition of the public school staff is 50% Black, 49% White, and 1% other.

The City has been involved in an extensive urban renewal program. The city of Highland Park is currently completing its fourth year plan under Model Cities. It is also the center for an industrial complex, composed of large and small manufacturing establishments. Among them, the largest are the Ford Motor Company, the Chrysler Corporation, and the Excello Corporation.

The School District of Highland Park includes 4 elementary schools, enrolling approximately 3,487 pupils, 3 middle schools with 1,901 pupils, and a high school with an attendance of 2,163. The School District also supports a community college which draws a student body of almost 4,124 from the large Detroit Metropolitan area.

Two of the elementary schools are organized on a K-6 basis, two on a K-5 basis, and one on K-3 basis. Two of the middle schools are organized on a 6-8 basis, and one of the middle schools is on 4-8 basis. The high school is organized on a 9-12 basis. Each school is under the direction of a principal.

Program Description

Sixth- and some seventh-grade students participate in the program as tutees. Eighth- and some seventh-grade students participate as tutors. The program is now in its fourth year of operation and the majority of tutors are former tutees. During the 1972-73 school year, 131 pupils participated as tutees in reading in the two Title I schools (a reading center in a third school was funded by Model Cities). One hundred forty-two pupils participated as tutees in mathematics. There were 124 full-year reading tutors and 198 mathematics tutors.

Program participants are selected on the basis of need. For the most part, participating children score a year or more below grade level on the Wide Range Achievement Test. Special priority is given to those students who are farthest below grade level.

Each center is staffed by one certificated teacher and two paraprofessional aides. Each tutoring session is scheduled for 30 minutes of which 20 to 25 minutes is productive time. The size of tutoring sessions varies according to student availability and the size of the room available. The maximum size is estimated to be 20 tutor-tutee pairs. Tutees participate 4 days a week while tutors may participate less frequently. There is no need to maintain particular tutor-tutee pairings although such pairings tend

to emerge naturally.

The certificated teacher supervises the operation of the program and participates in the preparation and selection of materials for the tutees. The aides assist in supervising students, participate in the tutoring process, chart daily progress, assist in distributing motivational material, assist on field trips for tutors, prepare bulletin boards, etc.

The instructional strategy is patterned after the Performance Determined Instruction model of Burl B. Gray of the Behavioral Sciences Institute in Monterey, California. A central feature of the system is the daily calculation of the percentage of correct responses for each tutee in the program. When any tutee's rate falls below 90% for three days in a row, the difficulty of instructional materials is decreased to make the task easier. When the rate exceeds 94% for three days, the difficulty of instructional materials is increased to make the task more difficult. This procedure insures that new learning is introduced at the optimum rate and that nearly all responses are correct.

Also basic to the instructional system is the utilization of instructional materials which carefully control the rate of introduction of new learning and provide for frequent review. Remedial Reading Drills by Hegge, Kirk, and Kirk, and the Sullivan programmed reading and arithmetic series are the principal instructional materials for the program. Increases in level of difficulty are accomplished by skipping pages in the books and decreases are accomplished by reviewing pages. The HIT Center teacher reviews the performance of each tutee daily and makes all decisions regarding instruction.

Interaction between tutor and tutee is structured to maximize the amount of time the tutee is engaged in active learning behaviors. Acquisition of skills for this population is viewed as best facilitated when the learner is actively practicing skills, and hindered when passively listening to advice on how to acquire skills. Thus, tutors do not teach rules for assigning long and short sounds to vowels, how to break words into syllables, etc. Tutors, therefore, do not teach in the conventional sense of the word; they assist the tutee by recording responses, providing immediate reinforcement, and correcting incorrect responses as soon as they occur.

The motivational system for tutees is based upon points earned for correct responses. Each tutee has a point "bank book," and each center sets times when points can be redeemed for tangibles or privileges. Tutors earn rewards on the basis of attendance.

Pre-service training of approximately one-week duration is required for new teachers and aides. Tutors are trained at the beginning of the regular school year. Weekly staff meetings are scheduled with the project director for the purpose of exchanging ideas. Parental involvement is encouraged but does not constitute a major component of the project. Some home visits are

conducted and one tea per year is scheduled.

Costs

The yearly budget for operating a reading center is approximately $26,000 or about $200 per pupil considering tutees only. If tutors are also considered (and they do benefit from the program), per-pupil costs are cut approximately in half.

The yearly budget for operating a math center is approximately $25,000 or about $175 per pupil for tutees only. Considering tutors as well as tutees, per-pupil costs are approximately $75.

Operational costs are approximately 85% personnel related (i.e., salaries and fringe benefits). For this reason, per-pupil costs are highly dependent on local salary scales and the seniority of the teachers and aides.

Start-up costs are estimated at $5,000 per center.

The cost estimates presented here do not include a pro-rata portion of a project director's salary. Once centers are operational, however, no more than one day per week should be required to manage a four-center project. The figure $1,500 per center could be used to estimate this cost element.

PROJECT TITLE: Project Conquest

LOCATION: East St. Louis, Illinois

PROGRAM AREA: Diasdvantaged children (Title I); reading

SOURCE AND LEVEL OF FUNDING: ESEA Title I, $637,000

BRIEF DESCRIPTION OF PROJECT:

Goals and Objectives

Statistically significantly raise the average reading abilities of the students after nine months of remedial instruction.

Statistically significantly improve students' self-concepts, which are reflected in school related aspirations.

Train Conquest Clinicians in new methods of remedial reading techniques so that they are knowledgeable of new trends in education.

Context

The pupils served by Project Conquest live in severely depressed metropolitan neighborhoods of East St. Louis, Illinois. Located across the Mississippi River from St. Louis, East St. Louis is the fifth largest city in Illinois. Less than a century ago, the city was a thriving industrial center as well as one of the largest pork producing areas in the world. Now, however, the packing houses and other industries have left, and East St. Louis is burdened with an oversupply of unskilled labor for the limited jobs available.

In a 1970 survey of cities with populations of fifty thousand or more, East St. Louis ranked first in the percentage of families with annual incomes of less than $3,000. Mid-1970 demographic data indicated that the city's population had dropped more than 16% since the 1960 census, that over 70% of its 70,000 inhabitants were Black, and that 51% of these Blacks earned less than $3,000 a year at employment which consisted almost entirely of unskilled jobs. Unemployment rates were 20% citywide and 30% in the more depressed areas from which Project Conquest participants were drawn. In these areas, over 50% of the families received some form of public aid.

As of February 16, 1972, the Federal Research and Evaluation, District 189 Indigent Survey placed the district poverty index at 61.36%. A special study of children in 23 of the city's most disadvantaged schools revealed they were reading more than a year below grade level.

Program Description

Project Conquest was established during the 1965-66 school year in response to the needs of capable, disadvantaged children whose reading problems were not being helped by regular classroom teachers. Specifically, the project was aimed at disadvantaged children in grades one through six who were capable of reading at grade level but who were reading one or more years below grade level.

Project Conquest has two complementary components; remedial reading instruction and in-service remedial reading training for teachers.

Project children receive diagnosis and remediation at one of the 19 centers throughout the target areas. Remedial instruction is provided in 45-minute sessions held 4-1/2 days per week.

Centers are designated as either "reading rooms" or "reading clinics." The reading rooms and reading clinics differ mainly in the grade levels they serve. Reading rooms serve pupils in grades one through three. Reading clinics serve children in grades four through six.

Reading rooms and clinics are similar in that they provide: (1) extensive diagnosis of each child's reading-related problems, (2) techniques and materials tailored to meet each child's diagnosed needs, (3) remediation either individually, or most often, in groups of six children and one clinician, (4) an experience carefully structured so that the student rarely fails to attain his objectives, and (5) a warm, one-to-one relationship with the children, using an abundance of praise and encouragement to enhance self-esteem. They also use both the same selection and release criteria. Children are selected on the basis of their failure to read up to their potential or at grade level and they are released when they reach one of these established goals.

Diagnosis and remediation procedures at each of the centers are the same. After in-depth clinical screening which helps to define the precise nature of a pupil's reading disability, the clinicians meet to devise a remediation plan based on diagnostic data. Attainable goals are assured at the outset by starting each child on tasks and materials geared one year below his tested reading level. In this way, the pupil can be encouraged by initial success in an area he previously associated with failure.

Early in the year, instruction is often provided on an individual basis. As the pupils acquire word-perception skills, the transition to small-group instruction is made. The clinicians select materials and equipment for each pupil according to the individual remedial instruction program planned for him. These materials and devices are different from those provided in regular classrooms, and most can be adjusted to match the student's reading rate and comprehension levels.

If a pupil cannot demonstrate that he is ready to return to his regular class by grade four, he is transferred to a reading clinic for continued remediation. Special techniques are used in reading rooms and reading clinics to build the pupil's confidence, to encourage him to adjust to the demands of school, and to raise his level of aspiration. Clinicians adjust instructional demands to insure success; they establish close rapport with each child; and they provide frequent opportunities for each child to demonstrate his progress and to be praised for his reading achievements.

Project Conquest personnel include the following administrative, instructional, clerical, and paraprofessional staff who serve the project full time.

Director. In addition to exercising general supervision over Project Conquest, the director conducts pre-service and in-service workshops for project clinicians and aides.

Supervising clinicians. Three reading clinics (grades four through six) each have one supervising clinician, a permanent member of the reading clinic staff who is responsible for supervising instruction at assigned clinics. In addition to providing in-service training for clinicians and screening pupils for admission to the clinics, the supervising clinician prepares reports for home schools and for the project director.

Reading clinic clinicians. These clinicians are part of the project's one year on-going in-service training program in diagnosis and remedial techniques. After their year as clinic clinicians, they fill vacancies which occur in the project's permanent reading staff. The clinicians, closely guided by each clinic's supervising clinician, provide specialized remedial instruction to children in grades four, five, and six.

Reading room clinicians. These clinicians are required to spend one year in in-service training before joining the permanent reading room staff. They provide remedial reading instruction based on needs identified by in-depth clinical diagnosis.

Clinician aides. Eight clinician aides rotate to all centers to assist clinicians in any capacity designated by the clinicians.

Clerks. One clerk serves the director: one clerk serves the clinicians.

Clerk aide. The clerk aide assists the two clerks.

Counselors. Two counselors help the child to understand himself, others, and his environment.

Project children also receive hearing, vision, and physical examinations. These services are provided by nurses who serve all Title I programs.

Selection of students is based on both test scores and judgmental decisions. At the beginning of each school year, test scores from the school district's testing department are used to acquire a preliminary list of pupils whose scores are one or more years below grade level. The Gates-MacGinitie Test is administered for grades 1-3 and the California Achievement Test for grades 4-6 at the close of the previous school year. Those in the educationally and economically deprived category are prospective Project Conquest students.

Clinician judgment is also an important factor. Pupils are also referred by classroom teachers who may have found them unable to achieve at grade level. In addition to teacher referrals, parents often seek the cooperation of principals to insist that requests for service come directly from him or they apply directly to the center when they are cognizant of the service. Social workers, counselors, and educational agencies may also submit names of prospective students.

The successful operation of the remedial reading component of Project Conquest is made possible by the second component, in-service remedial reading training for teachers. Training is initiated in a pre-service workshop held during the first two weeks of the regular school term. The aim of this workshop is two-fold. New clinicians are given an orientation into the philosophy, goals, and history of the program. The entire staff, both new and returning, is taught current methods in diagnosis and remediation. Full-day sessions focus on these techniques as well as methods of establishing rapport and enhancing self-confidence, and materials and equipment used in remediation activities. Special emphasis is given to the area of testing which encompasses a major part of the diagnostic procedure. The director, along with experienced clinicians, explains the purpose of each test and relates detailed procedural guides for each individual test. Clinicians then practice both administering each test and interpreting its results, with more experienced clinicians aiding the newer clinicians. The background provided by the two-week orientation prepares clinicians for more detailed in-service training after they assume their duties of project clinicians.

This session is followed by a regular Friday afternoon in-service workshop. Information is presented at this time and disseminated in order to keep the clinicians abreast of current trends in reading as well as innovative, relevant, effective educational techniques.

Costs

The estimated costs of operating Project Conquest in a replicating site are given below. It is assumed that replicating sites would provide

certain standard facilities such as classroom and office space, but that due to the unusually depressed environment in which the project is expected to operate, project funds must be allocated for standard supplies, testing materials, and security systems items which would be locally provided or would prove unnecessary in more affluent districts. Cost estimates are based on two reading clinics and six reading rooms operated in a total of six physically separate locations, and serving a total of 400 students. Average cost per pupil is approximately $468.

Personnel:

Project director (1)	$ 15,000	
Supervising clinicians (2)	20,000	
Clinicians (12)	96,000	
Counselor (1/2)	5,000	
Clinician aides (2)	9,000	
Clerk (1)	5,000	
	150,000	
Personnel benefits	22,200	
		$ 172,200
Supplies and materials (instructional and testing)		11,200
Equipment and repairs		1,400
Security systems monitoring		800
In-service training		1,600
TOTAL		$ 187,200

REFERENCES

Tallmadge, G. K., & Horst, D. P. A procedural guide for validating achievement gains in educational projects. Los Altos, Calif.: RMC Research Corporation, May 1974. (Technical Report No. UR-240)