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ABSTRACT

Project Make All Reading Serviceable (MARS) offers special reading instruction to over 200 public and parochial school disadvantaged children in grades one through four. The primary objective is to raise the reading performance of students to a level consistent with their potential reading ability. The program also aims to foster academic motivation and favorable attitudes toward reading. Children served by the program are located in seven target area schools, each of which has a full time remedial reading teacher. Students are admitted to the program on the basis of standardized reading results, daily classroom performance, and the evaluation of teachers and principals. The program utilizes intensive small-group instruction and uses materials and techniques different from those used in the regular classroom. Evaluation of reading achievement improvement was based on pre-test and post-test results on the Word Knowledge and Reading tests of the Metropolitan Achievement Test battery. Test data for academic years 1968-69 and 1969-70 indicated that the program was successful in producing statistically and educationally significant reading gains in second through fourth grade children. (Author)

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Office of Education  
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NCEC

# Model Programs Compensatory Education

Project MARS  
Leominster, Massachusetts

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**Model Programs**

DHEW Publication No. (OE) 72-77

# **Compensatory Education**

**Project MARS  
Leominster, Massachusetts**

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**U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE**  
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**Office of Education**  
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## FOREWORD

This is the third in NCEC's *Model Programs* series, whose purpose is to inform educators about successful ongoing programs and to provide them with sufficient information to decide if locally modified replications would be desirable. Included in this series are descriptions of 15 "successful" compensatory education programs for disadvantaged children currently operating in the Nation's schools.

Under contract to the Office of Education, the American Institutes for Research in the Behavioral Sciences, Palo Alto, Calif., identified—through a literature search and nominations by local, State, and national educational agencies—over 400 candidate programs in this area. Of this number only 17 met the stringent criteria for success established by AIR in conjunction with OE. It should be noted that most of the programs rejected during the study were not rejected because they were demonstrated failures but rather because their evaluation methodology was so inadequate that a conclusion about success or failure could not be drawn.

Short descriptions of each program in the series have been prepared, covering such topics as context and objectives, personnel, methodology, inservice

training, parent involvement, materials and equipment, facilities, schedule, evaluation data, budget, and sources for further information.

Six of the programs in this series were formerly written up in the *It Works* series published by OE in 1969. These six continue to operate successfully, as evidenced by the evaluation data; and since the *It Works* booklets are out of print, the program descriptions have been updated and included in this *Model Programs* series.

Two other programs—Programed Tutorial Reading Project, Indianapolis, Indiana, and Summer Junior High Schools, New York, New York—identified as exemplary compensatory education series programs were included in the former *Model Programs* series on reading. Since these program descriptions are still available from the U.S. Government Printing Office, they were not republished for this series.

Two previous *Model Programs* series have been issued—on reading (10 programs) and childhood education (33 programs). Booklets on these programs are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for 15 to 25 cents each.

## **Project Mars Leominster, Massachusetts**

### **Overview**

Project MARS (Make All Reading Serviceable) offers special reading instruction to over 200 public and parochial school disadvantaged children in grades one through four. The primary objective is to raise the reading performance of students to a level consistent with their potential reading ability. The program also aims to foster academic motivation and favorable attitudes toward reading.

Children served by the program are located in seven target area schools, each of which has a full-time remedial reading teacher. Students are admitted to the program on the basis of three criteria—standardized reading test results, daily classroom performance, and the evaluation of teachers and principals. Throughout the year, pupils spend 45 minutes daily in the special reading classrooms. They are released from the program at any time during the school year when staff members determine that they have reached their reading potential.

Project MARS began in 1966–67 in response to the needs of the area's disadvantaged children who were falling below their grade levels in reading achievement. The program's methodology centers on intensive small-group instruction, emphasizing use of materials and techniques other than those used in the regular classroom. This approach,



it was felt, provides more appropriate instruction for children who have experienced only failure with traditional classroom methods.

The project's staff consists of a project director, seven special reading teachers, and two part-time clerks. A psychologist is also employed as an evaluation consultant.

Evaluation of reading achievement improvement was based on pretest and posttest results on the Word Knowledge and Reading tests of the Metropolitan Achievement Test battery. Test data for academic years 1968-69 and 1969-70 indicated that the program was successful in producing statistically and educationally significant reading achievement gains in second-, third-, and fourth-grade children.

### **Description**

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#### **Context and Objectives**

Project MARS began 5 years ago in Leominster, a city of about 31,000 people located in Central Massachusetts. Irish, French, and Italian ethnic groups were predominant in the population; more recently, however, Leominster has had a large influx of Puerto Ricans. The majority of the citizens in the area are employed in the plastics industry which is the town's main source of economic support. The unemployment rate in Leominster is comparable to that of the Nation as a whole, and 17 percent of the population receive welfare. In the disadvantaged sector from which program students are drawn, however, the number of parents on welfare totals 33 percent.

The school system serves approximately 6,700 students, in 13 schools—10 elementary schools, 2 junior high schools (grades seven through nine), and one senior high school. The schools are well supported, and the district spends approximately \$600 per pupil per year at the elementary level.

The MARS program includes children in seven elementary schools in designated target areas. Four of these schools are public; three are parochial. The 1969-70 program had 74 children in first grade, 71 in second grade, 42 in third grade, and 25 in fourth grade. In support of the program, the Elementary and Secondary Education Act title I added \$300 per child to the district's \$600 expenditure to provide a total of \$900 per child in Project MARS.

The project, established in 1966-67, is designed to provide special remedial reading instruction for disadvantaged children who are falling below their grade levels in reading achievement. The major emphasis of the program is on early detection and remediation of reading difficulties in order to prevent the kind of academic achievement problems which often result from lack of adequate reading skills.

The specific objectives of Project MARS are:

- To diagnose specific reading weaknesses and to provide individualized instruction in the areas needed to improve reading performance.
- To strengthen and increase the reading performance of educationally deprived children beyond the confines of the regular classroom.
- To give specific vocabulary practice.
- To help children acquire habits, attitudes, and skills necessary to be successful in reading and schoolwork in general.
- To strengthen reading skills taught in the regular classroom, enabling disadvan-

taged children to perform on a level with their peers and maintain a positive self-image.

#### **Personnel**

*Project director (one-fourth time).*—The project director is responsible for supervising the program, selecting materials, testing and evaluation, and making recommendations for program changes.

*School administrator (part-time, nonsalaried under ESEA title I).*—The school administrator for the program is the administrative assistant to the superintendent of schools and is involved in only the budgetary aspects of the program.

*Special reading teachers (7).*—Each of the four public and three parochial schools participating in the program have one full-time reading teacher who works in a specifically designated reading area. Their duties include reading instruction, standardized and informal testing, scheduling, and pupil evaluation. They hold periodic conferences with the regular classroom teachers, parents of students, and other personnel involved with the program.

*Clerks (2, part-time).*—The clerks type curriculum orders, correspondence, payroll papers, reports, and various informational materials for distribution.

*Evaluator (part-time, on a consultant basis).*—A psychologist from a neighboring college attends several inservice sessions and makes a final assessment of the program.

#### **Methodology**

Standardized test results, daily classroom performance, and teacher and principal evaluations are used in selecting children for the program. Since they are still non-readers, first-grade children are selected from results on the Durrell-Murphy Reading Readiness Test which is administered to all first graders by their classroom teachers on

the second day of school. The purpose is to identify children with potential reading difficulties early and prevent more serious difficulties later.

The Project MARS program consists of special intensive remedial instruction for children who have evidenced reading difficulties. Students are released from their classrooms at definite times for 45 minutes of daily small-group instruction with their special reading teacher. Groups are composed of six or fewer students, and no teacher has more than 30 students during the course of a day. Pupils are not released from recess, art, gym, or music to attend the reading classes. Those who have scheduling difficulties or particularly severe reading problems are taught on a one-to-one basis in half-hour sessions.

Parents are involved in the program through a 27-member parent advisory council. They are also invited to visit the schools periodically and to attend conferences with school personnel. At the end of the year, teachers are required to submit detailed reports, anecdotal records, and recommendations for the coming year.

Instructional methods and materials other than those regularly found in the classroom are used exclusively in the program in order to sustain the interest of children who have been unsuccessful in the traditional situation. Teachers are urged to be creative and to adapt their methods to the child's mode of learning. Immediate feedback and correction take place in all phases of reading instruction. The atmosphere of the sessions is informal, and the small-group structure is designed to allow maximum opportunity for experimentation. Each teacher uses whatever method works best for her.

**Materials.**—Teachers are free to choose whatever resources they find most useful from a wide range of learning materials available to the program. These included the following:

**Examples of Materials**

All Dolch materials  
I Can Read books  
Word Wheels  
I Can Read books  
Sullivan Programmed Reading materials  
Phonetic Reader Series  
Skill Builders  
Easy to Read books  
Revised Structural Reading Series, A-E  
Standard Test Lessons in Reading  
Gates Peardon Reading Exercises  
Round Table Easy to Read books  
Happy Times with Sounds  
Websters Reading Clinic Lab  
New Practice Readers  
Reading Skill Series, A-D  
Phonic Skill Texts  
Fun with Phonics  
Word Blends  
Specific Skill Series  
Easy to Read Series  
Reluctant Reader books  
Basic Reading Series, revised  
Getting Ready to Read  
Introducing English with Spirit Masters

**Publisher/Manufacturer**

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Kenworthy Educational Co.  
Kenworthy Educational Co.  
Barnell Loft  
Random House  
Random House  
Lippincott  
Houghton Mifflin  
Houghton Mifflin

In addition, numerous games, charts, cards, flannel boards, and manipulative materials are used. A variety of audiovisual equipment is also available. Visual and auditory discrimination training is important in the program; and filmstrips, tapes, and transparencies are used extensively. These include the materials produced by Eye Gate House Lippincott, and J. L. Hammett Company. Listening skills are also emphasized, and many activities are aimed at stimulating verbal communication, an often underdeveloped skill among the children in the program. Most teachers begin each session with a 5-minute talk-and-show activity to foster verbal interaction.

**Personnel training.**—During the first 2 years of the program all teachers participate in weekly inservice team meetings; later, the schedule is changed to only monthly meetings. Area specialists are included in these meetings and some of the topics covered are:

- Interpreting test results
- Comprehension skills
- Phonetic and word analysis skills
- The educationally disadvantaged
- Remedial reading techniques
- Motivation and reading

The teachers participate in a summer reading institute and are required to do similar work every 3 years in order to keep abreast of new developments in reading instruction.

**Facilities and schedule.**—The schools in which the program operates are generally older buildings and, in each, a special area is set aside for Project MARS classes. Teachers are free to equip and organize these rooms in accordance with their instructional needs and individual methods. One teacher, for example, has large, colorful

**Specific Example  
of Methodology**

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**pillows on the floor where children can sit for paired practice activities while she works with one child in another section of the room.**

**The instructional period is typically divided into three parts: (1) skill development, (2) oral and silent reading, and (3) game time. For each child, instruction is individualized on the basis of his particular reading problems. The reading teacher works closely with the child's classroom teacher to provide instruction relevant to the student's reading needs as evidenced in his classroom work. Reading grades are assigned by the regular classroom teacher after consulting with the reading teacher.**

**Among the activities employed by program teachers to stimulate student interest and provide instructional experiences different from those in the regular classroom is the use of books written by pupils. The teacher types children's original stories on a primer typewriter. These are then cut, stapled, and bound with pieces of wallpaper. The children are proud of their books and enjoy sharing them with other students.**

**Teachers often create their own materials and techniques which, while similar to those used in other classrooms, are "tailor-made" to the needs of program children and designed to be different and appealing to them. For teaching specific skills, many of the teachers make their own "reading labs." These are similar in format to the ones used in the regular classroom, but they contain special exercises devised by the teacher and geared to the student's particular reading level. They are color coded and stored in large cereal boxes which are brightly decorated.**

**One activity used in visual-perception training is designed to help children who have difficulty learning letter names. Old magazines or newspapers printed in large type are used, and the student draws a circle around his own "troublesome letter" whenever it appears in either upper- or lower-case form.**

A group exercise provides drill in hearing long and short vowel sounds and a chance for physical activity. One student stands in front of the group with a deck of word cards made by the teacher. As he reads each word, the rest of the children sit if it has a long vowel sound and stand up if the vowel sound is short. The last student to sit, or anyone who sits at the wrong time, has to stay down, and the last student standing wins the game.

The 1969-70 program budget for Project MARS is as follows:

**Budget**

Teachers' salaries	\$35,525.00
Administrative salaries	4,060.00
Supplies	923.18
Contracted services (evaluation, etc.)	800.00
Total	<u>\$41,308.18</u>

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Per-pupil cost is approximately \$900 per year. The regular district yearly expenditure is \$600 per pupil, and the extra \$300 for Project MARS students is provided by title I. Costs of replicating the program would vary in different locations since teachers' salaries, rather than special materials or facilities, constitute most of the expense.

### **Evaluation**

The primary objective of Project MARS is to provide remedial reading instruction to disadvantaged grade one through four children in an attempt to bring them to a reading achievement level at which they can profit from their regular classroom instruction. Program evaluation is therefore focused on determination of the extent of reading



achievement improvement made by project MARS students after 1 academic year of remedial reading instruction. The model used to evaluate reading achievement gains is the standard pretest-posttest evaluation model. No control groups are employed; rather, students' performances are compared to national norms on a standardized reading achievement test.

The Reading and Word Knowledge tests of the Metropolitan Achievement Tests series were administered to MARS students as preprogram and postprogram tests during the 1969-70 academic year. Form C of the tests was administered prior to remediation and Form B at the end of the academic year.

Table 1 shows pretest, posttest, and gain scores for the 1969-70 program year. All scores are expressed in grade-equivalent units. Statistical analysis indicated that all gain scores except grade two Word Knowledge were significant. Also, all but one of the statistically significant gains exceeded the expected 6 months and therefore can be considered educationally significant.

**Table 1.—Reading and Word Knowledge achievement scores for the 1969-70 academic year**

Grade	Number	Metropolitan Achievement Tests					
		Reading			Word Knowledge		
		Pre	Post	Gain	Pre	Post	Gain
Two	66	1.97	2.66	.69*	1.99	2.72	.73
Three	36	2.90	3.71	.81*	2.90	3.85	.95*
Four	18	3.33	4.36	1.03*	3.52	4.06	.54*

\* $p < .01$ , one tailed t test

In summary, reading achievement test scores during the 1969-70 academic year indicated that Project MARS' second-, third-, and fourth-grade students made gains in Word Knowledge and Reading achievement test scores which (with but few exceptions) were both statistically and educationally significant.

### **Sources for Further Information**

For further information concerning Project MARS, the following individuals may be contacted:

**Mr. Martin Moran, Superintendent  
Leominster Public Schools  
Leominster, Massachusetts 01453  
(617) 534-6508**

**Mr. Nicholas P. Rigopoulos  
Assistant to the Superintendent  
Leominster Public Schools  
Leominster, Massachusetts 01453**

**Miss Geraldine Merrick, Program Director  
Reading Department  
Leominster Public Schools  
24 Church Street  
Leominster, Massachusetts 01453  
(617) 537-6376**

**References**

*Book of Reading "Recipes" by the Leominster Elementary Teachers. Leominster, Mass.: Leominster Public Schools, June 1969.*

*Crowley, H. Evaluation of Title I Reading Program. Leominster, Mass.: Leominster Public Schools, 1969-70.*

*Ellis, B. Project MARS Title I Project Report, Fiscal Year 1969. Leominster, Mass.: Leominster Public Schools, June 1969.*

*— . Project MARS Title I Project Report, Fiscal Year 1970. Leominster, Mass.: Leominster Public Schools, June 1970.*

## MODEL PROGRAMS—Compensatory Education Series

Fifteen promising compensatory education programs for the disadvantaged are included in this series. Following is a list of the programs and their locations:

College Bound Program, New York, N.Y.	Mother-Child Home Program, Freeport, N.Y.
Diagnostic Reading Clinic, Cleveland, Ohio	Preschool Program, Fresno, Calif.
The Fernald School Remediation of Learning Disorders Program, Los Angeles, Calif.	Project Conquest, East St. Louis, Ill.
Higher Horizons 100, Hartford, Conn.	Project Early Push, Buffalo, N.Y.
The Juan Morel Campos Bilingual Center, Chicago, Ill.	Project MARS, Leominster, Mass.
Learning To Learn Program, Jacksonville, Fla.	Project R-3, San Jose, Calif.
More Effective Schools Program, New York, N.Y.	PS 115 Alpha One Reading Program, New York, N.Y.
	Remedial Reading Laboratories, El Paso, Texas

Two programs also identified for this series were described in the *Model Programs—Reading* series: Programmed Tutorial Reading Project, Indianapolis, Indiana, and Summer Junior High Schools, New York, New York. Since these program descriptions are still current and available from the Superintendent of Documents, U.S. Government Printing Office, they were not rewritten for this series.

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