The Mother-Child Home Program was designed to modify the early cognitive experience of preschool disadvantaged children by "intervening" with a series of verbal stimulation activities planned to raise the child's measured IQ. Intervention was timed to occur with early speech development and within the context of family relationships. The program provided for structured verbal interaction between 2- and 3-year-old children and their mothers, centered around toys and books brought as gifts to the child by a trained program staff member. The program had four major components: 1) a focus on mother-child pairs; 2) the use of trained toy demonstrators who worked with the mother and child in their home; 3) Verbal Interaction Stimulus Materials (VISIM) consisting of toys and books which formed the basis of the relationship; and 4) supervision, including selection of VISIM according to specific criteria, development of methods to insure proper presentation of VISIM, and monitoring the work of the toy demonstrators with each pair. Children in the treatment group showed statistically and educationally significant IQ gains when both professional social workers and trained nonprofessionals were used as toy demonstrators. (LH)
Model Programs
Compensatory Education

Mother-Child Home Program
Freeport, New York
This series was prepared by the American Institutes for Research in the Behavioral Sciences under contract with the Office of Education/Office of Program Planning and Evaluation. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

DISCRIMINATION PROHIBITED—Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Therefore, the program described herein, like every program or activity receiving Federal financial assistance, must be operated in compliance with this law.
Model Programs

Compensatory Education

Mother-Child Home Program
Freeport, New York

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Elliot L. Richardson, Secretary
Office of Education
S. P. Marland, Jr., Commissioner of Education
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 Sur Imer Junior High Schools, New York, New York—identified as exemplary compensatory education 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.
Mother-Child Home Program
Freeport, New York

Overview

In association with the Family Service Association of Nassau County, New York, the Mother-Child Home Program was designed to modify the early cognitive experience of preschool disadvantaged children by "intervening" with a series of verbal stimulation activities planned to raise the child's measured IQ. Intervention was timed to occur with early speech development and within the context of family relationships. The program provided for structured verbal interaction between 2- and 3-year-old children and their mothers, centered around toys and books brought as gifts to the child by a trained program staff member.

The program grew from concern over the fact that many children from low-income families lacked the cognitive background necessary to succeed in school. In contrast to middle-class children, who were more likely to participate in extensive early verbal interaction within their families, disadvantaged children frequently had poorly developed verbal abilities and, consequently, low IQ's.

The Mother-Child Home Program, which began in 1967, had four major components: (1) a focus on mother-child pairs; (2) the use of trained "toy demonstrators," who worked with the mother and child in their home; (3) Verbal Interaction Stimulus Materials (VISM) consisting of toys and books which formed the basis of the mother-child-demonstrator relationship; and (4) supervision, which included selection of VISM accord-
ing to specific criteria, development of methods to insure proper presentation of VISM, and monitoring the work of the toy demonstrators with each pair.

The mothers and children who composed the pairs were from three different low-income housing projects on Long Island, New York. The average educational level of parents was about 10th grade, and 40 percent of the mothers were receiving welfare; 90 percent of the families were black. For research purposes, the pairs were divided into a treatment group and comparison groups. Only the treatment group received all the program components. During the first year, the number in the treatment group was about 30. In succeeding years the number was increased to about 60. Children entered the program at about 2 years of age and participated in program activities during a 7-month period in each of 2 successive years.

Program activities were centered around home visits. Twice a week a trained staff member called a “toy demonstrator” visited the mother-child pair. On the first visit each week, a toy or book, which was known as Verbal Interaction Stimulus Material (VISM), was given to the child. When the toy demonstrator introduced the VISM to the two, she encouraged the mother to follow her example in employing verbal interaction techniques with the child. On the second visit each week the demonstrator provided a “review” of the VISM and emphasized mother-child interaction. The toy demonstrators were trained by the program supervisor and were provided with guide sheets outlining the specific points to emphasize and techniques to follow in introducing each new VISM. During the first year, the toy demonstrators were all professional social workers. In succeeding years, nonprofessionals—both paid, low-income workers and unpaid, middle-to high-income volunteers—were trained to function as toy demonstrators.

Children’s gains in verbal and general IQ were measured by pretest and posttest scores on the Peabody Picture Vocabulary Test, the Stanford-Binet (for older children)
and Cattell Infant Intelligence Scale (for younger children). Children in the treatment group showed statistically and educationally significant IQ gains, both during the first year when professional social workers served as toy demonstrators and in the following years when trained nonprofessionals were used.

**Description**

The program originally operated in three low-income housing projects located about 18 miles from each other in the Long Island communities of Freeport, Glen Cove, and Manhasset. In the third year a few children were added from low-income families outside the housing projects. Eligibility criteria for subjects' parents were low socioeconomic status and an education level of high school or less. Forty percent of the mothers were receiving welfare. Although the target group was identified by the criterion of poverty without regard to race, the high correlation between being black and being poor led to a sample that was 90 percent black.

The instructional and research design of the program was created by the Verbal Interaction Project and was carried out through the Family Service Association of Nassau County, New York, a nonprofit organization, with financial support from the Children's Bureau of the U.S. Department of Health, Education, and Welfare. Additional funding was provided by the National Institute of Mental Health and the Grant Foundation, New York City, in 1970.

Initiation of the program resulted from widespread concern that disadvantaged children were inadequately prepared to profit from public school education because of cognitive handicaps produced by an educationally disadvantaged early childhood envi-
environment. One of the main debilitating factors in this environment was felt to be lack of verbal communication between the child and his family. The project's hypothesis was that introducing such verbal interaction into low-income families with young children might help to foster the child's cognitive growth as measured by his IQ. On this basis a small pilot project was carried out in 1965-66 and was followed in 1967 by the establishment of the full-scale Mother-Child Home Program supported by the Children’s Bureau.

The mother-child pairs involved in the program during the first 2 years were drawn from three low-income housing projects and were divided by housing projects into three experimental groups—a treatment group and two comparison groups. The treatment group received all program components; one comparison group received visits and non-VISM gifts but no verbal interaction stimulation; and the second comparison group received no special treatment. In 1967-68 participants were 2- and 3-year-olds, and selection was accomplished by inviting all eligible mothers to participate voluntarily. Response of mothers resulted in a treatment group of 34 pairs, and comparison groups of 9 and 19 pairs. Professional social workers were employed as toy demonstrators to visit the homes.

In 1968-69 the new children were all 2-year-olds, and 18 nonprofessionals trained and supervised by the social workers acted as toy demonstrators. By the third year of program operation, 1969-70, another small pilot study had indicated the greater effectiveness of working with the children for a period of 2 years, and 19 of the preceding year’s subjects were continued in the program for a second year. Under the program’s present format, children enter at the age of 2 and remain in the program for 2 years; thus there are always two groups of children—an entering group aged 2, and a continuing age-3 group. Also during the third year, a third comparison group was added which received VISM only with no special verbal interaction stimulation.
Project director.—The program supervisor serves as both the principal investigator for the research aspect of the program and the project director. In supervising the research she is responsible for design of procedures and for gathering, analysis, and reporting of data. She directs activities of all professional and clerical staff, selects Verbal Interaction Stimulus Materials, and disseminates program information.

Program supervisors (2).—The supervisory social workers' activities include recruiting paid and unpaid nonprofessional toy demonstrators and program subjects, conducting the month-long training workshop for toy demonstrators, arranging and supervising their home sessions with mother and child, and keeping records and providing counseling in connection with home sessions. They also offer social services to the subjects and refer them to community agencies if necessary.

Assistant program supervisors (3 part-time).—These assistant supervisors fill in for the program supervisors and assist as needed.

Senior social worker.—The senior social worker assists the supervisory social workers in recruitment, research, and training activities and has the major responsibility for a followup study of children who have finished the program. She also directs a pilot family counseling service within the project.

Toy demonstrators (45).—Demonstrators include low-income paid workers as well as middle- and high-income volunteers. The paid toy demonstrators are high-school educated, many of them former mother-participants in the program. The volunteers are mainly college educated. All receive special training prior to service and work with one or two pairs each. Their work involves stimulating verbal interaction between mother and child with the VISM's. They also maintain records such as diaries of behavior during home sessions, and attend weekly group supervisory conferences.
Psychometrician.—The psychometrician is responsible for pretesting and posttesting the children in the treatment and control groups as well as for followup testing.

Secretary-unit office manager and secretary.—The secretary-unit office manager supervises clerical duties such as typing and mimeographing, recordkeeping, ordering and maintaining stock of VISM, keeping files, and handling communications. The secretary assists her in all of these duties.

Methodology

Methodology is designed to foster cognitive development of disadvantaged youngsters by stimulating verbal interaction between the children and their mothers. Interaction is highly structured and involves four essential components: mother-child pairs, trained toy demonstrators, Verbal Interaction Stimulus Materials (VISM), and supervised intervention techniques.

Mother-child pairs.—Selection of the mother and child pairs is done by sending a letter to all tenants in the three low-income housing projects which describes the program and invites inquiries. The letters are followed by door-to-door invitations to mothers of preschool children who are approximately 20 months old. Mothers who express interest in the project are visited by the program supervisor who gathers information on the family which would be helpful to the toy demonstrator in working with the two. Such information might include, for example, number of siblings and their age relation to the program child.

Mothers vary greatly in their quickness to learn and their degree of sensitivity to the program goals and verbal interaction techniques. Some are highly successful in working with their children; others remain passive throughout the entire 2-year program. Program methods take such variations into account, providing for flexibility in approach...
to the pairs and attention to the needs of each in group and individual supervisory conferences.

Toy demonstrators.—The toy demonstrators are selected on liberal criteria and receive special training before beginning to work with the two. The toy demonstrator’s role requires development of a warm relationship with the mother and child, demonstration of verbal stimulation techniques, and the development of maximum mother participation. The toy demonstrator visits each pair twice a week for a half-hour home session. On the first visit each week she brings either a toy or a book which she uses as a Verbal Interaction Stimulus Material. She introduces the VISM to the child, encouraging him to talk by asking him questions, listening to his answers, and replying. At the same time she draws the mother into the session by modeling verbal stimulation techniques which the mother then imitates. She also encourages the mother to read and play with the child between home sessions.

Verbal Interaction Stimulus Materials (VISM).—The 11 toys and 12 books used each year to stimulate verbal interaction within the mother-child relationship are presented to the child as gifts, one each week in alternating order. During their initial session, the mother and the toy demonstrator cooperate in putting together a special toy chest designed to store the VISM.

VISM are selected each year on the basis of several criteria related to their “stimulating” qualities. For toys, perceptual criteria include having strong primary and secondary colors, possibilities for spatial organization and form fitting, possibilities for simple sound stimuli when manipulated by the child, presence of simple geometric shapes, and attractive and varied tactile qualities. Other criteria are durability and safety, possibility of encouraging large muscle activity and development of dexterity,
stimulation of imaginative play, challenge to problem solving, and ability to act as a stimulus for self-rewarding activity. The VISM books are selected for appropriateness to the children's age and interests, interest to mothers, simplicity in language, good literary quality, and generally appealing in content and format.

**Supervised intervention techniques.**—Supervision is concerned with both the research and the instructional aspects of the overall intervention program. Supervisory personnel are responsible for selection of pairs, selection and training of demonstrators, monitoring of progress between pairs and demonstrators, and overall intervener evaluation.

Special instruction techniques are used to assure general uniformity of intervention procedures. During the semiweekly half-hour home sessions, the demonstrators use a variety of methods to stimulate the children to think, question, and talk; and encourage verbal interaction between the children and their mothers. They follow a similar approach for all VISM, but the level of complexity increases to match the children's progress and the greater sophistication of the VISM provided as they grow older. Similarly, the mother is encouraged to play an increasingly active role as she demonstrates a grasp of the techniques being modeled by the demonstrator.

Interaction techniques are divided into the following eight categories of verbal or verbally stimulating behavior: giving information, eliciting responses from the child, describing toy manipulation aloud, giving positive motivation, verbalizing social interaction by inviting or cooperating, encouraging reflection, encouraging divergence, and, engaging the child's interest in the book or toy.

"Giving information" includes naming features of the toy or book such as color, shape, or size, and encouraging the child to name them. In encouraging reflection, the
toy demonstrator uses words in many ways to remind the child to think about what he is doing during the home session. She and the child might describe their own actions in playing with the VISM. She attempts to arrange the play so that the child has choices to think about and make; she points out the times when self-control and doing things in the right order will help the child have a better time with the VISM. She also encourages him to use words in remembering other experiences like the one he is having with a particular toy or book.

Materials.—The VISM materials used in each year's program are two sets of 23 toys and books, one set for 2-year-olds and another for 3-year-olds. There is also a toy chest for storage of VISM which the mother and toy demonstrator put together on the first session. Some specific examples of VISM for 2-year-olds and for 3-year-olds are given below. They are listed in the order in which they are used, and the numbers indicate the home session to which each VISM is assigned.

Examples of Materials:

For 2-year-olds:

1. *Pat the Bunny* (book)
2. Col-o-roll Wagon block cart
4. Transportation puzzle
16. Musical instruments—bell, tone block, etc.
18. Magnetic Form Board

Publisher/Manufacturer:

Golden Press
Playskool
Harper & Row
Sifo
Childcraft
Child Guidance
Examples of Materials:

For 3-year-olds:
1. *Put Me in the Zoo* (book)
2. Can of blocks
4. Play kitchen
16. Xylophone
18. Number Learner

Publisher/Manufacturer:
Random House
Playskool
Random House
Fisher-Price
Tudor
Childcraft

Facilities and schedule.—The program’s office facilities are furnished by the Family Service Association of Nassau County. Facilities include an office for the program supervisor, space for secretarial activities, and a large conference room for training workshops and weekly conferences. Instructional activities of the program take place in the homes of the mothers, and the toy demonstrator and mother-child use whatever facilities lend themselves most conveniently to their activities. Each year the schedule of twice-weekly, half-hour home sessions continues for about 7 months, beginning in October and ending in May.

Personnel training.—The toy demonstrators are trained in an eight-session training workshop. The sessions include a general introduction to such topics as program methodology, working in poverty areas, psychosocial development of 2- and 3-year-olds, relation of language to cognitive development, nature of mother-child interaction, and specific plans for the first meeting with the pairs. The toy demonstrators also receive a
VISIT (Verbal Interaction Stimulus Intervention Techniques) handbook outlining general methodology.

At the weekly conferences the supervisor demonstrates the use of VISM and gives demonstrators mimeographed guide sheets for each new VISM. The guide sheet outlines specific procedures to be used during her next home session with the two. Within the general framework of procedures given in the guide sheets, the toy demonstrators are encouraged to be flexible and creative in their implementation of the verbal interaction techniques, adapting to the needs and characteristics of each pair.

The guide sheet for the book The Snowy Day furnished the following specific examples of methods used by the toy demonstrator to stimulate verbal interaction in connection with this particular VISM. The demonstrator was directed to invite the child to look and listen, to sit with the child between her and the mother, to show and read the title page, to show how to turn the pages and treat the book, and to read slowly and clearly. She was to stop at most illustrations to invite the child to point out and name colors, shapes, sizes, numbers, and relationships. She could also invite the child to tell about his own experiences (e.g., "Did you play in the snow, like Peter?"). Finally, the toy demonstrator was to encourage the mother to take over the reading as soon as she and the child seemed ready.

The following description of an actual home session in which these types of techniques were applied is excerpted from an account written by a toy demonstrator.

Joe sat down on the couch between his mother and me, having had a few moments
to look at the book before his mother joined us. Joe has a pixie-like, teasing quality which often manifests itself at some time during a session; it did so again today. He was eager both to give information and to request it. Very often Joe would name items which attracted him, and would say: “What’s that?” When he next encountered the same thing he needed only the response, “Tell me!” before he would give the correct answer. The teasing quality appeared early when he pointed to two girls and called them “boys,” immediately after he had correctly identified the sexes.

I read the text underneath the illustrations, and after a few pages, turned the reading over to his mother, who easily followed my lead. In retrospect, it seems that he displayed most enthusiasm over the more active, busy pictures, occasionally exclaiming wordlessly after turning a page and observing a fresh, busy illustration. We continued through the book, allowing him freedom to turn the pages as he wished, waiting for his initial response, reinforcing or discussing what he said, and asking for additional comments.

Dissemination activities.—A guide for replication of the Mother-Child Home Program and accompanying model kit of forms, schedules, toy demonstrators’ handbook, and curriculum materials used in the program are available through the program director. Other materials available are film, slide, tape, and cassette presentations of home sessions.

**Budget**

Mother-Child Home Program replication costs vary with the number of pairs, the number of paid toy demonstrators and clerks, the nature of facilities, etc. A model
annual budget for 80 children and a combination of paid and unpaid toy demonstrators is given below:

<table>
<thead>
<tr>
<th>Percent of time</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program supervisor-coordinator</td>
<td>100</td>
</tr>
<tr>
<td>Paid toy demonstrator (2)</td>
<td>100 for 4,900</td>
</tr>
<tr>
<td>35 weeks</td>
<td></td>
</tr>
<tr>
<td>20 Volunteer Toy Demonstrators</td>
<td>part-time</td>
</tr>
<tr>
<td>Secretary-clerk</td>
<td>50</td>
</tr>
<tr>
<td>Verbal Interaction Stimulus Materials (VISM)</td>
<td>—</td>
</tr>
<tr>
<td>Office supplies</td>
<td>—</td>
</tr>
<tr>
<td>Overhead (rent, telephone, maintenance, etc.)</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

On the basis of the above estimated budget, and the assumption of 80 children served, the per-child cost would be $367.

Evaluation

The Mother-Child Home Program attempted to elevate the IQ's of 2- and 3-year-old disadvantaged children by increasing their verbal interaction with their mothers.

1 Or a program supervisor, 50 percent of time at $5,000.
Interactions were structured through periodic home visits by trained “interveners” who also provided toys and books as Verbal Interaction Stimulus Materials. The program was evaluated by comparing mean intelligence test scores of the treatment and comparison groups at the beginning and end of the treatment period. The evaluation employed the Peabody Picture Vocabulary Test (PPVT) and either the Stanford-Binet (for the older children) or the Cattell Infant Intelligence Scale (for the younger children). The Cattell test is considered to be a downward extension of the Stanford-Binet.

On the basis of data collected from these tests, it can be concluded that the Mother-Child Home Program achieved its objectives in producing statistically and educationally significant IQ gains.

Mothers’ reports data are far less comprehensive than the test data. Follow-up interview data revealed, however, that significantly more mothers of treated children considered the program “good or excellent” than mothers of the untreated comparison group (97 percent versus 38 percent). Also more mothers of the treated group felt that the program had helped their children in initial and later school adjustment than did mothers of the untreated group.

Replication

The Mother-Child Home Program is being replicated in the Pittsfield, Massachusetts, Public Schools; the Family Counseling Service of Newton, Massachusetts; the Family Counseling Service of Paterson, New Jersey; and the Sheltering Arms Childrens Services, New York City. The average IQ gain after 1 year (1970–71) for subjects in all replications combined was 16 points, starting from a total mean IQ of 88.3 and ending with a mean IQ of 103.8 points. All four replications will continue for a second year of the Mother-Child Home Program in 1971–72.


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