During the 1979-1980 school year Project Primary Reading Objectives for Bilingual Education (P.R.O.B.E.) was involved in improving the rate of reading growth and cognitive development of four and five year olds from the Bronx, New York. In bilingual classes that were conducted primarily in Spanish, the 153 program participants received instruction that emphasized oral language readiness for reading: sensory-motor coordination; training in reasoning; cultural heritage; self-concept; and a language experience approach to curriculum areas. P.R.O.B.E. was evaluated through observations by a consultant and through pre- and post-test data from the Boehm Test of Basic Concepts. Both the pre-Kindergarteners and Kindergarteners exceeded the expected level of achievement. The consultant found that the program successfully created a stimulating and effective learning environment. (MK)
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FINAL EVALUATION REPORT
1979-1980

Project P.R.O.B.E.

TITLE VII

BUDGET CODE     # 5001-07
PROJECT          # 07603

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction and Description of Program</td>
<td>1</td>
</tr>
<tr>
<td>Description of Planning Procedures and Staffing</td>
<td>3</td>
</tr>
<tr>
<td>Description of Materials</td>
<td>6</td>
</tr>
<tr>
<td>Observation of Program Participants, Staff Development and Training Procedures</td>
<td>7</td>
</tr>
<tr>
<td>Observation of Instructional Activities and Curriculum Approaches</td>
<td>10</td>
</tr>
<tr>
<td>Findings from Testing and Statistical Analysis</td>
<td>14</td>
</tr>
<tr>
<td>Program Strengths</td>
<td>14</td>
</tr>
<tr>
<td>Program Recommendation</td>
<td>17</td>
</tr>
<tr>
<td>Conclusion</td>
<td>18</td>
</tr>
</tbody>
</table>
The P.R.O.B.E. program has been in operation since the funding year 1977-78. The evaluation design consisted of observations by the consultant, participants, staff development, training procedures, instructional activities and curriculum approaches and findings from testing and statistical analysis was also conducted.

Description of Program

Project P.R.O.B.E. (Primary Reading Objectives for Bilingual Education) focuses on the creation of a stimulating bilingual classroom environment primarily conducted in Spanish for four (4) and five (5) year olds in P.S.5, Bronx and P.S.30, Bronx.

The 4 year olds, the 5 year olds and their parents in each school are involved in the process of improving the rate of reading growth and cognitive development early in the child's experience.

There is a strong emphasis on oral language, sensory-motor coordination and training in reasoning. Cultural heritage, music and art are used as vehicles of enrichment and self-concept. The language-experience approach is used to improve skills in all the necessary curriculum areas.

Instruments are being used to determine the child's language development, dominance and general aptitudes. Results of these assessments help to create prescriptions needed to give special help for individual children.

Parents of children, "volunteer parent cooperators", are required to work in the classroom assisting in the learning centers on a weekly rotating basis under the direction of the teacher. An educational assistant (one for 4 year olds and one for 5 year olds) works with children individually and in small groups. A family assistant helps the coordinator, assisting parents with problems and in contacting agencies. She helps during workshops.
Parents attend workshops conducted by the coordinator and/or consultants twice a month. They are reviewing classroom experiences, learning about behavioral objectives for age levels from 3-7 and are receiving a comprehensive view of all the curriculum areas. Emphasis is upon the creation of materials that can be used at home to help their children's growth and development. The complete staff is involved in a training program consisting of early childhood philosophy, child development, pre-reading skills, culture and other curriculum areas.

Spanish, the dominant language, is used in the program. ESL is included during music, physical education and general assemblies often taken with the rest of the school. Teachers of art, culture (Black History and Puerto Rican), physical education, science and library cover these classes once a week, thus providing exposure to English in the form of directions and applications.

Children are thus exposed to experiences which are improving their skills in all areas. Parents are exposed to experiences which enrich their knowledge, understanding and powers of observation. They are also acquiring skills that can be used at home. Parents and children are pre and post-tested to measure growth.

The bilingual coordinators (one in each school) work with teachers and paraprofessionals. Training sessions are set up so that both schools are working together training the staff in
the needed skills to carry on the focus of the program. Each school coordinator gives workshops for parent cooperators twice a month in their own school. Once every two months workshops also include other parents in the school. The principal in each school oversees the program and its administrative functions.

Description of Planning Procedures and Staffing

The P.R.O.B.E. project at each site was staffed by a resource teacher, two paraprofessionals and one family assistant. In addition, two tax-levy teachers were assigned to participate in the program. All staff assigned to the program were bilingual.

The Resource Teachers at both sites were persons experienced in bilingual education and they were responsible for the administrative coordination of the project. The Resource Teachers provided for training of staff and parent volunteer cooperators in techniques, methods and materials and philosophy of instruction; articulated with Diagnostic Center teachers and appropriate agencies regarding special placements; conferred with consultants, administrators, teachers and parents to review findings and recommendations; encouraged communication between project staff and school staff; provided for sessions for the analysis of methodology, teacher training, pupil evaluation and coordination of project activities and school activities at both sites; maintained a file of records related to pupils and to program activities; reviewed, recommended and ordered materials; periodically visited classrooms to observe implementation of the project.
The paraprofessionals assisted children in small groups of three or four and/or individually in learning centers; employed reinforcement techniques in diagnosed areas of difficulty with children; collated and prepared original teacher-made materials necessary for individualized instruction and learning centers; assisted teachers with testing as well as the construction, care and distribution of materials; assisted with the necessary recordkeeping and maintained an inventory of materials and equipment. They also reinforced learning in all areas; assisted in trips, spoken language, storytelling, etc.; transcribed children's stories onto paper; held informal conversations and discussions with small groups and/or individually; observed children's behavior and conferred with teachers for prescriptions for improvement; maintained amicable and supportive informal working relationships with all parent volunteer cooperators.

The Family Assistants acted as liaison with parent cooperators and other parents to maintain their involvement in the program; assisted parents with younger children (toddler service) during workshops or during parents' participation in the classroom; assisted parents with referrals and contacts regarding medical and emotional problems of children and/or families. They visited homes if necessary.
In addition, Family Assistants kept records of activities in the form of a log. They also assisted in the preparation of parent workshops and did advance publicity formally and informally for parent workshops.

Teachers were selected by the principals based upon experience, educational background, and licensing, while the paraprofessionals in most cases were selected to complement the teachers.

All staff schedules were available and accurate. Staff members maintained a close and cooperative atmosphere. They all worked well together and communicated well with each other and with non-program personnel.

Supervision of all the staff was done at each site by the principals of the schools who were quite involved with the program. The Resource Teacher directly supervised the Paraprofessionals and Family Assistants as well as interacted with the teachers to discuss problems and curriculum, etc.

The teachers also supervised the paraprofessionals with whom they worked on a daily basis by discussing daily planning and implementation of diagnostic results. Supervision was done in the classrooms as well as in workshops. Problems were discussed both formally and informally with the Resource Teachers and principals.
The interaction between the staff has been excellent. An open, friendly and cooperative feeling was evident.

**Description of Materials**

The materials in the classroom were quite varied. They were shared by the staff of the four and five year old groups. Much of the equipment as well as some puzzles and posters were purchased before the program began and are the property of the school. Some of the equipment such as cabinets, library display units, easels and chairs were present at each school site.

Most materials were the same in the four year old and five year old age groups, although they were used differently with the different age groups.

Materials were instructional and manipulative. Some of the instructional materials were wooden letters, wooden numbers, dominoes, posters, cubes, abacus, worksheets, books, workbooks, color wheels, and charts, cards, flannel boards, cut outs and a variety of counting boards.

A great variety of manipulatives (developmental learning materials) were available such as blocks of different colors, sizes and shapes, materials and weights to stimulate kinesthetic senses, tinker toys, attribute sets (instructional as well), crayons, paints, many other arts and crafts materials.

Other materials included those necessary for the stimulation of social development and communication, such as costume jewelry, dress-up clothes, dolls, dishes, and home-like play materials.
including ironing boards, mops, and plastic food. Handpuppets and woodworking materials were also available and pets like fish in tanks were maintained in at least one classroom this year.

Materials were of good quality, shape and attractively displayed. All were appropriate for the age group served by the program. Most materials were made available to the children in a planned manner for small group instruction. Others were displayed on open storage shelves and available to children during free play. Some were kept in closed storage and made available when needed.

Among the materials most frequently used were the puzzles, blocks, beads, wooden erector sets, clay and crayons, workbooks, letters and numbers. Painting easels and paints were sometimes used.

Audio/visual materials were also available including a record player, cassette player, programmed tapes as well as a filmstrip projector with a variety of appropriate filmstrips. In one Kindergarten classroom, these materials were available for children's independent use in a Listening Center.

Observation of Program Participants, Staff Development and Training Procedures

There were approximately 160 children who participated in the program. One of the criteria for selection included parents' willingness to work in the classroom setting with their children.
on a regular basis and their willingness to participate in
the bi-weekly workshops for parents.

Updated pupil records and test data were repeatedly con-
sulted. Pupil schedules were posted. Children's notebooks
and folders of current work were maintained and regularly up-
dated as work was sent home with the children.

Parents of children participating in the program were
expected to be available for shifts of participation in the
classroom as assistants to the teacher in bi-weekly workshops.
The active participation of parents was a unique feature of this
program.

Orientation and training sessions were attended by the
staff. Orientation and training covered a variety of topics
such as testing, knowledge of child development, concepts of
language development, techniques for use of English and Spanish
as Second Languages. In general, the paraprofessional staff
preferred joint sessions to those where the teachers and para-
professionals had separate training sessions. Both teachers
and paraprofessionals cited the fact that all could benefit
from each other's responses and experiences. They referred
especially to workshops in which new materials were presented,
whereby all staff would eventually use the same materials
with the children. All staff reported that the training
sessions helped them to perform their jobs more effectively
than they might have without such training.
This year, several teachers in the program participated in an on-going district-wide workshop for gifted children. They reported observations of programs for exceptional children in the field. Numerous ideas and techniques observed being implemented in the P.R.O.B.E classes were initially suggested to teachers through their observations in this program.

In addition to the orientation and training sessions for the teachers and paraprofessionals, parent workshops were conducted by the Resource Teachers and the Family Assistant at each school. All parents were included in the same workshops, both those participating in the program for the first time as well as those involved in the program for the second year. A significant number of parents attended and their participation was enthusiastic. The themes of the workshops included preparation for the parents to:

1. assist in the classroom;
2. understand child development;
3. detect health problems;
4. specify curriculum areas;
5. specify information related to holidays and suggestions on how parents may reinforce at home lessons learned at school;
6. suggest and implement ideas for projects and activities for children during visitation periods;
7. suggest and implement ideas for beauty care, arts and crafts projects.

Parents were involved with the school in trips and other contacts such as preparing the caps and gowns worn by the kindergarten children at the graduation exercises.

This year efforts were made to coordinate workshops for parents with other programs at each site in an effort to maximize parental involvement. This allowed parents whose older children were in the same school in the other programs to take advantage of all the workshops. On several occasions guest speakers were scheduled from the Bilingual Resource Center of the Board of Education.

Parents were also active this year in representing the program by exhibiting materials, arts and crafts projects, and student made projects at the district-wide annual exhibition/workshop/conference for parents of children in all funded programs.

Observation of Instructional Activities and Curriculum Approaches

The classroom program was divided into three parts.

I. Class Instruction

work and lessons done with entire class at the same time.

II. Small Group Instruction

Instructions usually done at free time in different learning or activity areas.
III. Prep Periods

Instruction done with prep teachers that come to the P.R.O.B.E. classes; classes the P.R.O.B.E. participants attend for instruction in music, art, science, etc. The teachers' lesson plan rotated around these three modes of instruction:

I. Class instruction of the whole group involved such instructional activities as circle time or story time; children's involvement in attendance and welcoming activities, i.e. counting those present; picking out cards with their own and others' names written; talking about their weekend and the weather of the day; talking about projected or past activities or trips; making butter; naming articles of clothing; counting; singing; performing rhythmic and musical activities; doing indoor gymnastics on mats on the floor in bad weather; talking about a picture; taking snacks; drawing; making collages; participating in rehearsals for assemblies; playing ball; conversing in English or Spanish; seeing filmstrips, making trips to the park; playing outdoors.

II. Small group instruction was usually during free time. This was done with groups no larger than four children and in different learning or activity areas in the classrooms. Teachers, paraprofessionals and parents were all involved in this type of activity. Teachers generally decided upon the composition of the groups which would either vary from day to day or stay the same for several weeks, depending upon the
children's specific skills and needs. Decisions about the type of grouping were either done informally or in response to the diagnostic tests.

Instructional activities in small groups involved:
working on puzzles, making collages; making finger puppets;
describing or playing with different shapes and colors on color wheels or boxes; reading books; engaging in dramatic free play;
testing; string beads painting with both water and poster paints;
differentiation of textures; doing instruction in ESL (with earphones); planting; writing or drawing in their workbooks;
playing with small blocks; tinker toys; and wooden erector sets;
jumping and tumbling on mats; lacing; modeling clay; utilizing pegboard and pegs, attribute sets (shapes and colors); playing with dominoes (regular sized and oversized); counting and learning the different coins in money; learning about magnets;
size concepts, wooden numbers and letters; drawing; constructing projects such as clowns made of construction paper and beans;
stimulating of children's vocabulary in English and Spanish through picture identification and reading.

In Kindergarten classes more advanced activities of a higher cognitive level were observed. Among them were instruction in specific skills such as early mathematical skills, reading and writing. Recognizing sequence skills were developed through placing cartoon story pictures in order.
III. The prep periods constituted the third part of the day. At this time other teachers came in to teach the children songs, to create drawings, to do science lessons or ESL instruction.

On some occasions, the classes were combined with tax-levy classes during this period. On other occasions, the two different age groups of the two P.R.O.B.E. classes at each site were combined for the prep periods.

Although only limited funding was available for transportation this year through the district, some trips were planned and taken. The younger children walked in the neighborhood to see trees changing colors in the park in the fall as part of their nature lessons. At Christmas time they walked to a local church where trees were sold. In the Spring, the older children took trips to the Bronx Zoo, to the Circus and to a farm in the city. Several parents accompanied the classes on the longer trips.
Findings from Testing and Statistical Analysis

"T" tests were used for a comparison of pre-test and post-test means. The tables on the subsequent pages indicate the results from the "t" tests. (See Tables 1 and 2).

Children in Reading, Pre-Kindergarten and Kindergarten were given the Boehm Test of Basic Concepts, Subtests--Listening Comprehension. Specifically the findings were as follows:

1. In reading, the Pre-Kindergarten children at P.S.30 demonstrated achievement beyond expectation (p=.05)--the T test value was significant at the .01 level. The Pre-Kindergarten children at P.S. 5 demonstrated achievement at the expectation level of p=.05 (See Table 1).

2. In reading, the Kindergarten children at P.S.30 demonstrated achievement beyond expectation (p=.05)--the T test value was significant at the .01 level. The Kindergarten children at P.S.5 did not demonstrate achievement at the expectation level of p=.05 (See Table 2).

Program Strengths

1. A great variety of manipulative materials were included for use by the children.

2. A large variety of instructional activities and language experiences were used to stimulate the interests of children.

3. The participation of volunteer parent cooperators was widely used in an effort to reinforce children's learnings.
TABLE 1

Comparison of Means, Standard Deviations and T-tests for Pupils Participating in the Project P.R.O.B.E. by Grade Level and Sub-test.

(Name of Test: Boehm Test of Basic Concepts)

<table>
<thead>
<tr>
<th>Sub-test</th>
<th>Grade</th>
<th>N</th>
<th>Pre-test Mean (X)</th>
<th>Pre-test SD (SD)</th>
<th>Post-test Mean (X)</th>
<th>Post-test SD (SD)</th>
<th>T-test</th>
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<tbody>
<tr>
<td>Listening</td>
<td>Pre-Kindergarten</td>
<td>30</td>
<td>38.78</td>
<td>13.82</td>
<td>77.80</td>
<td>13.07</td>
<td>11.37*</td>
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<tr>
<td>Comprehension</td>
<td>Pre-Kindergarten</td>
<td>23</td>
<td>47.83</td>
<td>19.99</td>
<td>52.02</td>
<td>13.81</td>
<td>2.67**</td>
</tr>
</tbody>
</table>

All scores are normal curve equivalents scores.

*T-test value is significant at the .01 level

**T-test value is significant at the .05 level
TABLE 2

Comparison of Means, Standard Deviation, and T-tests for Pupils Participating in the Project P.R.O.B.E. by Grade Level and Sub-test.

(Name of Test: Boehm Test of Basic Concepts)

<table>
<thead>
<tr>
<th>Sub-test</th>
<th>Grade</th>
<th>N</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>T-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Reading)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening</td>
<td>Kindergarten</td>
<td>50</td>
<td>58.45</td>
<td>67.72</td>
<td>2.97*</td>
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<tr>
<td>Comprehension</td>
<td>(P.S.30)</td>
<td></td>
<td>21.83</td>
<td>23.60</td>
<td></td>
</tr>
<tr>
<td>Listening</td>
<td>Kindergarten</td>
<td>50</td>
<td>50.69</td>
<td>51.84</td>
<td>.60**</td>
</tr>
<tr>
<td>Comprehension</td>
<td>(P.S.5)</td>
<td></td>
<td>14.47</td>
<td>16.34</td>
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All scores are normal curve equivalents scores:

*T-test value is significant at the .01 level

**T-test value is not significant at the .05 level
4. Workshops for parents were well planned and coordinated with workshop activities for parents from other programs.

5. There were good working relationships between the Principals, Resource Teachers, Classroom Teachers, Para-professionals, Family Assistants and Parents within the program.

Program Recommendations

1. It is suggested that peer instruction activities be expanded, capitalizing on opportunities for grouping Kindergarten and Pre-Kindergarten children in instructional activities. These activities will also increase opportunities for learning through interaction between these two groups.

2. It is suggested that emphasis continue to be placed on informal and creative activities -- clay building, music, play activities, dancing, painting, etc. as a means of providing a basis for providing language experiences for children. Within this context, continued emphasis can also be placed on using children's interests as mechanisms for building language experiences and ultimately verbal experiences.

3. It is recommended that additional emphasis be placed on the periodic use of monitoring and formative assessment techniques to accomplish continuous assessment of the progress of children and staff. The frequent use of staff conferences can be continuously stressed to permit discussion of strengths and areas for improvement. Conferences and workshops can also be relied upon for sharing ideas and procedures which have been effective.
Conclusions

The P.R.O.B.E. program successfully created a stimulating learning environment for four and five year olds according to the proposed program design. Focus was on improving the reading growth and cognitive development through bilingual instruction. A great richness of techniques and materials were used to provide a language experience approach for the four year olds and five year olds and their parents who participated at each site. Enrollment in classes was limited to fifteen for four year olds and twenty-five for five year olds.

Coverage during Program Teacher's prep periods by tax levy teachers of art, culture, physical education, science and library provided the children with additional exposure to English and interaction with other children in the school. Children learned to recognize and/or write their names and know numbers and colors and shapes in Spanish and English as well as to communicate and have respect for themselves, their fellow students, teachers and parents.