An evaluative study in New York (New York) comprehensive half-day public school prekindergarten programs serving language minorities is reported. The study investigated effectiveness of city policy supporting the use of the children's native (home) languages for some portions of instruction. Information was gathered on: (1) supervisory staff's identified goals and strategies for language-minority children; (2) program achievement of student needs through classroom activities and staff language use; (3) differences in classroom activities and language use between bilingual and monolingual groups; and (4) differences in overall student growth between groups. Student growth measurements included 23 items in 5 skill areas (gross motor, fine motor, language, visual discrimination, memory). All staff identified effective transition to English instruction as a goal, and many identified language maintenance and/or instruction. Home-to-school transition was also mentioned. One staff member was explicitly opposed to native language use in school. All schools used strategies intended to promote gradual transition to English. A variety of classroom factors (supplies, equipment, instructional materials, activities) were identified as having differential effects on development. Bilingual classroom teacher native language use was seen primarily in experiential and instructional contexts. Achievement results suggest that developmentally appropriate inclusion of children's first language is beneficial. (MSE)
THE EFFECTS OF NATIVE LANGUAGE USE IN NEW YORK CITY PREKINDERGARTEN CLASSES

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PROGRAM DESCRIPTION

In 1986 the Mayor of the City of New York and the New York City Board of Education initiated a publicly-funded, comprehensive half-day prekindergarten program for four-year-olds. The program, called Project Giant Step, provided educational, health and nutrition services to low-income children and their families. By the 1989-90 school year approximately 5,000 children were enrolled in 139 classrooms located in 81 elementary schools in 20 community school districts.

In August 1987 the Mayor's Office of Early Childhood Education established an Advisory Committee on Linguistic and Cultural Diversity for Project Giant Step to make recommendations on how the program might best respond to the needs of the non-English speaking and culturally diverse population enrolled in Project Giant Step classrooms. According to the Advisory Committee report, young children acquire fluency in a second language easily as long as they have sufficient exposure to the second language and have opportunities to use it in meaningful situations. On the other hand, the report also emphasized that because their first or native language is a "primary vehicle" for learning for all children, children deprived of the opportunity to use that language in school are "robbed of access to further cognitive development....[and of] equal educational opportunity."

The Committee recommended that teachers identify the home language and language proficiency of the children in their classrooms and use their native language for part of classroom
instruction especially when presenting new or complex concepts. It was suggested that English be introduced in naturalistic settings, that is, as children are engaged in meaningful learning activities.

The New York City Board of Education is required to provide bilingual and/or English as a Second Language (ESL) instruction to limited English proficient children in kindergarten through twelfth grade. About one third of the Project Giant Step parents, however, reported that their children spoke languages other than English at home. Although there were no official Board of Education policies regarding instruction for limited English proficient children in public school prekindergartens, a number of Giant Step programs described themselves as operating bilingual prekindergarten programs.

THE EVALUATION

In the spring of 1990 the Office of Research, Evaluation and Assessment examined the strategies used to meet the linguistic needs of language minority children enrolled in Project Giant Step classrooms. A sample of 23 classrooms in 14 schools in eight community school districts was randomly selected from schools which had been identified as enrolling predominately non-English speaking children. Of the 23 classrooms, one was considered bilingual Chinese (Mandarin) and 12 as bilingual Spanish. The remaining 10 classrooms were considered monolingual English classrooms although most of the children came from families that spoke either Spanish or Chinese at home. All 14
schools provided bilingual and/or English as a Second Language services beginning in kindergarten.

**Evaluation Questions**

Evaluation activities were designed to address the following questions:

- What goals did supervisory staff identify for working with non-English speaking prekindergarten children? What strategies did supervisory staff indicate were effective in working with non-English speaking children?
- How did the program meet the needs of bilingual and culturally diverse children through classroom activities and staff language use?
- Did classroom activities and language use in bilingual prekindergarten classrooms differ from those in monolingual classrooms?
- Did student growth in bilingual prekindergarten classrooms as measured by the Chicago EARLY differ from that in monolingual classes?

**Data Collection**

Data for the evaluation were collected in a variety of ways. OREA field consultants conducted three-day site visits. During the site visits they conducted structured interviews with Project Giant Step teacher specialists, school principals, and staff persons in charge of the school's bilingual or ESL program. The field consultants who were fluent in English and Spanish or English and Mandarin used a standardized observation system to collect data on the type and frequency of classroom activities, classroom materials, and the use of languages other than English in the classroom.

The Chicago Early Assessment and Remediation Laboratory
EARLY) test, a criterion-referenced test, was used to assess student growth. The test is individually administered and contains 23 items representing five major skill areas: gross motor, fine motor, language, visual discrimination, and memory. It was normed in English and in Spanish on approximately 1,900 children in Chicago public school prekindergarten programs. Children in the normative sample were 54 percent African-American, 11 percent Latino, 30 percent White, and five percent Other.

Children in Project Giant Step classrooms were administered the Chicago EARLY twice. Classroom teachers administered the test in December 1989 or January 1990 and again in April or May 1990. Scores for children in the sample classes were collected from program records.

FINDINGS

PROGRAM GOALS FOR NON-ENGLISH SPEAKING CHILDREN

Program Goals

School principals and the Project Giant Step teacher specialists in all 14 schools were asked to identify what they considered to be developmentally appropriate goals for bilingual education in prekindergarten. All staff included promoting an effective transition to English as a goal. In seven schools staff also described native language maintenance and/or acquisition of fluency in both the native language and English as appropriate goals. In the schools which provided bilingual programs, staff believed that they should teach in the children's
native language so that the children could continue to develop new skills at the same time that they gained fluency in English. One staff person stated that, "Children should be given the opportunity to learn in the language they best understand."

In addition, several staff members believed that the transition from home to school can be a traumatic experience for young children especially when the language spoken at home is different than that spoken in school. By using the children's home language staff felt that they conveyed a welcoming attitude to the children and thus, helped make their first exposure to school a positive experience.

Other staff asserted that, in addition to easing the adjustment to formal schooling, use of their home language helped foster children's self-esteem. According to these educators, when the children's linguistic and cultural backgrounds is validated in school this helps children to gain confidence and preserve their self-identities. As one person said, "We speak their language whenever possible. Language is so much a part of who one is...You must continue to build on the first language. That way other skills improve as well and that will help in learning the second language." Another person said that the prekindergarten program tries, "to provide an environment in which every child can be successful. That involves teaching in their language.

Four persons who were interviewed described the language of non-English speaking children as "weakly developed" and viewed
their home language as an impediment to their progress in school. One staff member, who was explicitly opposed to the use of Spanish in school, defended her position by saying that the children's future depended on their ability to function in English. No staff, however, spoke in favor of a "total immersion program" in which no use of children's home language is permitted.

Instructional Strategies

All of the schools used strategies intended to promote a gradual transition to English. School staff had four basic strategies for working with non-English speaking children. The strategy most frequently mentioned by school principals and teacher specialists was to hire bilingual teachers and other staff who were able to communicate with the children and their parents. The second most frequently discussed strategy was to provide some instruction in the children's home language.

Two schools described specific strategies for implementing the transition to English. As described by one teacher, when the children first started school, she let them use whatever language they wanted. Some children in the class were Spanish dominant, others were English dominant although they spoke Spanish at home, and some children spoke languages other than English or Spanish. The teacher said she spoke "four-year-old Spanish" herself. After the New Year, when the children first returned from the Christmas vacation, she held a class meeting to explain the importance of learning to speak English in school. The teacher
reported that once she suggested to the children that they start to speak English in school they responded eagerly and increased their use of English as they were able.

A number of staff described what are considered good early childhood education practices as the best strategies to use in working with non-English speaking children. These included experiential learning (learning by doing), promoting language development through peer interaction, and low teacher-child ratios. They said they assigned children to mixed groups so that non-English speaking children had opportunities to communicate with English-speakers as they played and worked together; using ESL methods such as visual props or body language so that verbal messages were reinforced by extralinguistic cues; and sensitizing staff to cultural differences.

CLASSROOM ENVIRONMENT

The sections which follow describe the classroom environments and the extent to which they fostered developmentally appropriate educational activities.

Classroom Supplies and Equipment

OREA field consultants used a standardized checklist to record the equipment and materials available in the classrooms to the children and the materials and equipment used by the children during the observation period. Furniture, equipment and supplies are ordered for new Project Giant Step classrooms by the central Early Childhood Education Unit. As a result, initially at least, all Project Giant Step classrooms have essentially the same
supplies and equipment. Previous evaluations of Project Giant Step found that classrooms were well equipped with a variety of developmentally appropriate materials and equipment.

In addition to centrally ordered materials, money is provided to project staff to purchase additional supplies during the school year. These funds can be used to purchase instructional materials which reflect the culture and environments of the prekindergarten children and their families. Field consultants observed a variety of multicultural materials available to children. Dolls and block accessories representing different racial and ethnic groups were found in 82.6 percent of the bilingual classrooms and 24.7 percent of the monolingual classrooms. Multicultural books were observed in about half (52.2 percent) of the classrooms; multicultural music tapes or records in 39.1 percent, and puzzles in 21.7 percent. Items which were purchased locally such as display photos were found in fewer than ten percent of the classrooms.

**Classroom Activities**

For analysis purposes, the 26 possible activities on the classroom observation form were grouped into three broad categories. The first category, experiential activities, consisted of activities which help children develop concepts through observation, manipulation of concrete objects, and meaningful social interaction with adults and other children. It includes block play, arts and crafts, puzzles and games, and dramatic play (such as may occur in the housekeeping area).
Group time, singing/movement, and snack time were also defined as experiential activities. Experiential activities usually do not focus on the acquisition of a specific academic skill.

The second category, instructional activities, differs from experiential activities primarily in focus. Instructional activities were defined as activities designed to teach specific academic skills in beginning reading, early writing, beginning mathematics, oral language, social studies or science. Both experiential and instructional activities are considered productive educational activities.

Activities that were not planned as educational experiences for the children were categorized as non-learning activities. These include: necessary classroom management and transition activities; inappropriate social interaction and observing; negative interaction; and off-task behavior. Most non-learning activities were coded as classroom management or transition activities.

As shown in Table 1, the majority of instances of classroom activities observed both in bilingual and monolingual classrooms were experiential activities. The distribution of different activities in bilingual and monolingual classrooms was similar.
TABLE 1
Percentages of Instances of Classroom Activities in Bilingual and Monolingual Classrooms

<table>
<thead>
<tr>
<th>Activity</th>
<th>Bilingual Classrooms (N = 466)</th>
<th>Monolingual Classrooms (N = 372)</th>
<th>All Classrooms (N = 838)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential</td>
<td>75.8%</td>
<td>76.1%</td>
<td>75.9%</td>
</tr>
<tr>
<td>Instructional</td>
<td>9.9</td>
<td>9.9</td>
<td>9.9</td>
</tr>
<tr>
<td>Non Learning</td>
<td>14.3</td>
<td>14.0</td>
<td>14.2</td>
</tr>
</tbody>
</table>
LANGUAGE USAGE

Field consultants recorded observations once every ten minutes for two hours in each of the 23 sample classrooms. Twelve observations were completed in each classroom for a total of 156 observations in the 13 bilingual classrooms and 120 observations in the 10 monolingual classrooms. When teachers, educational assistants, or other adults used a language other than English during the observation this was recorded on the classroom observation form. Data were not collected on the language used by the children.

As shown in Table 2 almost no observations were recorded in the monolingual classrooms in which teachers spoke a language other than English. As was expected teachers were observed using languages other than English more often in the classrooms which were considered to be bilingual. Educational assistants were rarely observed using languages other than English in any of the classrooms (See Table 3).

TABLE 2

Percentages of Observations of Teachers' Use of Languages Other Than English

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Bilingual Classes (N = 156)</th>
<th>Monolingual Classes (N = 120)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential</td>
<td>10.9%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Instructional</td>
<td>7.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Non-Learning</td>
<td>3.8</td>
<td>---</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22.4 %</td>
<td>2.5%</td>
</tr>
</tbody>
</table>
TABLE 3
Percentages of Observations of Educational Assistants' Use of Languages Other Than English

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Bilingual Classes (N = 156)</th>
<th>Monolingual Classes (N = 120)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiential</td>
<td>5.1%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Instructional</td>
<td>1.3</td>
<td>1.7</td>
</tr>
<tr>
<td>Non-Learning</td>
<td>0.6</td>
<td>---</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7.0%</td>
<td>4.2%</td>
</tr>
</tbody>
</table>

STUDENT ACHIEVEMENT

In addition to raw scores (i.e., the number of test items answered correctly), the Chicago EARLY provided norm-referenced or equivalent percentile ranks according to age. The percentile rank scores were converted to Normal Curve Equivalent (N.C.E. scores) for analysis. Of the 587 children enrolled in the sample classrooms, only 243 had been administered all five subtests on either the pretest or the posttest. Only 152 children had complete pretest and posttest scores.

As shown in Table 4 children in the bilingual classrooms showed greater gains on the Chicago EARLY than children in the monolingual classes. Using analysis of covariance (ANCOVA), a test of difference between means on the posttest controlling for differences on the pretest, there was a statistically significant difference (p < .05) in posttest means.
TABLE 4  
Pre- and Posttest Mean NCE Scores on the Chicago EARLY for Bilingual and Monolingual Prekindergarten Classrooms

<table>
<thead>
<tr>
<th>Program Type</th>
<th>N</th>
<th>Pretest</th>
<th>S.D.</th>
<th>Posttest</th>
<th>S.D.</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monolingual</td>
<td>89</td>
<td>50.3</td>
<td>18.6</td>
<td>65.8</td>
<td>17.7</td>
<td>15.5</td>
</tr>
<tr>
<td>Bilingual</td>
<td>64</td>
<td>48.3</td>
<td>16.2</td>
<td>69.4</td>
<td>15.9</td>
<td>21.1</td>
</tr>
</tbody>
</table>

ANCOVA - F(1,150) = 5.25, p < .05

DISCUSSION
The New York City Board of Education has no official policy on bilingual education for preschool children. School staffs emphasize the need for eventual competence in English. A Language Policy Task Force (1986) convened by the New York City Board of Education recommended that prekindergarten children who are learning English as a second language have the opportunity to express themselves orally in their new language in non-threatening, low anxiety environments. The results of this study seem to suggest that the inclusion of the children's first language, for at least some of the time, in a developmentally appropriate early childhood setting is beneficial to young children's growth.
REFERENCES


Language Policy Task Force (1896). Recommendations for the implementation of the Board of Education's language policy resolution. New York City Board of Education.