Project Compugrafia.LEP (Limited English Proficiency) was designed to provide supplementary services and materials to existing bilingual special education programs in nine elementary schools in the Bronx (New York). The 471 project students were mildly to moderately disabled children from low-income Spanish-speaking families. The components of the program included instruction in English as a Second Language (ESL), Native Language Arts (NLA), computer-based skills, and career education. The project involved the parents in order to help them understand bilingual and special education procedures, and parents were also offered ESL instruction. The project also planned a broad range of staff development activities which focused on techniques of instruction, new curriculum, and utilization of computers as teaching aids. This 1991-92 evaluation report describes staffing, implementation, and outcomes. The project met its objectives for career education, curriculum development, staff development, and computer skills, but failed to meet objectives for ESL, NLA, and parent involvement. A brief case history concludes the report, and appendixes describe data collection and analysis procedures and list instructional materials used in the project. (JDD)
OREA Report

Project Compugrafia.LEP
Transitional Bilingual Education Grant G008710368
1991-92

FINAL EVALUATION PROFILE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Robert Johnson"

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)"
Project Compugrafia.LEP
Transitional Bilingual Education Grant G008710368

1991-92

FINAL EVALUATION PROFILE
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7/1/92
ACKNOWLEDGMENTS

This report has been prepared by the Bilingual, Multicultural, and Early Childhood Evaluation Unit of the Office of Research, Evaluation, and Assessment. Thanks are due to Solomon Derewetzky for collecting the data and writing the report.

Additional copies of this report are available from:

Dr. Tomi Deutsch Berney
Office of Research, Evaluation, and Assessment
New York City Board of Education
110 Livingston Street, Room 732
Brooklyn, NY 11201
(718) 935-3790  FAX (718) 935-5490
FOREWORD

The body of this report is preceded by an Extract which presents an overview of salient points of the project: funding cycle; enrollment figures; background of students served; admission criteria; and programming features, strengths, and limitations, including the outcome of all objectives. The extract also presents the conclusions drawn by the Office of Research, Evaluation, and Assessment (OREA) about the program and its recommendations for program improvement.

The extract is followed by the body of the report, titled Program Assessment. This includes such information as staffing, program implementation, and outcome and implementation objectives. Instructional objectives are presented first, followed by noninstructional objectives. The report then addresses those aspects of programming mandated by Title VII regulations that do not have specifically stated objectives. This may be information on attendance and dropout rate, grade retention, mainstreaming, referrals out of the program to meet special needs of the students, and withdrawals. A case history concludes the report.

Data for this profile were collected and analyzed using a variety of procedures, which are described in Appendix A following the text.
Office of Research, Evaluation, and Assessment
New York City Public Schools
E.S.E.A. Title VII Evaluation Profile
Project Compugrafia.LEP
Transitional Bilingual Education Grant G008710368
1991-92

EXTRACT

PROJECT DIRECTOR: Dr. Vincent Saetta
FUNDING CYCLE: Year 5 of 5

SITES (All are located in the Bronx.)

<table>
<thead>
<tr>
<th>School</th>
<th>Community School District</th>
<th>Grade Levels</th>
<th>Enrollment*</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.S. 04</td>
<td>9</td>
<td>2-5</td>
<td>45</td>
</tr>
<tr>
<td>P.S. 32</td>
<td>10</td>
<td>2-4</td>
<td>52</td>
</tr>
<tr>
<td>P.S. 42</td>
<td>9</td>
<td>2-6</td>
<td>70</td>
</tr>
<tr>
<td>P.S. 60</td>
<td>8</td>
<td>2-6</td>
<td>122</td>
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<td>P.S. 66</td>
<td>12</td>
<td>2-3</td>
<td>57</td>
</tr>
<tr>
<td>P.S. 89</td>
<td>11</td>
<td>2-4</td>
<td>29</td>
</tr>
<tr>
<td>P.S. 93</td>
<td>11</td>
<td>2-4</td>
<td>7</td>
</tr>
<tr>
<td>P.S. 156</td>
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<td>3-6</td>
<td>33</td>
</tr>
<tr>
<td>P.S. 157</td>
<td>7</td>
<td>3-6</td>
<td>29</td>
</tr>
<tr>
<td>P.S. 198</td>
<td>12</td>
<td>3-5</td>
<td>27</td>
</tr>
</tbody>
</table>

*The project enrolled 471 students (69 less than in the previous year). Male students numbered 322, female 147; gender not stated for 2.

STUDENT BACKGROUND

<table>
<thead>
<tr>
<th>Native Language</th>
<th>Number of Students</th>
<th>Countries of Origin</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>471</td>
<td>Unites States</td>
<td>293</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Puerto Rico</td>
<td>134</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dominican Republic</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Honduras</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ecuador</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nicaragua</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Panama</td>
<td>1</td>
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<td></td>
<td></td>
<td>Spain</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Venezuela</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unreported</td>
<td>3</td>
</tr>
</tbody>
</table>

Median Years of Education in Native Country: 2.0; in the United States: 6.0

Percentage of Students Eligible for Free Lunch Program: 99.6

ADMISSION CRITERIA

Admission criteria included special education designation and a score at or below the 40th percentile on the Language Assessment Battery (LAB) indicating limited English proficiency.
PROGRAMMING

Design Features

Project Compugrafia.LEP was designed to provide supplementary services and materials to existing bilingual special education programs in nine elementary schools in the Bronx. The project students were mildly to moderately disabled and were in Modified Instructional Services (MIS) I, II, III, or IV. The components of the program included instruction in English as a Second Language (E.S.L.), Native Language Arts (N.L.A.), computer-based skills, and career education. The design included involving the parents in order to help them understand bilingual and special education policies and procedures. Parents also were offered E.S.L. for the purpose of improving their own English proficiency. The project also planned a broad range of staff development activities focused on techniques of instruction, new curriculum, and the utilization of computers as teaching aids.

Capacity building. By the end of the year under review the project reduced Other Than Personnel Services (O.T.P.S.) support by Title VII by more than 80 percent.

Strengths and Limitations

The chief strengths of the program were the class intervention activities, staff development, and curriculum development activities. Program limitations lay in its inability to meet its objectives for E.S.L., N.L.A., and parent involvement.

CONCLUSIONS AND RECOMMENDATION

Compugrafia.LEP was fully implemented. As it had done last year, it met its objectives for career education and curriculum and staff development. Although it failed to do so last year, Compugrafia.LEP met its objective for computer skills. Similar to last year, it did not meet objectives for E.S.L. or N.L.A. While it had met its objectives for parent involvement last year, it failed to do so this year.

This was the last year of the project, therefore no recommendations are being made by OREA.
PROGRAM ASSESSMENT

STAFFING

Title VII Staff (Total 2)

<table>
<thead>
<tr>
<th>Title</th>
<th>Degree</th>
<th>Language Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Training Coordinator</td>
<td>M.A.</td>
<td>Spanish</td>
</tr>
<tr>
<td>Paraprofessional</td>
<td>High School+</td>
<td>Spanish</td>
</tr>
</tbody>
</table>

The teacher training coordinator fulfilled the functions of a resource specialist.

Other Staff Working With Project Students (Total 29)

The project director held a doctorate and was proficient in Spanish.

<table>
<thead>
<tr>
<th>Titles</th>
<th>Degrees</th>
<th>Certification</th>
<th>Language Competencies and Teaching/Communicative Proficiencies (TP/CP)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Director</td>
<td>1 Ph.D. 1</td>
<td>Bil. Special Ed. 28</td>
<td>Spanish TP 21, CP 7</td>
</tr>
<tr>
<td>Teachers</td>
<td>28 M.A. 22</td>
<td>B.A. 6</td>
<td></td>
</tr>
</tbody>
</table>

All staff were certified in the area in which they worked.

IMPLEMENTATIONS AND OUTCOMES (Objectives prefaced by ●)

English as a Second Language (E.S.L.)

E.S.L. was offered five periods a week on the beginning, intermediate, and advanced levels. Project instructors employed the whole language, language experience, natural, and total physical response approaches as well as art and music.

See Appendix B for list of instructional materials.

● By the conclusion of the fifth project year, all students will have demonstrated a significant increase in percentile score in their performance on the Language Assessment Battery (LAB)--English administered on a pre- and posttest basis.

Evaluation Instrument: Language Assessment Battery (LAB)**

*Teaching Proficiency (TP): Competent to teach in this language.
Communicative Proficiency (CP): Conversational capability only.

**OREA used a gap reduction design to evaluate the effect of supplementary instruction on project students' performance on the LAB. Since all LEP students in New York City are entitled to such instruction, no valid comparison group exists among these students, and OREA used instead the group on which the LAB was normed. Test scores are reported in Normal Curve Equivalents (N.C.E.s), which are normalized standard scores with a mean of 50 and a standard deviation of 21.06. It is assumed that the norm group has a zero gain in N.C.E.s in the absence of supplementary instruction and that participating students' gains are attributable to project services.

Number of students for whom pre- and posttest data were reported: 312

Percent of students with pretest/posttest gains: 28.8

Mean gain: \(-0.15\) N.C.E.s (s.d.=11.8)

Project did not meet E.S.L. objective.

Native Language Arts (N.LA.)

N.LA. was offered five periods weekly on the beginning, intermediate, and advanced levels. All the students lacked literacy skills in their native language when they entered the program. Of those who had entered the project in its first year, none remained in it—most of these students had graduated. The director estimated that 70 percent of those who entered in the project’s second year and remained in the program had attained literacy in Spanish. For students who had entered in the third and fourth year, estimates of the proportion attaining native language literacy were 40 percent and 10 percent respectively.

For a list of instructional materials, see Appendix B.

- By the conclusion of the fifth project year, all students will have demonstrated a significant increase in percentile score in their performance on the Language Assessment Battery (LAB)--Spanish administered on a pre-posttest basis.


Number of students for whom pre- and posttest data were reported: 150

Percent of students with pretest/posttest gains: 35.3

Mean gain: \(-6.1\) N.C.E.s (s.d.=18.9)

Project did not meet N.LA. objective.

Content Area Subjects

The project provided a bilingual/bicultural teaching environment and cultural activities within the content-based program of instruction of the special education curriculum. Learning was facilitated by relating materials to children’s personal experiences. Subjects were taught bilingually or with an E.S.L. methodology, depending on the level of ability of each student. For Bilingual Instruction Service (BIS) I students the lessons were conducted in Spanish, and for BIS II students the lessons were conducted in both Spanish and English.

See Appendix B for a list of instructional materials.

The program did not propose an objective for content area subjects.

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*Details for the evaluation design using the spring 1991 Spanish LAB administration as a pretest and the spring 1992 ELE administration as a posttest will be forthcoming.
Computer-Based Skills

See Appendix B for a list of instructional materials.

- By the conclusion of the fifth project year, all students will have demonstrated improved ability of six new skills for each year of project participation in computer-supported writing instruction in any combination of the areas of keyboarding, text editing, and word processing skills.

Evaluation Indicator: teacher report of skills mastered.

Number of students for whom skills were reported: 318
Percentage of students mastering six or more skills: 100.0

Project met computer-based skills objective.

Career Education

- By the conclusion of the fifth project year, all students will have demonstrated improved ability of six new skills for each year of project participation in career education instruction in any combination of the areas of career exploration, work readiness, and work study skills.

Evaluation Indicator: teacher report of skills mastered.

Number of students for whom skills were reported: 289
Percentage of students mastering six or more skills: 100.0

Project met career education objective.

Attendance

The program did not propose an objective for attendance. Participating students' attendance rates for the year under review and the previous year, however, are presented below:

<table>
<thead>
<tr>
<th>School</th>
<th>1991-92 Rates</th>
<th>1990-91 Rates</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.S. 4</td>
<td>91.6</td>
<td>83.8</td>
<td>+7.8</td>
</tr>
<tr>
<td>P.S. 32</td>
<td>88.8</td>
<td>77.4</td>
<td>+11.4</td>
</tr>
<tr>
<td>P.S. 42</td>
<td>90.8</td>
<td>88.2</td>
<td>+2.6</td>
</tr>
<tr>
<td>P.S. 60</td>
<td>90.0</td>
<td>87.0</td>
<td>+3.0</td>
</tr>
<tr>
<td>P.S. 66</td>
<td>83.1</td>
<td>90.6</td>
<td>-7.5</td>
</tr>
<tr>
<td>P.S. 89</td>
<td>91.4</td>
<td>94.3</td>
<td>-2.9</td>
</tr>
<tr>
<td>P.S. 93</td>
<td>N/A</td>
<td>87.9</td>
<td>--</td>
</tr>
<tr>
<td>P.S. 156</td>
<td>96.3</td>
<td>93.6</td>
<td>+2.7</td>
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<td>P.S. 157</td>
<td>89.8</td>
<td>87.4</td>
<td>+2.4</td>
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<tr>
<td>P.S. 198</td>
<td>89.1</td>
<td>88.0</td>
<td>+1.1</td>
</tr>
</tbody>
</table>

In the schools for which there were data (all but one school), attendance rates increased at seven schools (77.8 percent) and decreased at two (22.2 percent).
Grade Retention

Two project students (0.35 percent) were retained in grade. Last year, four project students (0.7 percent) were retained in grade.

Mainstreaming

The mainstreaming of project students into English-only classes depended on School-based Support Team (S.B.S.T.) referrals, LAB scores above the 40th percentile, and demonstrated competence in reading, writing, and speaking. Because of the transient nature of the community, few students were in the program long enough to be entirely mainstreamed.

In the year under review, approximately 5 percent of participants were mainstreamed. Many more students were partially mainstreamed into general education classes, which met five periods per week. Last year one student (0.2 percent of participants) was mainstreamed.

There were no formal follow-up procedures for mainstreamed students, but those who remained in the school were in contact with the guidance counselor.

Staff Development

Each month, the project management team developed agendas, supporting materials, lists of guest speakers, and outlines for the purpose of implementing staff development workshops. Folders for each workshop were prepared for each participant. The resource specialist conducted on-site sessions, using the same agenda for teachers who missed the workshops. In addition, 16 hours of training was made available to the project teachers in a summer institute.

- By the conclusion of the fifth project year, all targeted classroom teachers will have participated in staff development sessions on the development of instructional areas identified by this project using bilingual special education instruction approaches. Academic programs will emphasize mastery of English.

All 28 classroom teachers of program students participated in the staff development sessions as proposed.

Project met staff development objective.

Curriculum Development

- By the conclusion of the fifth project year, the Title VII resource specialist will have developed subject matter oriented instructional units and model lesson plans for teaching keyboarding, text editing, and word processing skills. These curriculum materials will be integrated into the E.S.L. instructional component.

- By the conclusion of the fifth project year, the Title VII resource specialist will have developed subject matter oriented instructional units and model lesson plans for teaching career exploration, work readiness, and work study skills. These curriculum materials will be integrated into the major content area instructional component.

The Title VII resource specialist developed instructional units and model lesson plans for the designated subjects. The project integrated these materials into the E.S.L. or content areas component as proposed.

Project met curriculum development objectives.
Parental Involvement

- By the conclusion of the fifth project year, all parents of program students will have attended parent involvement sessions in the areas of bilingual education policies and procedures, and special education policies and procedures.

Over 360 project parents (approximately 75 percent) attended parent involvement sessions that dealt with the policies and procedures of bilingual education and special education.

Project did not meet objective for 100 percent parental involvement.

- By the conclusion of the fifth project year, at least 50 percent of the parents of program students will have participated in E.S.L. training sessions for the purpose of improving their own English language proficiency.

Over the course of the project 125 (approximately 25 percent) of the parents attended E.S.L. workshops.

Project did not meet parental involvement objective for E.S.L.-training participation.

CASE HISTORY

I. was a bilingual student in a project class (Mis I, Bis II program). Her academic performance was poor. She improved greatly over the course of the term and did well academically and socially. She was mainstreamed in mathematics and by the end of the third marking period she was on the school's High Honor Roll with an 85 percent average. She was recommended for mainstreaming into general education.
APPENDIX A
DATA COLLECTION AND ANALYSIS

COLLECTION

OREA evaluation consultants visit sites and interview key personnel. The project director gathers data and, with the consultant, completes forms (as shown below) as necessary.

Student Data Form

This one-page form is filled out by staff for each participating and mainstreamed student. OREA gathers data from this form on backgrounds, demographics, academic outcomes, attendance, referrals, and exit from the program.

Project Director's Questionnaire

The Project Director's Questionnaire includes questions on staff qualifications, program implementation, periods of instruction, and instructional materials and techniques.

Project Director's Interview

The interview gathers information on program and student or staff characteristics not supplied by the Project Director's Questionnaire. The interview also allows project staff to offer qualitative data or amplify responses to the questionnaire.

Citywide Test Scores

OREA retrieves scores centrally from the Language Assessment Battery (LAB) and other citywide tests. For evaluation purposes, these test scores are reported in Normal Curve Equivalents (N.C.E.s). N.C.E.s are normalized standard scores with a mean of 50 and a standard deviation (s.d.) of 21.06. They constitute an equal-interval scale in which the distance is the same between any two adjacent scores. A gain of 5 N.C.E.s is the same whether it is at the lower or the higher end of the scale. N.C.E.s can be used in arithmetic computations to indicate group progress. (Percentile scales, although more familiar to many, are unsuitable for such computations since they are not equal-interval.)

Likert-Type Surveys

Likert-type surveys, in which respondents mark their opinions on a scale from one to five, are used in a variety of ways. They examine student attitudes (i.e., toward school and career, native language use, and native and mainstream cultures). They also assess staff and parent attitude and reactions to workshops and other activities.

ANALYSIS

Gap Reduction Evaluation Design

OREA uses a gap reduction design for measuring changes in standardized tests. Since no appropriate non-project comparison group is available in New York City, where all students of limited English proficiency (LEP) are entitled to receive supplementary services, OREA compares the progress of participating students with that of the group on which the test was normed. It is assumed that the norm group would show a zero gain in the absence of instruction, and gains made by project students could be attributed to project services. Scores are reported in Normal Curve Equivalents (N.C.E.s), which are normalized standard scores with a mean of 50 and a standard deviation of 21.06. (See "Citywide Test Scores" above.)

To test whether pre/posttest gains are greater than could be expected by chance alone, OREA uses a t-test. To test whether a difference between two proportions (e.g., program and mainstream attendance rates) is
greater than could be expected by chance, OREA uses a $z$-test and reports the differences between the two proportions. The level of significance is set at .05 for all tests.

**Techniques For Minimizing Error**

The evaluation procedures minimize error by providing for proper administration of evaluation instruments through a combination of testing at 12-month intervals, appropriate analysis procedures and reporting.

Instruments of measurement include the LAB (see above), the Degrees of Reading Power (D.R.P.) test, the Metropolitan Achievement Test--Mathematics (MAT-Math), El Examen de Lectura en Español (ELE), Likert-type scales (see above), and project-developed tests. Except for Likert scales and project-developed tests, these instruments are scored on a citywide basis at the Scan Center of the New York City Public Schools.
APPENDIX B

INSTRUCTIONAL MATERIALS

Software Programs

Magic Slate II
I Can Write 1
Be A Writer
Write With Me
Write A Story
Touch Window
Touch And Write
Language Experience Recorder
Webster's Spell Checker
Super Print

E.S.L.

Magnetic Way Into Learning
Vox Everyday Spanish/English Dictionary
A Writing Book: English In Everyday Life
Short Stories
Folk Tales

N.L.A.

Classics in Spanish

Science

The World of Machines
You And Your Body
Sports And Entertainment
What People Do
Land Travel
Ships And Boats
Outer Space
Index
Flying
People of Long Ago
The Sea
The Earth
Cold Blooded Animals
People And Customs
The Prehistoric World
Warm-Blooded Animals
Getting To Know The Body
Into Life Systems
Readings In Natural
The Bilingual Special Education Director