Project COMPUOCC.LEP, a Title VII-funded program of instructional and support services, served 400 Hispanic students of limited English proficiency with special handicapping conditions. It also served 36 special education teachers at 14 Bronx (New York) intermediate and junior high schools, offering on-site technical assistance in curriculum development, occupational and vocational instruction, and computer-assisted instruction. The project used computers to teach writing and career education skills, and provided students with supplementary English-as-a-Second-Language (ESL) and Native Language Arts instruction at the project's learning centers. The project's non-instructional component consisted of staff and curriculum development as well as activities to involve parents. The project met its computer-assisted instruction, career education, and staff development objectives, partially met its curriculum development objectives, but failed to meet its ESL or parental involvement objectives. It did not provide sufficient data for assessing the Native Language Arts objective. This evaluation report describes the evaluation methodology, analyzes the qualitative and quantitative findings, and offers conclusions and recommendations.
OREA Report

EVALUATION SECTION REPORT

Project COMPUCC.LEP
Grant Number: G008635370

1988-89
EVALUATION SECTION REPORT

Project COMPUCC.LEP
Grant Number: G008635370
1988-89

Prepared by
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Office of Research, Evaluation, and Assessment
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1/1/90
PROJECT COMPUOCC.LEP
1988-89

SUMMARY

Project COMPUOCC.LEP was fully implemented. During the 1988-89 school year, project students received instruction in English as a Second Language, Native Language Arts, and writing through computer-assisted instruction. Career education was integrated into the major content areas.

The project met its computer-assisted instruction, career education, and staff development objectives, partially met its curriculum development objectives, but failed to meet its E.S.L. or parental involvement objectives. It did not provide sufficient data for OREA to assess the N.L.A. objective.

Project COMPUOCC.LEP was a Title VII-funded program of instructional and support services in its third year. The project served 400 Hispanic students of limited English proficiency (LEP students) with special handicapping conditions. It also served 36 special education teachers at 14 Bronx intermediate and junior high schools, offering on-site technical assistance in curriculum development, occupational and vocational instruction, and computer-assisted instruction. COMPUOCC.LEP provided students with supplementary English as a Second Language (E.S.L.) and Native Language Arts (N.L.A.) instruction at the project's learning centers. The project's non-instructional component consisted of staff and curriculum development as well as activities to involve parents. Title VII-funded staff included a project director, two resource specialists, and a bilingual secretary.

The project proposed three instructional objectives. E.S.L. and N.L.A. objectives stated that by the end of the school year, 70 percent of project students would demonstrate a significant increase in their scores on the English and Spanish versions of the Language Assessment Battery (LAB). A computer literacy objective stated that by the end of the school year, students would demonstrate improved ability in three new skills in the areas of career exploration, work readiness, and work-study skills.

COMPUOCC.LEP met its staff development objective: targeted classroom teachers participated in staff development sessions in different skill areas. The project partially met the curriculum development objectives: the resource specialists developed instructional units for teaching computer skills and career exploration. The project failed to meet its parental involvement objectives.
The conclusions, based on the findings of this evaluation, lead to the following recommendations:

- Sensitize parents to the importance of becoming involved in their children's education.
- Offer more training sessions on basic strategies for teaching special education.
- Hire a third resource specialist, as proposed.
- Supply necessary data to OREA in a timely fashion.
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I. INTRODUCTION

This report documents the Office of Research, Evaluation, and Assessment's (OREA's) evaluation of the E.S.E.A. Title VII program, COMPUOCC.LEP. The project completed its third year in June 1989. COMPUOCC.LEP used computers to teach target students writing and career education skills, and offered technical assistance to teachers of English as a Second Language (E.S.L.), Native Language Arts (N.L.A.), and the major content areas. The project assisted these teachers in the development of the skills necessary to teach target students and also involved parents in their children's education.

HISTORY OF THE PROGRAM

Program participants, special education students of limited English proficiency (LEP students), have been historically underserved. A full history of the program can be found in the final evaluation report of 1986-87. A complete description of the implementation and outcomes of the program in previous years can be found in the final evaluation reports of those years.

SETTING

Project COMPUOCC.LEP served 14 junior high schools and intermediate schools throughout the Bronx. These sites were mainly in low-income Hispanic communities where many residents had limited language proficiency in both English and Spanish.
PARTICIPATING STUDENTS

Project COMPUOCC.LEP served 400 Hispanic LEP students who had been identified as mildly disabled by the Division of Special Education (D.S.E.) of the New York City Board of Education. Most students qualified for participation in the schools' free lunch programs, an indication of family income at the poverty level. A high percentage of these students were illiterate or semi-literate in their native language. The turnover rate among COMPUOCC.LEP students was high: 65 percent had left the project by its third year. A survey of 61 students provided data regarding the reasons why students left the program. Forty students (65.6 percent) moved; twelve students (19.7 percent) graduated; three students (4.9 percent) were mainstreamed; and six students (9.8 percent) left the program for unknown reasons.

Of the 314 students for whom both age and grade data were available, the largest numbers were in grades seven and eight (38 and 43 percent, respectively). (See Table 1.) Overall, 55 percent of the students were over-age for their grade placement.

STAFF

Project staff included three resource specialists and a secretary. One of the resource specialists resigned after three months, and the position remained vacant. The project director had a Ph.D and the two resource specialists had master's degrees. They, as well as the project secretary, were bilingual in English and Spanish.
TABLE 1
Number of Program Students by Age and Grade

<table>
<thead>
<tr>
<th>Age</th>
<th>Grade 6</th>
<th>Grade 7</th>
<th>Grade 8</th>
<th>Grade 9</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>12</td>
<td>20</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>13</td>
<td>20</td>
<td>52</td>
<td>5</td>
<td>0</td>
<td>77</td>
</tr>
<tr>
<td>14</td>
<td>0</td>
<td>0</td>
<td>48</td>
<td>2</td>
<td>107</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
<td>4</td>
<td>78</td>
<td>10</td>
<td>93</td>
</tr>
<tr>
<td>16</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>17</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>42</td>
<td>119</td>
<td>136</td>
<td>17</td>
<td>314^</td>
</tr>
</tbody>
</table>

Overage Students

| Number | 21 | 63 | 83 | 5 | 172 |
| Percent | 50.0 | 52.9 | 61.0 | 29.4 | 54.8 |

Note. Shaded boxes indicate expected age range for grade.

* As of June 30, 1989.

^ Data were missing for 53 students.

More than half of the program students were overage for their grade.
DELIVERY OF SERVICES

The participating students attended computer-assisted learning centers where they received assistance in E.S.L. and N.L.A. The resource specialist worked with the tax-levy teachers so that they might better serve these students in the content areas. Many teachers had little experience with bilingual special education and were unfamiliar with E.S.L. methodologies and materials or with computer-assisted instruction, and the program trained 36 teachers in these skills.

REPORT FORMAT

This evaluation report is organized as follows: Chapter II describes the evaluation methodology; Chapter III presents an analysis of the qualitative findings of the evaluation; Chapter IV analyzes the quantitative findings; and Chapter V offers conclusions and recommendations based upon the results of this evaluation.
II. EVALUATION METHODOLOGY

EVALUATION QUESTIONS

This evaluation assessed two major areas: program implementation and outcomes. Evaluation questions included the following:

Process/Implementation

- Did teachers receive training in computer-assisted instruction, language arts, bilingual special education methodologies, and cultural sensitivity?
- Did parents become involved in their children's education?
- Did project staff identify and/or develop specialized curricula?

Outcomes

- Did students become computer literate?
- What was the students' average gain in Language Assessment Battery scores after participating in the project?
- How many project students were mainstreamed?

EVALUATION PROCEDURES

Sample

An OREA field consultant interviewed the project director, two resource specialists, a school principal, and two participating teachers. She also observed two classes. OREA provided student data forms for all program students; the project returned 367.
Instruments
OREA developed interview and observation schedules. Project personnel used OREA-developed data retrieval forms to report student demographic and achievement data.

Data Collection
Interviews and observations took place during the months of May and June 1989. OREA sent student data forms to the project director early in the spring 1989 semester and collected them at the end of the school year.

Data Analysis
OREA used the Language Assessment Battery to measure improvement in English proficiency. Students were tested at grade level each spring. To assess the significance of gains, OREA computed a correlated t-test on LAB scores. The t-test determined whether the difference between the pre- and posttest scores was significantly greater than would be expected by chance variation alone.

To ensure representative achievement data, OREA isolated from the total group those students who had been in the program for at least five months and had attended classes for at least 100 school days. OREA extrapolated to estimate full-year scores of late-arriving and early-exiting students.

Limitations
Since all LEP students are entitled to receive bilingual and E.S.L. services, OREA was unable to select a control group.
III. EVALUATION FINDINGS: IMPLEMENTATION

Project COMPUOCC.LEP provided target students with computer-assisted supplementary English language instruction. The project also offered staff and curriculum development and parental involvement activities.

INSTRUCTIONAL ACTIVITIES

English as a Second Language

Students with very limited proficiency in English were placed in BIS I, and those who had achieved some proficiency in English were placed in BIS II.

An OREA field consultant observed a seventh grade lesson in the project's learning center. Eight students were in attendance. The teacher used a card game to teach vocabulary and sentence construction. Most students produced simple, well-coordinated sentences.

Native Language Arts

Project students received supplementary services in Spanish N.L.A. through regular weekly sessions at the microcomputers in the learning centers. Students discussed topics, used the computers to write a few paragraphs about them, and edited and rewrote their work. These exercises remained in students' folders as a way of measuring their progress.
Computer-Assisted Instruction

The project used computer-assisted instruction for E.S.L., N.L.A., work skills, and the major content areas. The students were able to write and correct their own work. Some of the content area classrooms contained a computer, which allowed further integration of computer skills with course content.

Career Education

There was no evidence that career awareness skills were integrated into the content areas or the activities in the learning centers. However, project personnel showed the OREA consultant the materials on career education that they had purchased. According to project administrators, these materials served as the basis for integrating career education into the curriculum.

NON-INSTRUCTIONAL ACTIVITIES

Staff Development

By the conclusion of the project period, all targeted classroom teachers will have participated in staff development sessions on the development of different skill areas using special education instruction approaches.

The entire staff of 36 teachers participated in 15 two-hour training sessions. Guest speakers, trainers, and the project's resource specialists presented workshops on bilingual education, the use of computers to strengthen language skills, content areas, and career education skills. According to participating teachers, the staff development component of COMPUOCC.LEP
afforded them the opportunity to broaden their knowledge of the educational needs of bilingual special education students. The project met its staff development objective.

Resource specialists offered additional support to participating teachers by visiting them during regular school hours and providing demonstration lessons on special methods and team-teaching approaches. They answered teacher's questions, solved problems, and provided commercially prepared materials.

The project held a two-week summer institute in 1989. Mainstream teachers who worked with bilingual special education children attended.

A major problem faced by the project in the area of staff development was the high turnover of participating teachers. Only 45 percent of the original teachers were still with the project.

Curriculum Development

The project's objectives for curriculum development were:

- By the conclusion of the project period, the Title VII resource specialists will have developed subject matter-oriented instructional units for teaching keyboarding, text editing, and word processing skills.

- By the conclusion of the project period, the Title VII resource specialists will have developed subject matter-oriented instructional units for teaching career exploration, work readiness, and work-study skills.

The resource specialists developed materials for use in the staff development workshops. They provided teachers with model lesson plans on teaching writing skills with the computer. Teachers were then able to develop their own materials for
teaching keyboarding, editing, and word processing skills. Therefore, COMPUOCC.IEP met it first curriculum development objective.

This year, the focus of Project COMPUOCC.IEP was on work-readiness skills such as writing a resume and letters applying for a job; interview skills; identifying, reading, and understanding want ads; filling out working papers; applying for a social security card; and completing forms related to work applications. Students learned about good grooming habits and appropriate attire, haircuts, and makeup. The project met its second curriculum development objective in the area of work readiness. The project did not provide data to show that the project met its objectives in career exploration or work-study skills.

Parental Involvement

By the conclusion of the project period, 50 percent of the 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.

By the conclusion of the project period, 80 parents of program students will have participated in E.S.L. training sessions for the purpose of improving their own English language proficiency and will maintain an attendance rate of 75 percent.

COMPUOCC.IEP provided six special workshops at I.S. 184 and P.S. 66 for the parents of target students. Topics included:

Title VII parents' rights, bilingual and special education assessment procedures, legal mandates requiring testing of the child, and bilingual approaches. Thirty-eight parents attended
these sessions. The project did not meet its first parental involvement objective.

The project did not provide information about parental involvement in the E.S.L. sessions. OREA was unable to determine whether COMPUCOCC.LEP met its second parental involvement objective.
IV. EVALUATION FINDINGS: OUTCOMES

Project COMPUOCC.LEP proposed outcome objectives in the areas of E.S.L., N.L.A., computer-assisted instruction, and career education.

The project did not provide all the data needed for OREA to assess all objectives, probably due to a lack of staff.

INSTRUCTIONAL ACTIVITIES

English as a Second Language

The evaluation objective for English language development was that:

- By the conclusion of the project period, 70 percent of the participating students will demonstrate a significant increase in percentile scores in their performance on the English version of the Language Assessment Battery (LAB).*

The project provided complete English LAB data for 176 students in grades six through nine. While students in grades eight and nine made small gains, students in grades six and seven made small losses. None, however, were statistically significant (p<.05). (See Table 2.) The project did not achieve its E.S.L. objective.

---

*The Language Assessment Battery (LAB) was developed by the Board of Education of the City of New York to measure the English-language proficiency of non-native speakers of English in order to determine whether their level of English proficiency is sufficient to enable them to participate effectively in classes taught in English. Students scoring below the twenty-first percentile on the LAB are entitled to bilingual and E.S.L. services.
TABLE 2

Pretest/Posttest Percentile Score Differences on Language Assessment Battery (English), by Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>N</th>
<th>Pretest Mean</th>
<th>Pretest S.D.</th>
<th>Posttest Mean</th>
<th>Posttest S.D.</th>
<th>Difference Mean</th>
<th>Difference S.D.</th>
<th>t value</th>
<th>Proportion of Students Making Gains</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>19</td>
<td>7.7</td>
<td>9.3</td>
<td>6.7</td>
<td>5.0</td>
<td>-0.9</td>
<td>6.2</td>
<td>-0.67</td>
<td>47</td>
</tr>
<tr>
<td>7</td>
<td>75</td>
<td>8.1</td>
<td>10.5</td>
<td>7.9</td>
<td>9.8</td>
<td>-0.1</td>
<td>9.7</td>
<td>-0.10</td>
<td>40</td>
</tr>
<tr>
<td>8</td>
<td>75</td>
<td>5.8</td>
<td>6.9</td>
<td>6.5</td>
<td>9.4</td>
<td>0.7</td>
<td>7.1</td>
<td>0.88</td>
<td>31</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>9.4</td>
<td>7.8</td>
<td>10.1</td>
<td>12.7</td>
<td>0.7</td>
<td>8.5</td>
<td>0.22</td>
<td>57</td>
</tr>
<tr>
<td>TOTAL</td>
<td>176</td>
<td>7.1</td>
<td>8.9</td>
<td>7.3</td>
<td>9.3</td>
<td>0.2</td>
<td>8.2</td>
<td>0.31</td>
<td>38</td>
</tr>
</tbody>
</table>

None of the gains or losses was statistically significant at p < .05 level.
Native Language Arts

The evaluation objective for Native Language Arts was:

- By the conclusion of the project period, 70 percent of the participating students will demonstrate a significant increase in percentile scores in their performance on the Spanish version of the Language Assessment Battery (LAB).

The project provided complete Spanish LAB data for 18 students, only 5 percent of the target population. Therefore, OREA could not evaluate this objective.

Computer-Assisted Instruction

The evaluation objective for computer-assisted instruction was that:

- By the conclusion of the project period, 70 percent of the participating students will have demonstrated improved ability in six new skills for each year of project participation in computer-supported writing instruction, and in any combination of the areas of keyboarding, text editing, and word processing skills.

According to data provided, 247 of the 255 students for whom there were data (97 percent) showed improved ability in six or more new skills in text editing. Thus, the project met the computer-assisted instruction objective.

Career Education

The evaluation objective for career education was that:

- By the conclusion of the project period, 70 percent of the participating students will have demonstrated improved ability in 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.
According to data provided, 188 of the 218 students for whom there were data (86 percent) showed improved ability in six or more new skills in work readiness. Thus, the project met the career education objective.
V. CONCLUSIONS AND RECOMMENDATIONS

Project COMPUOCC.LEP provided special education LEP students with computer-assisted instruction, career education, and supplementary E.S.L. and N.L.A. instruction. Historically, these students have been underserved, a situation Project COMPUOCC.LEP helped to ameliorate. The project also gave teachers the tools they needed to instruct this target population.

During the 1988-89 school year, the project faced a number of problems: the loss of a resource specialist and a high turnover rate among both students and teachers. The lack of staff made it difficult to supply correctly completed student data forms to OREA in a timely fashion. Also, targeted teachers lacked sufficient background in special education and E.S.L.

The project accomplished its proposed objectives in computer-assisted instruction, career education, and staff development. It met one of its objectives in curriculum development but failed to provide data for OREA to assess the achievement of a second objective. It failed to meet its objectives in E.S.L. and parental involvement.

The conclusions, based on the findings of this evaluation, lead to the following recommendations:

- Sensitize parents to the importance of becoming involved in their children's education.
- Offer more training sessions on basic strategies for teaching special education.
- Hire a third resource specialist, as proposed.
- Supply necessary data to OREA in a timely fashion.
PROJECT COMPUOCC.LEP 1988-89

EXECUTIVE SUMMARY*

- Project COMPUOCC.LEP was fully implemented. During the 1988-89 school year, project students received instruction in English as a Second Language, Native Language Arts, and writing through computer-assisted instruction. Career education was integrated into the major content areas.

- The project met its computer-assisted instruction, career education, and staff development objectives, partially met its curriculum development objectives, but failed to meet its E.S.L. or parental involvement objectives. It did not provide sufficient data for OREA to assess the N.L.A. objective.

Project COMPUOCC. LEP was a Title VII-funded program of instructional and support services in its third year. The project served 400 Hispanic students of limited English proficiency (LEP students) with special handicapping conditions. It also served 36 special education teachers at 14 Bronx intermediate and junior high schools, offering on-site technical assistance in curriculum development, occupational and vocational instruction, and computer-assisted instruction. COMPUOCC.LEP provided students with supplementary English as a Second Language (E.S.L.) and Native Language Arts (N.L.A.) instruction at the project's learning centers. The project's non-instructional component consisted of staff and curriculum development as well as activities to involve parents. Title VII-funded staff included a project director, two resource specialists, and a bilingual secretary.

The project proposed three instructional objectives. E.S.L. and N.L.A. objectives stated that by the end of the school year, 70 percent of project students would demonstrate a significant increase in their scores on the English and Spanish versions of

*This summary is based on the final evaluation of Project "COMPUOCC.LEP 1988-89" prepared by the OREA Multicultural/Bilingual Education Evaluation Unit.
the Language Assessment Battery (LAB). A computer literacy objective stated that by the end of the school year, students would demonstrate improved ability in three new skills in the areas of career exploration, work readiness, and work-study skills.

COMPUOCC.LEP met its staff development objective: targeted classroom teachers participated in staff development sessions in different skill areas. The project partially met the curriculum development objectives: the resource specialists developed instructional units for teaching computer skills and career exploration. The project failed to meet its parental involvement objectives.

The conclusions, based on the findings of this evaluation, lead to the following recommendations:

- Sensitize parents to the importance of becoming involved in their children's education.
- Offer more training sessions on basic strategies for teaching special education.
- Hire a third resource specialist, as originally proposed.
- Supply necessary data to OREA in a timely fashion.