In its second year (1987-88) of funding (part of the Elementary and Secondary Education Act Title VII), the Chinese Bilingual Career Awareness program (Project CAP) served 258 native Chinese-speaking, limited-English-proficient (LEP) students and 24 non-LEP students at two junior high schools in New York City. The project provided instruction in English as a second language (ESL), bilingual instruction in content areas (mathematics, science, social studies, and computer literacy), and career awareness activities. It also provided counseling, tutoring, extracurricular activities, staff development, and parent involvement activities. Field trips and guest lecturers supplemented classroom activities. The project was highly successful in achieving its stated instructional and noninstructional objectives. Program strengths included the numerous field trips, high level of parent participation, and career awareness instruction. Its only weakness was lack of native language instruction in one school. The one recommendation for program improvement was the relocation of career awareness classes at one school to avoid noise distraction. (MSE)
OREA Report

EVALUATION SECTION REPORT

CHINESE BILINGUAL CAREER AWARENESS PROGRAM

PROJECT CAP
1987-88
EVALUATION SECTION REPORT

CHINESE BILINGUAL CAREER AWARENESS PROGRAM

PROJECT CAP
1987-88

Prepared by
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New York City Board of Education
Office of Research, Evaluation, and Assessment
Robert Tobias, Director
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5/22/89

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Project CAP was fully implemented. During the 1987-88 school year, students received instruction in English as a Second Language (E.S.L.), bilingual content areas, and career awareness. The project also provided counseling, tutoring, and extracurricular activities for students; and staff development and parental involvement activities.

The students met the project's instructional objectives for mastery in E.S.L. and content area courses. The Native Language Arts (N.L.A.) objective was not assessed, because of lack of data. Project CAP met its noninstructional objectives in attendance rate, extracurricular activities, staff development, curriculum development, and parental involvement.

The Chinese Bilingual Career Awareness program (Project CAP) completed its second year of a three-year funding cycle under Title VII of the Elementary and Secondary Education Act (E.S.E.A.) in 1987-88. The project served 258 Chinese-speaking, Limited English Proficient (LEP) students and 24 non-LEP students at two junior high schools in New York City. The project attempted to improve students' English language skills; increase their achievement in content area subjects, including computer literacy; encourage them to stay in school by making them aware of the career opportunities awaiting well-educated students; and improve attendance.

Participating students were enrolled in courses in E.S.L., in addition to bilingual or mainstream classes in mathematics, science, social studies, computer skills, and career awareness. The project supplemented classroom career awareness instruction with field trips and lectures by guest speakers. Project CAP offered counseling and tutorial services, activities for students' parents, staff development, and curriculum development.

The Office of Research, Evaluation, and Assessment (OREA) assessed accomplishment of the project's objectives by examining students' Language Assessment Battery (LAB) and Degrees of Reading Power (D.R.P.) scores and by inspecting program and school records, interviewing program and school personnel, and

*This summary is based on the final evaluation of the "Chinese Bilingual Career Awareness Program (Project CAP) 1987-88" prepared by the OREA Bilingual Education Evaluation Unit.
observing classes. Project CAP was highly successful in achieving its objectives. Students showed an average Normal Curve Equivalent (N.C.E.) gain of 9.7 on the LAB and a 3.8 N.C.E. gain on the D.R.P., both of which were statistically significant (p < .05). More than 70 percent of the students passed their content area courses; program students' attendance rate was significantly higher than that of mainstream students; the project organized more than four field trips to cultural and business centers; staff members participated in a variety of staff development activities; research specialists developed curricular materials; and the program offered workshops to parents of project students. However, program participants received no Chinese N.L.A. instruction. Project CAP met most of its instructional and all of its noninstructional objectives.

Strengths of Project CAP included the numerous field trips for students, the high level of parental participation, and career awareness instruction. The project also hired an additional paraprofessional in accordance with OREA's recommendation in the 1986-87 evaluation. The only weakness of the program was the lack of N.L.A. classes for project students, in one of the participating schools.

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

- If possible, relocate the project office at J.H.S. 73 or hold these career awareness classes elsewhere so that students will not be distracted by noise from the nearby physical education classes.
I. INTRODUCTION

This report documents the Office of Research, Evaluation, and Assessment's (OREA's) evaluation of the 1987-88 Elementary and Secondary Education Act (E.S.E.A.) Title VII project, the Chinese Bilingual Career Awareness program (Project CAP). This program was intended to provide supplementary instructional and support services to Chinese-speaking limited English proficient (LEP) and English proficient (EP) Chinese students at two junior high schools in New York City.

Project CAP, completing its second year of a three-year funding cycle, provided career awareness classes to its students, who were also enrolled in English as a Second Language (E.S.L.), Native Language Arts (N.L.A.) (at I.S. 131M), and in bilingual or mainstream classes in mathematics, science, social studies, and computer skills. It organized field trips and guest speakers and provided counseling and tutorial services. It provided E.S.L. classes and other services for parents, developed career-oriented curricular materials, and offered staff development activities.

SETTING

Project CAP's office at J.H.S. 73, located in the Maspeth section of Queens, doubled as a classroom for career awareness classes. The small room was colorfully decorated with Chinese and English language posters. However, it was adjacent to the school's gymnasium and the noise distracted students in project classes.

Project CAP's office at I.S. 131, located in the Chinatown
section of Manhattan, was moved to an office with a telephone, which meant sharing space with the foreign language department. This room had a large supply of brochures on sites of interest in the city, bus and subway maps, and materials on career education and job opportunities for students.

PARTICIPATING STUDENTS

Of the 2,236 students enrolled in I.S. 73Q in 1987-88, 351 (17 percent) were LEP. The LEP population included 74 (21 percent) Chinese-speaking students. Of the 1,492 students enrolled at I.S. 131 in 1987-88, 551 (37 percent) were LEP. Of these LEP students, 531 (96 percent) spoke Chinese.

Project students were selected on the basis of their school records, teacher recommendations, personal interviews, and scores on the LAB.* However, students who scored above the twenty-first percentile on the LAB were also allowed to participate in the program. The project population at I.S. 73 included 98 Chinese-speaking students in grades five through eight; 24 of these were English proficient (EP). The project population at I.S. 131M consisted of 160 ninth graders, all of whom were LEP.

The majority of participating students were born in the People's Republic of China. (See Table 1.) The native language

*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 nonnative 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 1**

Number and Percent of Project Participants by Country of Birth

<table>
<thead>
<tr>
<th>Country of Birth</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>People's Republic of China</td>
<td>167</td>
<td>66.0</td>
</tr>
<tr>
<td>Taiwan</td>
<td>46</td>
<td>18.2</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>31</td>
<td>12.0</td>
</tr>
<tr>
<td>Vietnam</td>
<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>4</td>
<td>1.6</td>
</tr>
<tr>
<td>Other unspecified Asian countries</td>
<td>1</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>253</strong></td>
<td><strong>99.8</strong></td>
</tr>
</tbody>
</table>

*Data were missing for five students.

*Numbers do not equal 100 because of rounding.

Most participants were born in the People's Republic of China.
of 56 percent of the students (144) was Cantonese; another 27 percent (69) spoke Mandarin; and 17 percent spoke other Chinese dialects. More than 50 percent of project students had three years or less of education in the United States.

**STAFF**

Project CAP's Title VII-funded staff included a project director and a secretary. In addition, a resource specialist and an educational assistant were assigned to each of the two sites. The four school-based staff members met weekly with the project director at the central office and maintained telephone contact with her at other times.

The director of the New York City Board of Education's Office of Bilingual Education (O.B.E.) supervised the project director. The project director, in turn, supervised the resource specialists and educational assistants. The principal at I.S. 131 and the bilingual coordinator at J.H.S. 73 provided day-to-day supervision of project staff.

The project director designed and implemented project activities. The resource specialists coordinated project activities at the sites; interviewed, counseled, and tutored project students; provided instruction in career education; developed and adapted career education materials; served as liaison between the schools and students' homes; and acted as translators for mainstream teachers and guidance personnel. The educational assistants worked with the resource specialists, assisted in the classroom, maintained project records, and helped
coordinate parental involvement activities. Both educational assistants were proficient in Mandarin and Cantonese, and the assistant at I.S. 131 also spoke Thai and Malay.
II. EVALUATION FINDINGS: INSTRUCTIONAL ACTIVITIES

The Office of Research, Evaluation, and Assessment (OREA) evaluated Project CAP by inspecting student test results and program records, interviewing school and project personnel, and observing classes. The project proposed instructional objectives in E.S.L., N.L.A., and content area subjects.

ENGLISH AS A SECOND LANGUAGE

- The target students will demonstrate an appropriate increase in English language proficiency as indicated by statistically significant gains at the .05 level on the Language Assessment Battery (LAB) or the Degrees of Reading Power Test (D.R.P.).

Implementation

At each site, project students who had scored below the twenty-first percentile on the LAB in the fall of 1987 were enrolled in E.S.L. courses. At I.S. 131M, CAP students had two daily periods of E.S.L. instruction and one of E.S.L. reading. Paraprofessionals provided individualized assistance in these classes. The LEP project students at I.S. 73Q took one period of E.S.L. a day; there were no paraprofessionals in these classes.

An OREA field consultant observed a sixth grade E.S.L. class at I.S. 73Q. The teacher began by reviewing the function and use of adverbs and adverbial phrases. The class then read a passage from a story "The Drummer of Tedsworth." After the teacher explained some of the more difficult words, students took turns reading the passage aloud. They then answered comprehension
questions orally. They also wrote the answers to multiple choice questions. The teacher circulated among the students, providing individual help. Most students participated; the teacher called on those who did not.

In a combined E.S.L. and career awareness class for ninth grade students at I.S. 131M, the focus of the lesson was on resumes. The students first examined resumes that the teacher handed out and then prepared their own, using a model form. As the students worked, the teacher walked around the room, answered questions, called attention to errors, and gave encouragement.

Outcome

To assess students' achievement in E.S.L., OREA examined scores on the LAB and the D.R.P.* Data analysts computed a correlated t-test on N.C.E. scores.** This statistical analysis determines whether the difference between pretest and posttest mean scores was significantly greater than would be expected from

*The Degrees of Reading Power Test was developed by the College Board to provide information about student reading ability on the same scale used to describe the difficulty of textbooks.

**Raw scores were converted to N.C.E. scores, which are normalized standard scores. They have the advantage of forming an equal interval scale so that scores and gains can be averaged. For the norming population, N.C.E.s have a mean of 50, a standard deviation of approximately 20, and a range from one to 99. Scores can be compared to the norming population.
chance variation alone. OREA also computed effect size to show educational meaningfulness.*

A total of 193 students were tested on the LAB and/or the D.R.P. in the spring of 1987 (pretest) and the spring of 1988 (posttest). (See Table 2.) Pretest and posttest N.C.E. scores were provided for 145 students tested on the LAB. The average gain was 9.7 N.C.E.s (s.d.=9.75). N.C.E. score gains on the LAB were statistically significant (p < .05). Seventy-nine percent of the students showed higher scores on the posttest than they had on the pretest.

Pre- and posttest scores on the D.R.P. were available for 48 students. The mean gain was 3.8 N.C.E.s (s.d.=10.2). While 60 percent of the students did show posttest gains, the magnitude of the gain was not sufficient to make it significant.

The results of the LAB and D.R.P. tests indicate that Project CAP students were acquiring English language skills. LAB results suggest that the project met its E.S.L. objective. Since the D.R.P. is a reading test, the lack of a statistically significant difference between pre- and posttest scores on that instrument should not alter the fact that students did achieve the E.S.L. intent of the objective. In addition, the educational meaningfulness of the LAB gains, as shown by the effect size, was

*The effect size, developed by Jacob Cohen, is a ratio of the mean gain to the standard deviation of the gain. This ratio provides an index of improvement in standard deviation units irrespective of the size of the sample. Effect size (E.S.) is interpreted to indicate educational meaningfulness, and an E.S. of .80 is thought to be highly meaningful, while one of .20 is considered to be only slightly so.
# TABLE 2

**Growth in English Proficiency**

Significance of Mean Total N.C.E. Score Differences Between Initial and Final Test Scores of Students on the Language Assessment Battery (English) and Degrees of Reading Power Test

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard</td>
<td>Mean</td>
<td>Standard</td>
<td>Mean</td>
</tr>
<tr>
<td>N</td>
<td>Mean</td>
<td>Deviation</td>
<td>Mean</td>
<td>Deviation</td>
</tr>
<tr>
<td>LAB</td>
<td>145</td>
<td>12.89</td>
<td>10.68</td>
<td>22.57</td>
</tr>
<tr>
<td>D.R.P.</td>
<td>48</td>
<td>40.79</td>
<td>17.66</td>
<td>44.56</td>
</tr>
</tbody>
</table>

* Statistically significant at the .05 level.

- LAB and D.R.P. results indicate that students gained in English language proficiency.
high (E.S. = 1.0), while that of the D.R.P. was slight (E.S. = 0.37).

**NATIVE LANGUAGE ARTS**

- At least 70 percent of the participating students will show significant gains in native language arts as indicated by the results on the final course grade.

Project CAP participants received Chinese N.L.A. instruction in one of the two schools (I.S. 131M) served by the project, but no data was submitted on student results; therefore, OREA could not assess the N.L.A. objective.

**CONTENT AREA SUBJECTS**

- At least 70 percent of the students enrolled in mathematics, science, social studies, and computer skills courses (in the second and third project year) will score at or above the 65 percent passing criterion on their final course grades.

**Implementation**

I.S. 131M offered bilingual (Cantonese/English) instruction in mathematics, science, and social studies. There were no bilingual courses for Chinese students at I.S. 73Q, therefore project participants were enrolled in mainstream content area classes. All project participants at I.S. 131M and 20 project students at I.S. 73Q took computer skills classes. Project students at both sites were enrolled in mainstream art, music, and physical education classes.

There were 13 students present in the E.S.L. social studies class observed by a field consultant at I.S. 131M. The lesson was on governance in Puerto Rico. The teacher listed key words on the
blackboard. The students read aloud from the English language textbook, and the teacher translated into Cantonese. The teacher engaged the students in discussion on a wide variety of topics related to government and the electoral process. There was a great deal of student participation in the discussion.

Outcome

Final course grades were available for at least 225 students in mathematics, social studies, and science. In all three subject areas, no less than 87 percent of the students earned passing grades of at least 65. (See Table 3.) All 23 students for whom there were grades passed the course in computer science. Project CAP met its content area objective.

Career Awareness Classes

Project CAP resource specialists conducted small-group career awareness classes four days a week at both sites. As high school materials were too advanced for junior high school students, and it was almost impossible to find materials written in Chinese, the resource specialists either created or adapted all curricular materials. Students were pulled from other classes such as physical education or art to attend the CAP career awareness class once a week. Students were encouraged to do volunteer work at Goldwater Memorial Hospital.

At I.S. 73Q, an OREA consultant observed the CAP resource specialist working with four sixth graders. She was teaching the students how to balance a checkbook by asking them to write
TABLE 3
Student Achievement in Content Area Subjects

<table>
<thead>
<tr>
<th>Subject</th>
<th>Number of Students</th>
<th>Percent Passing*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics</td>
<td>237</td>
<td>92.8</td>
</tr>
<tr>
<td>Social Studies</td>
<td>226</td>
<td>87.2</td>
</tr>
<tr>
<td>Science</td>
<td>225</td>
<td>93.8</td>
</tr>
<tr>
<td>Computer Skills</td>
<td>23</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Passing criterion was a grade of 65 or better.

- Well over 70 percent of participating students passed their content area courses.
simulated checks for Halloween party items. In the next activity, city planning, the teacher had the students place buildings on a city street map handout. She then had the students locate specific buildings and shops in the immediate vicinity of the school and had them come up to a prepared map and indicate locations. Throughout the class period, an educational assistant worked directly with one newly arrived student, occasionally translating for him. The resource specialist conducted the class entirely in English.
III. EVALUATION FINDINGS: NONINSTRUCTIONAL ACTIVITIES

The project proposed noninstructional objectives in attendance, field trips, guest speakers, staff development activities, curriculum development, and parental involvement.

ATTENDANCE

- Project Students' attendance will be significantly higher than that of mainstream students as indicated by school attendance records.

Implementation

To prevent student attrition and promote better attendance, the project included a number of supportive strategies. These included academic guidance, personal and career counseling, student placement in educational and internship programs, and tutoring in academic subjects.

Guidance and Counseling. When not in the classroom, both resource specialists provided individual guidance and counseling to program students. They posted daily schedules on their office doors for students and staff to consult.

Although the ninth grade guidance counselor and attendance teacher at I.S. 131M spoke Cantonese, they often referred students to CAP personnel for more individualized help. None of the guidance staff at I.S. 73Q spoke Chinese.

Student Placement. The resource specialists placed eight project students in city agencies for paid work experience through the Summer Youth Employment program. They also placed 20
students in an internship program at Goldwater Memorial Hospital. In addition, the project successfully established an Adopt-A-Class program with Prudential-Bache, Inc. for the 1988-89 academic year to increase students' job training experience.

Tutoring. Project CAP staff were available to tutor participating students in all academic areas.

Outcome

To determine if the difference between program and school attendance was statistically significant, analysts used the \( z \)-test.* This procedure tests whether the difference between one proportion (the project's attendance) and a standard proportion (the school's attendance) is greater than can be expected from chance variation.

The attendance rate of project students was 99.43 percent, which was significantly higher than that of mainstream students \( (p < .05) \). Project CAP clearly achieved its attendance objective.

FIELD TRIPS

- The program will organize at least four field trips to cultural centers and business sites to increase students' familiarity with American culture and with the world of work.

The field trips made during the 1987-88 academic year included trips to such places as the Statue of Liberty, Radio City Music Hall, the New York Hall of Science, Flushing Meadows

Park, AT&T and the AT&T InfoQuest Center, "Starlight Express," the Harlem Globetrotters, South Street Seaport, the New York City Job and Career Center, a New York Harbor tour on the Circle Line, the Amish country in Pennsylvania, and Goldwater Memorial Hospital.

CAP students also participated in schoolwide activities offered at each site. For example, 15 CAP students participated in weekly after-school fine arts and Chinese dance classes. Project CAP met the proposed objective at each school.

**GUEST SPEAKERS**

- The program will organize at least one conference for students in which representatives of business and industry will present information on career options and skill requirements as indicated by project records.

The project sponsored a career seminar at Bear Mountain State Park in June. Approximately 100 CAP students and their parents attended. Program staff and specialists from the O.B.E. spoke about career issues. Project CAP met the guest speaker objective.

**STAFF DEVELOPMENT ACTIVITIES**

- Program staff members will participate in teacher training conferences and workshops as indicated by project records.

- Program staff members will enroll in at least one university course each semester as indicated by college course registration records.

Project CAP staff members met each Friday to discuss common problems, federal regulations, and parents' meetings, and to plan program activities. They also attended monthly O.B.E.
staff meetings, citywide E.S.L. workshops held at Hunter and Teachers Colleges, the annual New York State Association of Bilingual Education (SABE) conference, a bilingual Career Fair, and the citywide Chinese Parents' Conference.

Both resource specialists were enrolled in university courses. One attended two courses at the College of Staten Island; the other, four courses at Queens College. The project director completed a course at New York University.

The project met both staff development objectives.

CURRICULUM DEVELOPMENT

By the end of the project year, the resource specialists will have developed three resource manuals on career awareness for teachers and students.

The resource specialists completed for publication the following materials: A Handbook for Job-Seeking Chinese Bilingual Students; A Compilation of Practical Lesson Plans in Career Education; and a Parents' Manual (in Chinese). In addition, the resource specialists developed or adapted an extensive list of career-related items for use in career awareness classes. All of the materials were parallel to those used by mainstream students. Almost all completed materials were being used. A Chinese manual called Career Awareness and Exploration and a student manual/workbook were still being developed. A Teacher's Curriculum Guide was completed but was not yet being used. Project CAP met its curriculum development objective.
PARENTAL INVOLVEMENT

- The program will offer workshops to parents of the target population as indicated by program and school activity records.

About 20 parents participated in project-sponsored workshops on such diverse topics as "How to deal with your child's social problems," "What you need to know about issues on immigration," "The importance of parental involvement," and "Myths and facts about AIDS." Parents attended performances of "Starlight Express" and "CATS," accompanied their children on trips to the Amish country in Lancaster, Pennsylvania and to Bear Mountain State Park, New York, and attended weekly E.S.L. classes during the spring at I.S. 73Q.

An OREA consultant observed E.S.L. classes for parents conducted by the resource specialist. Classroom activities included completing a crossword puzzle with a career orientation, learning how to syllabicate, typing a short resume, and reading about and discussing the celebration of Memorial Day in the United States. The resource specialist used English except to translate new vocabulary into Chinese.

Project staff assisted in publicizing the Tenth Annual Citywide Chinese Parents' Conference held on May 22 at P.S. 124 in Manhattan. The New York Chinese Bilingual Educators' Committee sponsored the conference which offered information on a wide variety of topics to approximately 1,000 parents. Project CAL staff presented a workshop at this conference. Thirty people attended this workshop.
IV. CONCLUSIONS AND RECOMMENDATIONS

Project CAP provided career awareness classes, counseling, and tutoring at each site. It organized numerous field trips where students were afforded an opportunity to enrich their knowledge of American culture. Project personnel utilized the opportunities available to them for professional development. Programs for parents were well attended and parents took advantage of the many opportunities for parental involvement.

Project CAP met its instructional objectives in E.S.L., content area subjects, and career awareness classes. OREA was unable to assess the project's N.L.A. objectives because of a lack of data.

The project achieved its noninstructional objectives in attendance, field trips, guest speakers, staff development, curriculum development, and parental involvement.

The addition of the paraprofessional at J.H.S. 73, as recommended in the previous year's evaluation report, was a positive step.

Project CAP successfully provided students with career instruction and with a level of support which would not have been available otherwise. The services provided by Project CAP appear to have been badly needed, particularly at J.H.S. 73, where none of the faculty spoke Chinese.
The conclusions, based on the findings of this evaluation, lead to the following recommendation:

- If possible, relocate the project office at I.S. 73Q, or hold these career awareness classes elsewhere so that students will not be distracted by noise from the nearby physical education classes.