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ABSTRACT

Project Three Cs, which admitted 285 students in grades 7 through 9, was designed to meet the needs of recent immigrants (279 of whom were Chinese) of limited English proficiency. The New York City program provides computer-assested instruction (CCAI) of limited English as a Second Language (ESL), content areas, and career development. The project trained staff in computer techniques for classroom use and provided individualized instruction to students and staff. Parents visited the computer laboratory throughout the year to observe the child's progress and to use the computers themselves. The project carried out the activities in its design. Computer assisted instruction was incorporated into all subject areas, and valuable job skills were also incorporated. Project directors reported that the staff development component of the project was exceptional, and that staff became computer literate as a result of the training offered. The project also met its objectives for parent participation. One limitation was that the project could not serve all the students who wanted to participate. Two appendixes describe data collection and analysis and instructional materials. (SLD)

OREA Report

Chinese, Career Education, and Computer Education
(Project Three Cs)
Community School District 2, Manhattan
Transitional Bilingual Education Program
Grant Number: G008710390
1991-92

FINAL EVALUATION PROFILE

Chinese, Career Education, and Computer Education
(Project Three Cs)
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FINAL EVALUATION PROFILE

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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

Chinese, Career Education, and Computer Education

(Project Three Cs)

Community School District 2, Manhattan
Grant Number: G008710390
1991-92

EXTRACT

PROJECT DIRECTORS: Ms. Eugenia Chang and Mr. Phillip Ficke FUNDING CYCLE: Year 5 of 5

SITE

School	Grade Levels	Enrollment*
I.S. 131	7-9	285

*The project enrolled 285 students (39 more than in the previous year). Male students numbered 150, female 133. (Gender for two students was not stated.)

STUDENT BACKGROUND

Native Language		Number of Students
Chinese		279
Cantonese	124	
Mandarin	36	
Other	119	
Spanish		5
Unreported		1

Countries of Origin	Number of Students
China, People's Republic	242
Hong Kong	27
Malaya	5
Taiwan	3
United States	2
Other	5
Unreported	1

Median Years of Education in Native Country: 5.0; in the United States: 2.0

Percentage of Students Eligible for Free Lunch Program: 99.3

ADMISSION CRITERIA

Project Three Cs admitted students who had scored at or below the 40th percentile on the Language Assessment Battery (LAB) and were thus classified as of limited English proficiency (LEP).

PROGRAMMING

Design Features

Project Three Cs was designed to meet the needs of recent Chinese immigrants who were LEP. The program was designed to provide computer-assisted instruction (C.A.I.) to students in seventh through ninth grade in English as a Second Language (E.S.L.), content areas, and career development classes. The project trained staff in computer techniques to use in the classroom and provided individualized instruction to students and staff, if requested. Parents visited the computer laboratory throughout the year to observe their child's progress as well as to use the computers themselves.

Capacity building. This was Project Three Cs last year of Title VII funding. Pupils with Compensatory Educational Needs (P.C.E.N.) will fund resource teachers in the future.

Strengths and Limitations

Project Three Cs carried out those activities it had proposed in its design. The computer mastery center was fully operative. C.A.I. was incorporated into all subject areas. Valuable job skills were also incorporated into the curriculum. The project directors reported that the staff development component of the project was exceptional and that as a result of the training offered by the project, staff became computer-literate.

One limitation noted by the project directors was that the project could not serve all of the students who wanted to participate.

CONCLUSIONS AND RECOMMENDATIONS

The project met all of its objectives--E.S.L., content areas, career education, student management system, self-concept, attitudes toward education, and parental involvement.

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

- Disseminate information outlining the successful practices undertaken in this project to interested schools and districts.

STAFFING

Title VII Staff (Total 4)

Title	Degree	Language Competencies	Title VII Funding	Other Funding
Curriculum Coordinator/ Resource Specialist	M.A.	Cantonese	Part-time	Tax levy
Mastery Center Coordinator/ Resource Specialist	B.S.	None	Full time	
Paraprofessional	B.A	Mandarin	Full time	
Paraprofessional	H.S.	Spanish	Full time	

Other Staff Working With Project Students (Total 10)

Title		Degree		Certification		Language Competencies and Teaching/ Communicative Proficiencies (TP/CP)*	
Teachers	10	M.A.	8	E.S.L.	7	French	TP 1
		M.S.	1	Social Studies	1	Spanish	TP 1, CP 1
		B.S.	1	Fine Arts	1	Chinese	TP 6
				J.H.S. English	1	Mandarin	TP 2
				Bil. Social Studies	2	Cantonese	TP 2
				Bil. Common Branches (Cantonese)	1	Other	TP 2

All staff had certification in areas they served.

IMPLEMENTATION AND OUTCOMES (Objectives prefaced by •)

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

E.S.L. was offered six periods a week. The project used word processing and composition writing to foster E.S.L. See Appendix B for a list of textbooks used.

- Students will develop communication competencies in English by improving their listening, speaking, reading and writing skills.

Evaluation Instruments: Language Assessment Battery (LAB)** (full test and speaking subtest)
Secondary Level English Proficiency (SLEP) Test

Full LAB--Pretest: May 1991; posttest: May 1992.

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* 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 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: 211

Mean gain: 3.5 N.C.E.s (s.d. = 6.6)

Mean gain is statistically significant ($t = 7.75$, $p < .05$).

Speaking Subtest of LAB--Pretest: May 1991; posttest: May 1992.

Number of students for whom pre- and posttest data were reported: 87

Mean gain: 11.9 N.C.E.s (s.d. = 28.4)

Mean gain is statistically significant ($t = 3.91$, $p < .05$).

SLEP--Pretest: September 1991; posttest: May 1992.

Number of students for whom pre- and posttest data were reported: 177

Eighty-four percent of the students showed a gain in listening skills, and 86 percent of the students demonstrated a gain in reading skills on the SLEP test.

Project met E.S.L. objective.

Native Language Arts (N.L.A.)--Chinese

Number of students lacking native language literacy (estimated): 80 percent.

Students received four periods of instruction in N.L.A. each week. Teacher-made materials were used for instruction, including Chinese translations of works related to Asian cultural history, literature, and geography. Instructional strategies included choral and individual reading, memorization, copying, and projects.

The project did not propose a specific objective for N.L.A.

Content Area Subjects

The project used C.A.I. to promote achievement in the content areas. Classes were taught in English supplemented by native language when necessary. See Appendix B for a list of the textbooks used.

- Students will improve their overall educational achievement in English, mathematics, social studies, and science.
- Students will develop mathematics, science, and social studies skills.

Evaluation Indicator: final course grades.

All students received passing grades in all content area subjects in both the fall and spring semesters.

Project met objectives for content area subjects.

Student Management System

- Project staff will develop and implement a student management system to assist student development. The system will generate student lists, student time spent on the computers, and analyses of group errors that can be used for prescriptive planning for the target group.

The student management system was functional. The system provided the opportunity to monitor students' activities and progress on computer assignments. Parents and/or teachers could request information on individual students, and teachers could also request data on their class as a whole.

Project met objective for development and implementation of student management system.

Career Education

Students attended a home and career skills class which used lessons developed for the computer laboratory. Students working in the Three Cs laboratory learned valuable job skills while enhancing their academic abilities.

- Students will master basic skills related to careers and survival skills.

Evaluation Indicator: final course grades.

All students received passing grades in career education.

Project met objective for career education.

Self-Concept and Attitudes toward Education

- Students will upgrade their self-concept as learners, feeling more positive about their own potential as students.
- Students will develop more positive attitudes toward education.

The Office of Research, Evaluation, and Assessment (OREA) provided the project with a questionnaire which measured student self-concept and attitudes toward education. The questionnaire asked whether students liked coming to the Three Cs computer classroom, whether they found it easier to use the computer than they had at the beginning of the year, whether they thought that they would be able to graduate from I.S. 131, if continuing their education was important to them, and if what they had learned in the Three Cs computer class had helped them.

Ninety-eight percent of the students showed that they developed a more positive attitude toward education and that their self-concept was enhanced as a result of the program.

Project met objectives for improved self-concept and attitudes toward education.

Attendance

No attendance objective was proposed. However, attendance rates were 99.28 percent for project students and 94.6 percent for mainstream students. Last year, project students' attendance rate was 99.63 percent.

Dropout Rate

No students dropped out of the project, and no objective was proposed for dropout rate. This was the case last year as well.

Grade Retention

One student (0.4 percent) was retained in grade. Last year, no students were retained in grade.

Parental Involvement

- Parents will observe and participate in project classes. Parents who cannot attend during the day will participate in simulated lessons during Open School Night.

Parents came to visit the project classes during school hours and in some cases participated in the lessons. During Open School Night, parents were able to observe students demonstrating assignments on the computer. Parents' attendance this year was the highest in the history of the program.

Project met objective for parental involvement.

Students With Special Academic Needs

Referral to special education. Individualized attention was offered to resource room students. If a teacher felt that a student was disabled and would benefit from special education services, he/she would refer that student to the School-Based Support Team (S.B.S.T.). All members of the S.B.S.T. were bilingual. No students were referred to special education this year. This was also the case last year.

Remedial programs. Thirteen students (4.6 percent) were referred to remedial programs, in contrast to last years' total of nine students.

Gifted and talented programs. An after-school computer club and various publication activities were made available to those students deemed gifted and talented. As in the previous year, no project students were referred to gifted and talented programs.

Mainstreaming

The project did not mainstream any students.

Staff Development

At the beginning of each year, the project offered a review course to classroom teachers on how to use C.A.I. The project staff were available throughout the school year to assist teachers with their lessons.

CASE HISTORY

B. was a recent immigrant from Fu Zhou, a province of China. He was the only child in a family of non-English-speaking immigrants. In China, he had attended a small country school for less than two years and could neither read nor write Chinese. At I.S. 131, B. was placed in a class of LEP students assigned to Project Three Cs. Because B. spoke a unique dialect, he was isolated both in school and in the Chinatown community where he lived. In the computer laboratory, a paraprofessional was assigned to help him exclusively. The paraprofessional was able to teach B. the English alphabet and worked closely with him to develop pronunciation skills. After B. learned to work with the computer, the teacher and paraprofessional worked cooperatively, using elementary English texts and specially developed worksheets, to further B.'s English education. In about three months, he was able to work at his own pace to complete E.S.L. lessons. As his reading and writing skills progressed, he began to work on his oral and listening comprehension. Later, B. advanced to the point where he could follow and respond in English in all his classes. In the Three Cs laboratory, B. could progress unaided through the commercially developed C.A.I. programs that constituted a large portion of the Three Cs curriculum. B. was able to communicate well with his teachers and with other students and was no longer isolated.

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

Seventh Grade

English
Banks, et al. *English for a Changing World.* Scott Foresman.

Social Studies
Chamot, Anna Uhl. *America: The Early Years.* Addison-Wesley.

Science
Rosen, Seymour. *Understanding Living Things: Biology Workshop 1.* Globe.

Mathematics
Dolciani, et al. *Mathematics: Structure & Method.* Houghton Mifflin.

Eighth Grade

English
Iantornol, Giuliano. *Turning Points: Communicating in English.* Addison-Wesley.

Social Studies
Chamot, Anna Uhl. *America After Independence.* Addison-Wesley.

Science
Bernstein, Leonard. *Concepts & Challenges in Earth Science.* Globe.

Mathematics
Dressler, Isidore. *Preliminary Mathematics.* Amsco.

Ninth Grade

English
Dixson, Robert. *Modern American English.* Regents.

Social Studies
Graham, Alma, et al. *The World.* McGraw-Hill.
Gross, Herbert. *Follett Student Atlas.* Follett.
Goodman, Burton. *Spotlight on Literature.* Random House.

Science
Bernstein, Leonard. *Concepts and Challenges in Physical Science.* Globe.
Rosen, Seymour. *Understanding Forces: Physics Workshop 2.* Globe.

Mathematics
Dressler and Keenan. *Integrated Mathematics.* Amsco.
Lowry, et al. *Pre-Algebra.* Heath.