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ABSTRACT

The Alternative Learning Methodologies through Academics Project (Project ALMA) was an Elementary and Secondary Education Act Title VII-funded project in its fourth year of operation in two high schools in Queens and the Bronx (New York). The program served 436 Spanish-speaking students, most of whom were of limited English proficiency. Participants received instruction in English as a Second Language (ESL); native language arts (NLA); and the content area subjects of mathematics, science, and social studies, with emphasis on mathematics and computer skills. Staff development and parent participation, including a parent advisory committee, were integral components of Project ALMA. The project met its objectives for career advisement and dropout prevention and partially met its NLA objectives and content area subjects. Project ALMA did not meet its ESL objectives, and some program objectives could not be evaluated because of lack of data. Recommendations for project continuation include improving evaluation data and augmenting ESL and NLA instruction. Eight tables present evaluation findings. Two appendixes describe instructional materials and class schedules. (Author/SLD)

UD

# OER Report

Alternative Learning Methodologies through Academics
(Project ALMA)
Transitional Bilingual Education Grant T003A00209
FINAL EVALUATION REPORT
1993-94

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FINAL EVALUATION REPORT
1993-94

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## EXECUTIVE SUMMARY

Alternative Learning Methodologies through Academics (Project ALMA) was an Elementary and Secondary Education Act (E.S.E.A.) Title VII-funded project in its fourth year of operation at John Bowne High School in Queens and John F. Kennedy High School in the Bronx. Project ALMA served 436 Spanish-speaking students, most of whom were of limited English proficiency (LEP).

Participating students received instruction in English as a second language (E.S.L.); native language arts (N.L.A.); and the content area subjects of mathematics, science, and social studies. The program sought to emphasize instruction in mathematics and computer skills.

Staff and teachers attended a variety of conferences. Some paraprofessionals and teachers working with project students enrolled in relevant university courses.

The Bilingual Parent Advisory Committee (BPAC) was active at both sites. At John Bowne High School, project staff provided weekly E.S.L. classes for parents as well as two workshops on parenting and understanding the educational system.

Project ALMA met its objectives for career advisement and dropout prevention. It partially met objective for N.L.A. and both of its objectives for content area subjects. The project failed to meet objectives for E.S.L., attendance, and placement in programs for the gifted and talented. OER was unable to evaluate objectives for grade retention, referral to special education, enrollment in post secondary education institutions, and parental involvement because of lack of data.

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

- Provide evaluator with all data necessary to fully evaluate the project.
- Augment E.S.L. and N.L.A. instruction, possibly through the computer and additional staff and peer tutoring.
- Reassess the expected content area course passing rate to see if it is realistic.
- Reevaluate the attendance objective and revise if achievement is not statistically possible.

## ACKNOWLEDGEMENTS

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# I. INTRODUCTION

In 1993-94, Alternative Learning Methodologies through Academics (Project ALMA) was in its fourth year of funding as an Elementary and Secondary Education Act (E.S.E.A.) Title VII project serving Spanish-speaking. The project operated at John Bowne High School in Queens and John F. Kennedy High School in the Bronx.

## PROJECT CONTEXT

John Bowne High School is in the southern part of Flushing, close to the Queens College of the City University of New York (CUNY) campus. In the previous decade, many immigrants from Asia, the Indian subcontinent, and Latin America settled here, making it one of the most ethnically diverse neighborhoods in New York City.

The student population at John Bowne High School reflected the composition of the surrounding community. Of the 3,031 students registered, 44.0 percent were Latino, 23.8 percent were Asian-American, 19.4 percent were African-American, 12.8 percent were European-American, and 0.3 percent were Native American. Of those students, 29 percent were of limited English proficiency (LEP) and 37 percent were eligible for the federally-funded free-lunch program, an index of poverty.

The immediate neighborhood of John F. Kennedy High School (the Marble Hill section of the Bronx) was mostly Latino. While this very large high school had many low income families, it also draws students from the more affluent Riverdale section of the Bronx and from northern Manhattan.

The population at John F. Kennedy High School also reflected the composition of the surrounding community. Of the 4,994 students registered, 65.2 percent were Latino, 20.1 percent were African-American, 8.1 percent were European-American, 6.5 percent were Asian-American, and 0.1 percent were Native American. Of these students, 22 percent were LEP and 43 percent were from low-income families.

Each high school was housed in a building that was between 20 and 30 years old and was operating above capacity. John F. Kennedy High School was drastically overcrowded, with 129 percent utilization. Crowding created difficulties for the implementation of the project at both sites.

At each site, the project office provided students with a place to study, receive tutoring, and work on a computer during free periods. At John F. Kennedy High School, however, the office had been created by setting up temporary partitions and could be entered only by passing through a classroom.

## STUDENT CHARACTERISTICS

Project ALMA served a total of 436 Spanish-speaking students in the ninth through twelfth grades. (See Table 1.) Eighty-nine percent of these students were LEP. Scores at or below the 40th percentile on the Language Assessment Battery (LAB) determined LEP status. Additional criteria for selection were extreme educational need and interest in the areas of mathematics and computer science.

TABLE 1

Number of Students in Project ALMA, by Site and Grade

| High School | Grade | | | | Total |
|---|---|---|---|---|---|
| | 9 | 10 | 11 | 12 | |
| John Bowne | 44 | 58 | 52 | 43 | 197 |
| John F. Kennedy | 73 | 39 | 70 | 56 | 239 |
| Total | 117 | 975 | 122 | 99 | 436 |

In 1993-94, the project served a total of 436 students. The majority of participants (71 percent) were born in the Dominican Republic. (For students' countries of origin, please see Table 2.) Most (89.2 percent) of the participants came from low-income families as evidenced by their eligibility for the free-lunch program.

Needs Assessment

Before instituting the project, the Office of High School Bilingual/English as a Second Language (E.S.L.) Programs Unit of the Board of Education of the City of New York conducted a needs assessment of the students and staff at the two sites. The data obtained from these studies indicated that the substantial Latino immigrant student population was in need of supplementary services to accelerate their acquisition of English language skills and facilitate their academic achievement. Additional needs assessments indicated that many students needed tutoring in mathematics.

TABLE 2

Students' Countries of Origin

| Country | Number of Students |
|---|---|
| Dominican Republic | 310 |
| Colombia | 30 |
| Ecuador | 22 |
| Peru | 17 |
| El Salvador | 12 |
| Honduras | 9 |
| Mexico | 8 |
| United States | 6 |
| Puerto Rico | 4 |
| Venezuela | 3 |
| Costa Rica | 2 |
| Guatemala | 2 |
| Bolivia | 1 |
| Hong Kong | 1 |
| Nicaragua | 1 |
| Spain | 1 |
| Uruguay | 1 |
| Unknown | 6 |
| Total | 436 |

## PROJECT OBJECTIVES

### Student Objectives

- By June 1994, 70 percent of the target students will demonstrate an appropriate increase in English language proficiency as indicated by significant improvement at the .05 level of statistical significance when results are analyzed using a correlated *t*-test.

- By June 1994, 75 percent of the Spanish-dominant participants will demonstrate a significant increase in Spanish language achievement as indicated by significant improvement at the .05 level of statistical significance when results are analyzed using a correlated *t*-test.

- Eighty-five percent of all targeted students will achieve a passing grade of 65 or better in the subject areas of mathematics, social studies, and science.

- By June 1994, 75 percent of program students will show significant gains in computer skills, and those enrolled in formal courses will achieve a passing grade of 65 or better as a result of participating in the program.

- Participating students will meet on an individual basis with the Bilingual Specialist for advisement at least twice during the 1993-94 school year for career orientation and planning.

- By the conclusion of the project period, as a result of participation in the program, students' grade retention or referral to placement in special education classes will be ten percent less than mainstream students'.

- As a result of participation in the program, placement in programs for the gifted and talented and enrollment in post-secondary institutions will be five percent greater than similar non-program students.

- By June 1994, as a result of participation in the program, the dropout or absenteeism rate of the students will be less than mainstream students.

- Participating students attendance rate will be ten percent greater than mainstream students.

Parental Involvement Objective

- By June 1994, it is expected that 75 percent of the parents of project students will demonstrate ten percent more parental involvement than parents of mainstream students.

PROJECT IMPLEMENTATION

During the 1993-94 school year, Project ALMA provided instructional and support services to 436 Spanish-speaking students and their families. The project's main goal was to meet the needs of recently arrived immigrants, stressing the acquisition of English language skills and the development of mathematics and computer skills.

The use of Spanish and English in content area classes varied. At John Bowne High School, it was the policy to infuse as much English as possible into the Spanish-based classes of mathematics and science. There were only two social studies teachers who could teach bilingually, and some social studies and business education courses were taught with an E.S.L. methodology. At John F. Kennedy High School, project students in the ninth and tenth grades took all content area courses in Spanish, but most eleventh and twelfth grade instruction used English with E.S.L. methodology. Neither school had a bilingual teacher for computer science.

Project staff attended a variety of conferences and workshops and offered instruction and guidance to new teachers. Project ALMA offered a large number of parental involvement activities at both sites.

Materials, Methods, and Techniques

Schools participating in Project ALMA offered E.S.L. at literacy through transitional levels. They offered native language arts (N.L.A.) was offered at the literacy through advanced placement levels.

Teachers of participating students used a wide array of strategies and techniques, including cooperative learning and computer-assisted instruction (C.A.I.). Most classes made regularly scheduled visits to computer labs to supplement classroom instruction. The project also organized a number of educational field trips.

Project staff adapted materials for biology, the Regents Competency Tests (R.C.T.s), and social studies, and translated materials and lesson plans in social studies, science, and mathematics.

For a list of instructional materials used in the project, please see Appendix A.

Capacity Building

The two participating high schools were gradually assuming the cost of programming as Title VII funding abated. The project director's position, one resource teacher position, one educational assistant position, and the purchase of software materials were funded from other sources in the year under review. For the next school year, tax-levy funds will also be used to defray the cost of field trips, staff development, teacher mentoring, parent involvement, the International Extravaganza, and speakers for career education.

Staff Qualifications

Title VII staff. One resource teacher and one educational assistant were funded by Title VII. Both were fluent in Spanish. For a description of their degrees and language proficiency (teaching or communicative*), see Table 3.

TABLE 3

Project Staff Qualifications

| Position Title | Degree(s) | Language Proficiency |
|---|---|---|
| Resource Specialist | B.A. | Spanish (TP) |
| Educational Assistant | High School | Spanish (NS) |

The resource specialist coordinated activities, assisted classroom teachers in the development and implementation of instructional activities, helped plan activities for parents of participating students, and selected instructional material. The resource specialist had over five years of experience in bilingual education.

The educational assistant provided classroom assistance in selected E.S.L. and content area classes, and tutored students both at the project office and during scheduled periods in the computer lab.

*Teaching proficiency (TP) is defined as the ability to use LEP students native language in teaching language arts or other academic subjects. Communicative proficiency (CP) is defined as a non-native speaker's basic ability to communicate and interact with students in their native language. NS = Native Speaker.

Other staff. At John F. Kennedy High School, tax-levy funds paid the salaries of the project director, 36 classroom teachers, 3 bilingual counselors, and 1 assistant principal. Chapter 1 funds paid the salaries of 6 teachers; Pupils with Compensatory Educational Needs (P.C.E.N.) funds were used for 11 teachers and 5 paraprofessionals.

The project director's responsibilities included planning and supervising project activities, selecting and training staff, and providing evaluation data. She had more than 15 years' experience teaching LEP students.

Most of the teachers were certified in the areas they taught. At John F. Kennedy High School three teachers held Provisional Preparatory Teacher (P.P.T.) licenses and six held temporary per diem (T.P.D.) certification. At John Bowne High School, all teachers were reported to be certified in the subjects they taught. For degrees, certifications, and language proficiency, please see Table 4.

Instructional Time Spent on Particular Tasks

See Appendix B for examples of class schedules.

Staff Development

Resource teachers at both sites attended state and national conferences as well as workshops on E.S.L., N.L.A., and counseling LEP students. No money was budgeted for tuition assistance, but two Title VII-funded paraprofessionals and six teachers were reported to have taken university courses in the fall of the year under review.

TABLE 4

Qualifications of Non-Title VII Staff

| Position Title | Degree(s) | Certification | Language Proficiency |
|---|---|---|---|
| Project Director | M.A. | Business Ed. | Spanish TP |
| Assistant Principals (2) | 2 M.A. | 1 E.S.L.<br>1 Supervisory | Spanish 2 TP |
| Teachers (109) | 6 Ph.D.<br>85 M.A.<br>18 B.A. | 38 E.S.L.<br>15 Spanish<br>13 Social Studies<br>9 Bil. Science<br>8 Bil. Soc. Stud.<br>6 English<br>5 Mathematics<br>5 Bil. Mathematics<br>2 Science<br>2 Health<br>1 French<br>1 Bil. Business<br>5 P.P.T.<br>6 T.P.D. | Spanish 58 TP |
| Guidance Counselors (4) | 4 M.A. | 4 Bil. Guidance | Spanish 4 TP |
| Bilingual Grade Advisor | B.A. | | Spanish TP |
| Educational Assistants (7) | 1 B.A.<br>4 H.S.<br>2 H.S. + | | Spanish 7 NS |

Length of Time Participants Received Instruction

Students had a mean of 6.9 years (s.d.=1.3) of education in a non-English-speaking school system and 3.3 years (s.d.=1.7) of education in the United States. The median time students participated in Project ALMA was 10 months.

Activities to Improve Pre-referral Evaluation Procedures for Exceptional Children

Teachers referred those students thought to be in need of special education services to the School-Based Support Team (S.B.S.T.) for evaluation. At each site, the S.B.S.T.'s social worker and psychologist were bilingual in Spanish. As a follow-up, the bilingual guidance counselor interviewed the students and consulted with the resource specialist and the Assistant Principal for Special Education.

The project did not propose to serve gifted and talented students. Nevertheless, school and project staff used course grades, teacher judgment, and evidence of strong motivation to identify candidates for enrichment activities, such as Advanced Placement classes at each site.

Instructional Services for Students with Special Needs

The project offered C.A.I. and tutoring (by peers as well as staff) during lunch hour and outside of school hours to students in need of extra help. Students who were failing a number of subjects were mandated to attend the tutorial sessions. School supervisors collaborated with Project ALMA to create a special program, which they called CASA, to accommodate project and mainstream students who were at risk of failing.

PARENT AND COMMUNITY INVOLVEMENT ACTIVITIES

Project ALMA sponsored a variety of parental involvement activities that included workshops, E.S.L. and citizenship classes, and field trips. The project gave parents materials concerning school standards and requirements, strategies for dealing with their children's problems, and job application procedures.

## II. EVALUATION METHODOLOGY

### EVALUATION DESIGN

#### Project Group's Educational Progress as Compared to That of an Appropriate Non-Project Group

The Office of Educational Research (OER) used a gap reduction design to evaluate the effect of language instruction on project students' performance on standardized tests. Because of the difficulty in finding a valid comparison group, OER used instead the groups on which the tests were 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 21.1. 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.

#### Applicability of Conclusions to All Persons Served by Project

Data were collected from all participating students for whom there were pre- and posttest scores. There were no pretest data on students who entered the program late; therefore, posttest data for them will serve as pretest data for the following year. Instruments used to measure educational progress were appropriate for the students involved. The LAB and El Examen de Lectura en Español (ELE) are used throughout New York City to assess the growth of English, Spanish, and mathematics skills in populations similar to those served by Project ALMA.

INSTRUMENTS OF MEASUREMENT

OER compared pre- and posttest scores on the LAB to assess the E.S.L. objective and on the ELE to assess the N.L.A. objective. The content area objectives in mathematics, science, social studies, and computer skills were assessed through course grades, as specified.

The language of the LAB and the ELE was determined by the test itself.

According to the publishers' test manuals, all standardized tests used to gauge project students' progress are valid and reliable. Evidence supporting both content and construct validity is available for the LAB. Content validity is confirmed by an item-objective match and includes grade-by-grade item difficulties, correlations between subtests, and the relationship between the performance of students who are native speakers of English and students who are LEP. To support reliability, the Kuder-Richardson Formula 20 (KR20) coefficients and standard errors of measurement (SEM) are reported by grade and by form for each subtest and total test. Grade reliability coefficients, based on the performance of LEP students on the English version, ranged from .88 to .96 for individual subtests and from .95 to .98 for the total test.

The ELE was prepared by New York City educators who were native speakers of Spanish and represented several Latino linguistic and cultural groups. The ELE was administered in two forms to all New York City students who were receiving language arts instruction in Spanish. For both forms, the grade reliability coefficients ranged from .94 to .96. Items on the test were grade-specific. Construct validity is

evidenced by grade-to-grade decreases in item difficulty within level. This characteristic reflects the acquisition of increased amounts of the underlying construct (reading proficiency) as students progress through the grades.

## DATA COLLECTION AND ANALYSIS

### Data Collection

To gather qualitative data, an OER evaluation consultant carried out on-site and telephone interviews with the project director several times during the school year and also observed two classes on each of two visits. The project evaluator collected the data will prepare the final evaluation report in accordance with the New York State E.S.E.A. Title VII Bilingual Education Final Evaluation Report format, which was adapted from a checklist developed by the staff of the Evaluation Assistance Center (EAC) East in consultation with the Office of Bilingual Education and Minority Language Affairs (OBEMLA).

### Proper Administration of Instruments

Qualified personnel received training in testing procedures and administered the tests. Test administrators followed guidelines set forth in the manuals accompanying standardized tests. Time limits for subtests were adhered to; directions were given exactly as presented in the manual.

### Testing at Twelve-Month Intervals

Standardized tests were given at 12-month intervals, following published norming dates.

Data Analysis

Accurate scoring and transcription of results. Scoring, score conversions, and data processing were accomplished electronically by the Scan Center of the Board of Education of the City of New York. Data provided by the Scan Center were analyzed in the Bilingual, Multicultural, and Early Childhood Evaluation Unit of OER. Data collectors, processors, and analysts were unbiased and had no vested interest in the success of the project.

Use of analyses and reporting procedures appropriate for obtained data. To assess the significance of students' achievement in English and Spanish, OER computed correlated *t*-tests on the LAB and ELE. The *t*-test determined whether the difference between the pre- and posttest scores was significantly greater than would be expected from chance variation alone.

The only possible threat to the validity of any of the above instruments might be that LAB norms were based on the performance of English proficient (EP) rather than LEP students. Since OER was examining gains, however, this threat was inconsequential—the choice of norming groups should not affect the existence of gains.

## III. FINDINGS

### PARTICIPANTS' EDUCATIONAL PROGRESS

Project ALMA carried out all instructional activities specified in its original design.

#### Participants' Progress in English

Throughout the school year, students had ample opportunity to develop their English language skills.

At John F. Kennedy High School, the OER evaluation consultant observed a E.S.L. class of 14 students from grades 10 through 12. The aim of the lesson was to find out how an airline reservation is made. The teacher asked the students to give her a list of questions that a person would ask a travel agent when making a reservation for a flight. The teacher then told the students to turn to their textbook, *Turning Points III*, to read about airline reservations and copy the headings from the textbook into their notebooks. Meanwhile, she listed them on the chalkboard. She then told the students to close their books and listen to a tape recording. After playing the tape once, she told the students to be prepared to listen again and fill in the appropriate data on forms she gave out to them. On completing the forms, students exchanged worksheets with their partners and compared answers. Students volunteered to write the answers on the board. As the students worked, the teacher made sure that they used proper grammar and spelling. The teacher then went on to ask the students about their impressions as to whether the

reservations were made for vacation or business. The students speculated on clues as to why the trip was being made.

The teacher reminded the students about brochures they had seen on previous days pertaining to trips to Mexico and Japan. She referred students to the *Turning Points* workbook describing information in a brochure about Greece. The students had to read a page and work cooperatively to fill in Part A of an answer sheet; they were asked to complete Part B for homework. The teacher circulated to assist the students in each group.

This lesson integrated E.S.L. with social studies, mathematics, and career skills. The teacher individualized her instruction and used a variety of materials to facilitate comprehension. Groups promoted cooperative learning.

Project ALMA proposed the following objective for E.S.L.:

- By June 1994, 70 percent of the target students will demonstrate an appropriate increase in English language proficiency as indicated by significant improvement at the .05 level of statistical significance when results are analyzed using a correlated *t*-test.

There were complete pre- and posttest scores on the LAB for 302 students from grades nine through twelve. (See Table 5.) While the average gain of 4.8 N.C.E.s (s.d.=10.4) was statistically significant ($p<.05$), only 55 percent showed a gain from pretest to posttest. The gain shown in the year under review was less than that shown in the previous year (7.7 N.C.E.s, s.d.=9.2) and a lower percentage of students showed gains. (The percentage showing gains last year was 66.6 percent.)

Project ALMA failed to meet its objective for E.S.L. Last year, it partially met this objective.

TABLE 5

Pretest/Posttest Differences on the
Language Assessment Battery (LAB), by Site

| High School | Total number of project students | Number of students for whom data were available | Pretest | | Posttest | | Difference | | *t* value |
|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | S.D. | Mean | S.D. | Mean | S.D. | |
| John Bowne | 197 | 151 | 12.2 | 12.8 | 17.3 | 15.3 | 5.1 | 10.1 | 6.21* |
| John F. Kennedy | 239 | 151 | 13.4 | 12.9 | 18.0 | 15.8 | 4.6 | 10.7 | 5.23* |
| Total | 436 | 302 | 12.8 | 12.8 | 17.6 | 15.2 | 4.8 | 10.4 | 8.08* |

$p<.05$

- Overall and at each site, participating students showed significant gains on the LAB.

Participants' Progress in Native Language Arts

The project posed the following objective for N.L.A.:

- By June 1994, 75 percent of the Spanish-dominant participants will demonstrate a significant increase in Spanish language achievement as indicated by significant improvement at the .05 level of statistical significance when results are analyzed using a correlated *t*-test.

There were complete pre- and posttest scores on the ELE for 107 students. (See Table 6.) The average gain of 9.3 N.C.E.s (s.d.=15.8) was statistically significant and was much greater than last year's loss of 1.6 N.C.E.s (s.d.=12.8). However, only at John Bowne High School did at least 75 percent (83 percent) of the students show a gain from pretest to posttest. At John F. Kennedy High School 60 percent of the students showed a gain. Overall, 72 percent of the students (more than last year's 67 percent) showed a gain.

Project ALMA partially met its objective for N.L.A. Last year, the project failed to meet this objective.

LEP Participants' Academic Achievement

Teachers used Spanish in content area classes at the beginning of the year, then gradually made the transition to English with an E.S.L. methodology. They used a wide array of strategies and techniques, including peer tutoring, C.A.I., cooperative learning, and interdisciplinary programming.

At John Bowne High School, the OER evaluation consultant observed a bilingual biology class of 21 students from grades nine through eleven. The aim of the lesson was to determine how the reproductive systems of males and females differ. The class reviewed the previous day's work on the male sexual reproduction

TABLE 6

Pretest/Posttest N.C.E. Differences on
El Examen de Lectura en Español (ELE), by Site

| High School | Total number of project students | Number of students for whom data were available | Pretest | | Posttest | | Difference | | *t* value |
|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | S.D. | Mean | S.D. | Mean | S.D. | |
| John Bowne | 197 | 54 | 53.2 | 20.4 | 68.7 | 19.6 | 15.5 | 16.6 | 6.86* |
| John F. Kennedy | 239 | 53 | 60.9 | 21.1 | 64.0 | 19.0 | 3.1 | 12.2 | 1.86 |
| Total | 436 | 107 | 57.0 | 21.0 | 66.4 | 19.4 | 9.3 | 15.8 | 6.13* |

$p<.05$

- Overall and at one site, participating students showed significant gains on the LAB.

system. The students used their textbook, *Biologia Humana*, for information about the female reproductive system. The teacher developed vocabulary for the lesson by recording the words on the chalkboard. She used an overhead projector and spoke to the students in Spanish and English. Students responded to the teacher's questions, and the whole class was attentive, motivated, and asked many questions. The teacher gave the students a homework assignment. This lesson integrated science with language arts.

At John Bowne High School, the OER consultant observed a bilingual social studies class of 25 students from grades nine through eleven. At the beginning of the class, each student had to read silently from a worksheet entitled "The Russian Revolution." There were multiple-choice questions to answer. The teacher called on students to read aloud, and other students to answer questions. The aim of the lesson was on how Lenin transformed the Soviet Union. She asked the students questions in Spanish or English and recorded their answers in English on the chalkboard. The class discussed private ownership as opposed to public or governmental ownership and socialism as contrasted with communism.

The students then read *Results of the Russian Revolution*, which was on the other side of the worksheet. She called on one student to read aloud while the rest of the class followed the text. The teacher developed comprehension by discussing content with the students in Spanish and outlining it on the chalkboard in English. As a homework assignment, the students had to reread the passage and answer multiple-choice questions. The teacher fostered critical thinking as she asked the

students to compare and contrast Lenin's and Stalin's methods with those of Hitler. Better readers helped the other students. She provided for individual differences by asking questions of some students in Spanish and some in English. She prepared modified reading material to facilitate the students' reading and comprehension of English.

At John F. Kennedy High School, the OER evaluation consultant observed a biology class of 18 students from grades nine through twelve. The aim of the lesson was to determine the nature of a genetic disorder. The teacher distributed diagrams for each student to fill in, then had a student copy her answers on the chalkboard. The class helped check the accuracy of the answers. The teacher used a lecture method and accepted answers without comment. As a homework assignment, the students were asked to find out all they could about albinoism. By walking around the room as she talked, the teacher heightened student attention.

The project design emphasized instruction in computer skills. In the past, the schools' prerequisites for computer courses had prevented most project students from studying in this area. Each site offered an introductory keyboarding and computer skills course in addition to C.A.I. At John Bowne High School, a paraprofessional provided individual assistance. At John F. Kennedy High School, the project reserved the project office for computer practice four periods a week. Peer tutors worked with selected students four periods a week. Other students needing assistance in preparation for the R.C.T.s were able to participate as well.

Project ALMA proposed the following content area objectives:

- Eighty five percent of all targeted students will achieve a passing grade of 65 or better in the subject areas of mathematics, social studies, and science.

- Seventy five percent of program students will show significant gains in computer skills and those enrolled in formal courses will achieve a passing grade of 65 or better, as a result of participating in the program.

At least 85 percent of Project ALMA participants passed social studies both semesters at John Bowne High School and science in the spring at John F. Kennedy High School. (See Table 7.) At least 75 percent of students passed their computer courses at John Bowne High School.

Project ALMA partially met each of its two content area courses as it did last year.

## FORMER PARTICIPANTS' ACADEMIC PROGRESS IN ENGLISH LANGUAGE CLASSROOMS

Thirty-six students were mainstreamed at the end of the 1992-93 school year. Project ALMA did not provide information on their success in English language courses.

## OVERALL EDUCATIONAL PROGRESS ACHIEVED THROUGH PROJECT

### Mainstreaming

The project did not propose any specific objectives for mainstreaming. During the year under review, 12 (2.8 percent) were fully mainstreamed.

TABLE 7

Passing Grades in Content Area Courses

| High School | Subject | Fall 1993 | | Spring 1994 | |
|---|---|---|---|---|---|
| | | Number of students for whom data were reported | Percent Passing | Number of students for whom data were reported | Percent Passing |
| John Bowne | Mathematics | 166 | 67.5 | 156 | 73.7 |
| | Science | 121 | 74.4 | 119 | 84.0 |
| | Social Studies | 173 | 86.7 | 168 | 92.9 |
| | Computer Science | 6 | 100.0 | -- | -- |
| John F. Kennedy | Mathematics | 155 | 77.4 | 143 | 65.7 |
| | Science | 119 | 81.5 | 128 | 85.9 |
| | Social Studies | 183 | 77.0 | 178 | 73.0 |
| | Computer Science | 11 | 54.5 | 17 | 70.6 |

Career Advisement

The project proposed the following objective for career advisement:

- All project students will meet on an individual basis with the Bilingual Career Computer Specialist for advisement at least two times during the school year for career orientation and planning.

All students for whom data was provided met with the Bilingual Career Computer specialist for advisement at least twice during the school year.

As it did last year, Project ALMA met its objective for career advisement.

Grade Retention

Project ALMA proposed the following objective for grade retention:

- As a result of participation in the program, students' grade retention or referral to/or placement in special education classes will be 10 percent less than mainstream students.

At the end of the year under review, 38 students (8.7 percent) were retained in grade. No students were recommended for placement in special education. The project did not provide OER with comparable mainstream data.

OER was unable to evaluate the objective for grade retention because of lack of data. Last year, the project met this objective.

Dropout Prevention

Project ALMA proposed the following objective for dropout prevention:

- As a result of participation in the program, the dropout or absenteeism rate of the students will be less than the mainstream students.

According to project records, no students dropped out during the year under review.

As it did last year, Project ALMA met its objective for dropout prevention.

Attendance

The project posed the following objective for attendance:

- As a result of participation in the program, attendance rate of students will be 10 percent greater than mainstream students.

Attendance rates at each of the participating students were higher than the schoolwide rates at the schools they attended. (See Table 8.) However, rates at the

participating schools were also high. The attendance rates of participating students were not 10 percent higher than schoolwide rates.

As it did last year, Project ALMA failed to meet its objective for attendance. Because the attendance rates at participating schools are so high, it is unrealistic to expect project students to have attendance rates 10 percent higher.

TABLE 8

Attendance Rates of Participating and Non-Participating Students

| High School | Attendance Rates | |
|---|---|---|
| | Participating Students | Schoolwide |
| John Bowne | 92.7 | 90.1 |
| John F. Kennedy | 90.8 | 88.1 |

Placement in Gifted and Talented Programs

Project ALMA proposed the following objective for placement in programs for the gifted and talented:

- As a result of participation in the program, placement in programs for gifted and talented and enrollment in post secondary education institutions will be 5 percent greater than mainstream students.

In the year under review, no students were placed in programs for the gifted and talented. No graduating seniors indicated they would be attending a post secondary educational institution.

Project ALMA failed to meet its objective for placement in gifted and talented programs. Last year, OER could not evaluate the objective for lack of sufficient data.

Referral to Special Education

The project posed the following objective for referral to and placement in special education programs:

- As a result of participation in the program, students' referral to or placement in special education classes rate will be 10 percent less than mainstream students.

No project students were referred to or placed i special education classes. The project did not provide comparable data for the two participating high schools.

OER was unable to evaluate the object for referral to special education for lack of data. Last year, the project met this objective.

Enrollment in Postsecondary Education Institutions

The project proposed the following objective for enrollment in postsecondary education institutions:

- As a result of participation in the program, enrollment in postsecondary education institutions will be five percent greater than similar non-program participants.

No participating students indicated that they would be attending a post secondary educational institution. The project did not provide comparable data for the two participating schools.

OER was unable to evaluate the objective for enrollment in postsecondary education institutions because of lack of data. Last year, the project met the objective.

CASE HISTORIES

Marie (a pseudonym) was 12 years old when her family immigrated from Peru three years ago. Marie had both academic and behavior problems. She failed all of her subjects and cut classes to go to the handball court. The deans complained often to the resource specialist about Marie's constant fighting. Many of Marie's teachers felt that she was very disrespectful and did not seem to care about school. The project's resource specialist and paraprofessional held mediation sessions between Marie and her teachers. The resource specialist began to meet with Marie on a regular basis and learned that Marie chose gang members as friends. Marie complained that there were very few students in the school from Peru and that she needed protection. Marie's parents became involved and began to come to school regularly. An agreement was struck which required Marie to report to the Project ALMA office daily to show her homework and notebooks. If she did not report, her parents were notified immediately. Marie was told that one of the project's main functions was to help students who needed extra support.

The project staff began introducing Marie to other project students and involving her in project trips. Her mother began attending all of the project workshops, including one on "How to Communicate Better with Your Teenager." In the following semester, Marie's attitude began to improve. During the first marking period, she passed all of her subjects. Absences and cutting were no longer a problem.

Carlos (a pseudonym) came to the United States in 1988. In 1990, he entered the Project ALMA program. He was receptive to the program but felt that his problems were so great that the project could not help him. He was doing very poorly, especially in mathematics, English, and Spanish. The project assigned a tutor to work with him daily. In one semester, his grades rose from failing to passing, and his knowledge of English went from non-existent to fluent. He passed the R.C.T. in mathematics. In fact, he did so well that in the coming year he will be assigned to mainstream classes. The project helped Carlos become confident, self-assured, and to think positively about himself.

STAFF DEVELOPMENT OUTCOMES

The project proposed no objectives for staff development. Teachers of participating students at both schools received sensitivity training, instruction in the use of computers, and resource materials. Teachers at John Bowne High School attended conferences on cooperative learning and multicultural education. Resource teachers at both sites attended several workshops on E.S.L. and N.L.A. The resource teacher at John Bowne High School met on a monthly basis with supervisory, teaching, and guidance staff for planning, training, and articulation sessions. Teachers and paraprofessionals enrolled in relevant university courses at their own expense.

## PARENTAL INVOLVEMENT OUTCOMES

Project ALMA proposed one parental involvement objective:

- As a result of the program, parents of project students will demonstrate ten percent more parental involvement than parents of mainstream students.

At John Bowne High School, project parents attended Saturday classes on English and citizenship. They also participated in workshops on parenting skills, careers, college information, health, conflict resolution in the family, mediation techniques, social services, and immigration. At John F. Kennedy High School, parents participated in trips, parental meetings, student activities, and school assemblies.

Participation by parents of project students was high. The project did not provide information on the involvement of mainstream parents.

OER was unable to evaluate the objective on parental involvement because of lack of data.

## IV. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

### ACHIEVEMENT OF OBJECTIVES

Project ALMA met its objectives for career advisement and dropout prevention. It partially met objective for N.L.A. and both of its objectives for content area subjects. The project failed to meet objectives for E.S.L., attendance, and placement in programs for the gifted and talented. OER was unable to evaluate objectives for grade retention, referral to special education, enrollment in post secondary education institutions, and parental involvement because of lack of data.

Participating students in Project ALMA showed academic progress. Of the 436 participating students, 398 either graduated or were promoted to the next grade. The students showed gains in English, Spanish and the content area subjects.

Project services not only benefited the students academically but also increased their awareness of the importance of education. The attendance rates of participating students were high and no students dropped out of school.

Teachers attended in-service workshops as well as relevant graduate courses.

Parents were involved in project-sponsored classes as well as in a variety of other parent involvement activities.

### MOST AND LEAST EFFECTIVE COMPONENTS

Effective components of Project ALMA included the use of computer labs for C.A.I. in the content areas, bi-weekly evening meetings for parents at John Bowne High School, and tutoring and counseling of project students. The project's new

program, for ninth and tenth graders who failed four or more classes in the previous school year, CASA, an interdisciplinary program combining the major curriculum areas and art, was an innovative component.

RECOMMENDATIONS TO ENHANCE PROJECT EFFECTIVENESS

- Provide evaluator with all data necessary to fully evaluate the project.
- Augment E.S.L. and N.L.A. instruction, possibly through the computer and additional staff and peer tutoring.
- Reassess the expected content area course passing rate to see if it is realistic.
- Reevaluate the attendance objective and revise if achievement is not statistically possible.

APPENDIX A

Instructional Materials

*E.S.L.*

| Title | Author | Publisher | Date of Publication |
|---|---|---|---|
| Real Stories, Book A | Katz, et al. | Globe | 1978 |
| Picture Stories | S. Heyer | Prentice Hall | 1989 |
| Side by Side | Molinsky & Bliss | Prentice Hall | 1983 |
| Line by Line | Molinsky & Bliss | Prentice Hall | 1983 |
| Everyday English II, III | Krulik & Zaffran | National Textbook | 1991 |
| Second Steps in Reading and Writing | * | Newberry | 1991 |
| Turning Points, 1-4 | Iantorno & Papa | Addison-Wesley | 1987 |
| Writing Power | Graham & Young | Globe | 1980 |
| Great American Stories I, II | C. Draper | Prentice Hall | 1985 |
| Pizza Tastes Great | William Pickett | Prentice Hall | 1988 |
| Silas Marner [adapted] | G. Eliot | Globe | 1942 |
| Jane Eyre [adapted] | C. Brontë | Globe | * |
| Everyday English Bl. 3 | Krulik & Fazzran | National Textbook | 1982 |
| True Stories in News | Sandra Heya | Longman | 1987 |
| Easy Reading Selections | R. Dixson | Regents | 1984 |
| O. Henry Gifts (The Stories) | R. Dixson | Oxford | 1988 |
| Interactions | Segal & Paulick | MsGraw Hill | 1990 |
| In Good Company | Drayton & Skidmore | Addison Wesley | 1985 |
| Literature & Language | Jane N. Beatty | McDougal Littel | 1992 |
| In Contact I, II | Scott Foresman | National | * |
| English With a Smile 2 | Krulik/Zuffran | National | * |
| In Charge 2 | Scott Foresman | National | * |
| Speaking By Doing -Supplementary Materials | * | * | * |
| Writing Competency Practice Supplementary | * | * | * |

APPENDIX A

Instructional Materials, cont'd.

*E.S.L.*

| | | | |
|---|---|---|---|
| Preparing for TOEFL | Broukal/Nolan /Woods | National | 1993 |
| Passage to Literacy | * | * | * |
| Real Life Grammar & Reader | Firsten/ArmstrongEdiger/Scheffer | Steck-Vaughn Co. | 1992-93 |
| Teen Stories | * | * | * |
| Lilies of the Field | Barrett | Warner Books, Inc. | 1962 |
| The Basics of Writing, Books I, II | Wuffson | Globe Book Company | 1986-87 |
| Grammar & Composition for Everyday English | M. Goltry | Globe Book Company | 1987 |
| Essays, Letters, Reports | S. & R. Panman | Active Learning Corporation | 1990 |
| Grammar in Action | B. Foley | Prentice Hall | 1990 |
| Life Skill | J. De Fiuippo | A. Wesley | 1991 |
| Our Town | T. Wilder | Harper & Row | * |

*Information not provided.

APPENDIX A

Instructional Materials, cont'd.

***N.L.A.***

| Title | Author | Publisher | Date of Publication |
|---|---|---|---|
| Graded Spanish Reader | J. Ulloa | D.C. Heath | 1991 |
| Aventuras literarias | Jarvis, et al. | D.C. Heath | 1987 |
| El Español y su estructura | Brunat & Starcevic | Holt, Rinehart | 1983 |
| Lenguaje | J. Chow | Holt, Rinehart | 1984 |
| El hidalgo de la Mancha | D. Quilter | Houghton Mifflin | 1973 |
| La familia de Pascual Duarte | C.J. Cela | Appleton-Century Crofts | 1961 |
| La perla negra | S. O'Dell | Lectorum | 1990 |
| Crónica de una muerte anunciada | G.G. Márquez | * | 1982 |
| La barca sin pescador | A. Pasona | Oxford | 1972 |
| La dama del alba | A. Pasona | Holt, Rinehart | 1981 |
| La mala hora | G.G. Márquez | Obeja Negra | 1985 |
| Una Vez Mas | Couch Hoddie | Longman | 1982 |
| Vivencias Hispanicas | Hoddie | Harcourt Brace | 1988 |
| Rana Viajera | Julio Camba | D.C. Heath | 1928 |
| Aventuras de Don Quijote | J. Greenberg | Houghton Mifflin | 1935 |
| Dos Novelas Picares-Cas | William Tardy | National Textbook | 1980 |
| An Omnibus of Modern Spanish Prose | L.A. Wilkins | Odyssey Press | 1936 |
| Literatura Moderna | J.R. Gonzalez | National Textbook | 1987 |
| Antologia Comunicativa 7 | G.A. Arevalo | Editorial Norma, S.A. | 1987 |
| Redacción | Ana Maria Maqueo | Editorial Limusa, S.A. | 1991 |
| El Cuento | Juan Javaloy | Holt Rinehart | 1984 |
| Ficciones | García Lorca | Alianza Emece | 1971 |
| Antologia Communicativa | Charris & Arbelaez | Editorial Norma, S.A. | 1988 |
| El aleph | J.L. Borges | * | 1945 |

*Information not provided.

APPENDIX A

Instructional Materials, cont'd.

***Mathematics***

| Title | Author | Publisher | Date of Publication |
|---|---|---|---|
| Achieving Competence in Math | Mandery & Schneider | Amsco | 1987 |
| Fundamentos de matemáticas | * | NYC Board of Education | 1989 |
| Consumer Mathematics | Mason, et al. | Houghton, Mifflin | 1988 |
| Using Computers | Elgaren & Pasamentier | Addison-Wesley | 1984 |
| Matemática progresiva I, II | | Attansio & Associates | * |
| Repaso matemático | E. Stein | Allyn & Bacon | 1971 |
| Integrated Mathematics | Dressler & Keenan | Amsco | 1980 |
| Invitación a las matemáticas | * | Scott, Foresman | 1986 |
| Matematicas | * | Silver Burdett | 1989 |
| Exitos en las matemáticas | Vogelli & Le Blanc | Silver Burdett | 1983 |

*Information not provided.

APPENDIX A

Instructional Materials, cont'd.

***Science***

| Title | Author | Publisher | Date of Publication |
|---|---|---|---|
| Concepts in Modern Biology | D. Kraus | Globe | 1984 |
| La materia y la energía | Heimler & Price | Charles E. Merrill | 1985 |
| Exploring Matter and Energy | D. Keifer | Globe | 1991 |
| Biología humana | Dihigo & Llanos | Artes Graficas Coimoff | 1988 |
| Biology and Human Progrss | Tanzer & Schwartz | Prentice Hall | 1986 |
| Exploring Matter and Energy | David R. Kiefer | Globe Book Company | 1991 |
| Exploring Matter & Energy | * | Prentice Hall | 1991 |
| Une Fois Pour Toutes Perspectives | Linda Gregg | Phillip's Academu | 1976 |
| Nicolas Troisieme Livre | Eli Blune | Amsco School Publication | 1963 |
| Suivez La Piste | EMile De Harvey | EMC Corporation | 1963 |
| Physical Science | Hurd & Silva | Prentice Hall | 1988 |

APPENDIX A

Instructional Materials, cont'd.

***Social Studies***

| Title | Author | Publisher | Date of Publication |
|---|---|---|---|
| Nueva historia de EE.UU. | Gines & Serran-Pagan | Minerva | 1986 |
| Comprende tu mundo | Killoran & Zimmer | Jarrett | 1991 |
| Historia del antiguo continente | Gonzalez & Augusto | Editorial Norma | 1977 |
| Japón--Tierra del origen del sol | Rosenfeld & Geller | Barron's | 1974 |
| China--el reino redio | Rosenfeld & Geller | Barron's | 1974 |
| El mundo y so gente | Arnsdorf | Silver Burdett | 1984 |
| Economics for Young Adults | B. Linder | Sadlier | 1977 |
| The United States: Its People and Leaders | Louis and Jack Abramowitz | Globe Book Company | 1988 |
| World Geography and You | Vivian Bernstein | Steck-Vaughn | 1991 |
| Historia de la Humanidad | Daniel Roselle | Ginn & Company | 1973 |
| Government in America | Richard Hardy | Houghton Mifflin | 1990 |
| El Medio Oriente Y Africa del Norte | E. Rosenfeld, H. Geller | Barron's Ed. Series | 1976 |
| Africa, Sur Del Sahara | E. Rosenfeld, H. Geller | Barron's Ed. Series | 1974 |
| Exploring World History | Holt and O'Connor | Globe Book Company | 1969 |
| In Search of America | Martin and W. Sandler | Ginn & Company | 1975 |
| World History and You | V. Bernstein | Sleck-Vaughn | 1991 |

APPENDIX A

Instructional Materials, cont'd.

***Business Career Exploration***

| Title | Author | Publisher | Grades |
|---|---|---|---|
| Succeeding in the World of Work | * | * | 10, 11, 12 |
| Getting Your Foot in the Door | * | N.Y.C. Board of Education | 10, 11, 12 |
| Writing For the World of Work | * | * | 10, 11, 12 |
| Careers: Choices and Challenges | * | N.Y.C. Board of Education | 10, 11, 12 |
| Janus Job Planner/ Career Planning | * | Janus | 10, 11, 12 |

APPENDIX B

Class Schedules

As a sample of the students' schedules of instruction, the project submitted a daily schedule for a representative student at each grade level in John F. Kennedy High School. The school day was divided into nine 40-minute periods. (Seniors had a shorter day of eight periods.)

| Period | Grade 9 | Grade 10 | Grade 11 | Grade 12 |
|---|---|---|---|---|
| 1 | — | — | Business/E.S.L. | Bil. Economics |
| 2 | Spanish 8 | Bilingual Fundamentals of Mathematics 2 | Bilingual U.S. History 2 | Business Keyboarding |
| 3 | Physical Education | E.S.L. 2 (Supplementary) | Physical Education | Transitional English Writing |
| 4 | E.S.L. 2 (Supplementary) | E.S.L. 2 (Supplementary) | Business/E.S.L. | E.S.L. 7-8 |
| 5 | E.S.L. 2 (Supplementary) | Bilingual Global Studies 4 | Bilingual Physical Science | LUNCH |
| 6 | LUNCH | LUNCH | LUNCH | Physical Education |
| 7 | E.S.L. 2 | E.S.L. 2 | E.S.L. 5 | A.P. Spanish |
| 8 | Bilingual Pre-Algebra | Spanish B | Spanish F | Business Computers 2 |
| 9 | Bilingual Global Studies 2 | Physical Education | Bilingual Pre-Algebra | |