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ABSTRACT

The Bilingual Education Academic/Career Outreach for Newcomers Program (Project BEACON) completed its fourth year. The goals of Project BEACON are to facilitate acquisition of English proficiency, develop native language literacy skills, and provide instruction in bilingual and English content area/vocational classes. The project served 753 students of limited-English-proficiency at 5 high schools in Queens (New York). Participants were native speakers of Spanish, Chinese, and Korean. The program met its objectives for staff development and parental involvement activities. Students made significant gains in English language skills, and the project met its objective for career education. The native language skill development objective could not be assessed because of a lack of pertinent data. The project developed several curriculum materials, although this was not a specific objective. Evaluation recommendations include: (1) securing the services of a full-time, Spanish-speaking resource specialist for two of the high schools, if funds permit; and (2) acquisition and use of Spanish materials for content area courses. (JL)

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# OREA Report

## EVALUATION SECTION REPORT

BILINGUAL EDUCATION AND ACADEMIC/CAREER  
OUTREACH FOR NEWCOMERS  
PROJECT BEACON  
Grant Number G00852031  
1988-89

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EVALUATION SECTION  
John E. Schoener, Chief Administrator  
April 1990

EVALUATION SECTION REPORT

BILINGUAL EDUCATION AND ACADEMIC/CAREER  
OUTREACH FOR NEWCOMERS  
PROJECT BEACON  
Grant Number G00852031  
1988-89

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BILINGUAL EDUCATIONAL AND ACADEMIC/CAREER OUTREACH  
FOR NEWCOMERS  
PROJECT BEACON  
1988-89

SUMMARY

- Project BEACON was fully implemented. During the 1988-89 school year, students received instruction in English as a Second Language, Native Language Arts, and content area, and career subjects. Project BEACON also implemented staff development, curriculum development, and parental involvement activities.
- The program fully met its objectives pertaining to English as a Second Language, career subjects, student dropout rate, staff development, and parental involvement; it partially met objectives for content area subjects. Students' performance in Native Language Arts was very good, but OREA could not assess this objective because of lack of appropriate data.

The Bilingual Education Academic/Career Outreach for Newcomers program (Project BEACON) completed its fourth year of funding by Title VII of the Elementary and Secondary Education Act (E.S.E.A.). The goals of Project BEACON were to facilitate students' acquisition of English proficiency, to help them develop native language reading and writing skills, and to provide instruction in bilingual and English content area/vocational classes.

The project served 753 students of limited English proficiency at four public and one private high school in Queens. Native speakers of Chinese, Korean, and Spanish received instruction in English as a Second Language (E.S.L.), Native Language Arts (N.L.A.), content area subjects, and career subjects. Participating students were in the ninth through twelfth grades. The program implemented staff and curriculum development activities and offered activities for parental involvement.

The private school site, Martin Luther High School, did not submit data, and OREA based all measurements on the student populations of the four public schools. Project students made significant gains in English language skills, thus achieving the proposed E.S.L. objective. The project also met the objective for career subjects. OREA could not measure the N.L.A. objective as proposed because the project did not provide pertinent data. The project partially met its objective for the content areas. It should be noted that student performance exhibited a substantial drop in the spring semester, particularly at John Bowne High School.

The project met its objectives for staff development through staff participation in outside conferences and in-service training and completion of university-level courses. Although there was no specified objective for curriculum development, Project BEACON did develop several curriculum materials. Project BEACON met its parental involvement objectives: more than 200 parents participated in E.S.L./citizenship classes, and over 300 parents attended various school functions and cultural enrichment events. Project BEACON also met its student dropout rate objective. The program could offer a Spanish-speaking resource specialist only 40 percent of the time, despite the large number of Spanish-speaking participants.

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

- If funds permit, secure the services of a full-time Spanish-speaking resource specialist for both John Bowne and Newtown High Schools.
- Acquire and use Spanish language materials for content area courses.

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## I. INTRODUCTION

This report presents the Office of Research, Evaluation, and Assessment's (OREA's) evaluation of the 1988-89 Bilingual Education Academic/Career Outreach for Newcomers (Project BEACON). In the first year of an extension to a three-year Title VII funding cycle, Project BEACON operated at four Queens public high schools and, to a limited degree, at one private high school. The project sought to combine bilingual academic with career education. The New York City Board of Education's High School Division operated the program.

### HISTORY OF THE PROGRAM

Project BEACON commenced operation in 1985-86 by providing bilingual services at one private and four public high schools in Queens. Two of those sites, Francis Lewis and Forest Hills High Schools, had not previously received Title VII support for their services to students of limited English proficiency (LEP students). A more complete history of the program, as well as a description of activities and outcomes of prior years, can be found in the final evaluation reports for those years.

### SETTING

All five schools served large numbers of recently arrived immigrants, many of whom had not received much formal education. A substantial proportion of Project BEACON students were from poverty level families, as indicated by their eligibility for the federally funded free lunch program.

During the 1988-89 school year, Newtown High School, whose main building is located in Elmhurst and its annex in Corona, enrolled students with 48 native languages from over 100 countries. Approximately 25 percent of Newton High School's 4,256 students were classified as LEP.

John Bowne High School, in Flushing, was designated a model school for the development of bilingual curricula in mathematics, science, and social studies. Known for its innovative international education program, John Bowne High School had a sister-school relationship with a high school in Japan. Five hundred and sixteen of its 2,721 students were designated LEP.

Francis Lewis High School, also located in Flushing, served 2,390 students, 35 percent of whom were LEP. It has experienced an influx of recently immigrated Asian students.

Forest Hills High School had a register of 2,444 students, 33 percent of whom were designated LEP. It has also experienced an influx of recent arrivals from Asia.

The one private school served by the project, Martin Luther High School, is located in Maspeth.

#### PARTICIPATING STUDENTS

The program served 71 more public school students than it had the previous year.

All students were recent arrivals to the United States, and none had previously been served by a Title VII program. More students were in the tenth grade than any other grade. (See Table 1.) Four hundred and five students (58 percent) had

TABLE 1

Number of Program Students by Age and Grade<sup>a</sup>

Age	Grade 9	Grade 10	Grade 11	Grade 12	TOTAL
13		1			1
14	38	3	1	1	43
15	39	48	6		93
16	34	118	23		175
17	15	86	64	11	176
18	3	41	74	30	148
19	1	21	33	15	70
20		3	9	10	22
21		1		3	4
<b>TOTAL</b>	130	322	210	70	732 <sup>b</sup>

Note. Numbers in bold area reflect expected age range for grade.

<sup>a</sup> As of June 1989.

<sup>b</sup> Data were missing or incomplete for 21 students.

Programwide  
Over-Age Students

Number	53	152	116	28	349
Percent	40.8	47.2	55.2	40.0	47.7

- The greatest numbers of program students were in the tenth grade.
- Forty-eight percent of students were over-age for their grade; the largest number were in the eleventh grade.

participated for one year or less, 193 (28 percent) had participated in the program for two years, and 101 (14 percent) had participated for three years.

Seventy-nine percent of the students were native speakers of Spanish, 12 percent were native speakers of Chinese, and eight percent were native speakers of Korean; the remaining one percent were speakers of a variety of other languages. At Newtown High School, Project BEACON served 250 Spanish-speaking students. At John Bowne High School, the project served 200 Spanish-speaking students. It served 70 Chinese- and Korean-speaking students at Francis Lewis High School and 50 Chinese- and Korean-speaking students at Forest Hills High School. Martin Luther High School, a private institution, served 30 LEP students; however, the site offered no data on these students.

Most of the Spanish-speaking students were born in the Dominican Republic or Colombia. The majority of the Asian students were from Korea and Taiwan. Project students' varying cultural, educational, and family backgrounds significantly affected their educational needs and academic performance. For example, students from Hong Kong, Taiwan, and Vietnam often needed basic-skills instruction in Roman lettering, while those from Korea did not.

#### STAFF

The project had seven Title VII staff members: a project director, a Korean resource specialist, a Chinese educational associate, a Korean educational assistant, two Spanish-speaking

family workers, and a bilingual secretary/intern. This represented a reduction from the previous year, when staff had included a Korean coordinator, a Chinese curriculum specialist, and Korean and Spanish educational assistants. It also meant that the large numbers of Spanish-speaking students in the program had no Spanish-speaking educational assistant or resource specialist to serve them. Martin Luther High School, a private institution, had no Title VII personnel.

The project director had a Ph.D. and 19 years of relevant teaching and administrative experience. She supervised Project BEACON's staff and was the liaison between the project and the schools' administrative staffs. The educational assistant and secretary had master's degrees; the remaining staff, with the exception of a family worker, had bachelor's degrees.

The educational assistant and family workers provided individualized assistance to students in content area classes, translated, and served as liaisons to families.

The assistant principals at each site supervised bilingual, E.S.L., and content area teachers.

#### DELIVERY OF SERVICES

Project BEACON students enrolled in E.S.L., Native Language Arts (N.L.A.), and in content area classes taught bilingually and using E.S.L. techniques. When necessary, an educational assistant served as translator.

Project BEACON developed and adapted curriculum materials and provided staff development and parental involvement

activities. The project offered students such support services as counseling, college advisement, career orientation, and placement in training programs. Project staff offered tutoring and translation services.

Martin Luther High School's participating students received indirect services through the dissemination of bilingual curricula and information, faculty participation in project-sponsored in-service training sessions, a project-supplied bilingual education consultant, and workshops on bilingual education offered to parents.

#### REPORT FORMAT

This report is organized as follows: Chapter II describes the evaluation methodology; Chapter III relates the project's implementation and evaluates the attainment of relevant objectives; Chapter IV examines the project's quantitative data; and Chapter V offers conclusions and recommendations based upon the results of the evaluation.

## II. EVALUATION METHODOLOGY

### EVALUATION QUESTIONS

The evaluation assessed two major areas: program implementation and outcome. Evaluation questions included the following:

#### Process/Implementation

- . Did the program select students according to specific criteria?
- . Did the project implement the instructional activities for developing English language proficiency as proposed?
- . Did the program provide career instruction as planned?
- . Did the program offer staff development as proposed?
- . Were parents involved in project-sponsored activities?

#### Outcome

- . What was the average Normal Curve Equivalent (N.C.E.) gain on the Language Assessment Battery (LAB)?
- . What percentage of program students passed their courses in mathematics, science, and social studies?
- . Was the program's dropout rate lower than that of mainstream students?

### EVALUATION PROCEDURES

#### Sample

An OREA field consultant interviewed the project director and two school principals and observed four classes at two of the participating schools. OREA provided a student data form for each student; the project returned 753.

## Instruments

OREA developed interview and observation schedules and a project director questionnaire. Project personnel entered student demographic, attendance, and achievement data on OREA-developed student data forms.

## Data Collection

Interviews and class observations took place during May and June. The project director completed questionnaires and submitted them in February and June. Project personnel submitted completed student data forms in February and June.

## Data Analysis

OREA used the Language Assessment Battery (LAB)\* to assess improvement in English proficiency. Project BEACON students were tested at grade level each spring. Students' raw scores were converted to Normal Curve Equivalent (N.C.E.) scores, which have multiple advantages over other scoring methods. They are standard, normalized, and form an equal interval scale.

("Standard" indicates that the unit of measurement is a fraction of the standard deviation of the original distribution of raw scores; "normalized" refers to the fact that the scale is adjusted for the norm group so that its distribution has the shape of a normal distribution; and "equal interval scales" allow

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\*The Language Assessment Battery (LAB) was developed by the Board of Education of the City of New York to measure the English-language proficiency of non-native speakers of English to determine if they can participate effectively in classes taught in English.



for legitimate aggregation or averaging of scores.) Project students' N.C.E.s indicated their standing in relation to the national average of 50.

To assess the significance of students' achievement in English, OREA computed a correlated  $t$ -test on LAB N.C.E. scores. The  $t$ -test determined whether the difference between the pre- and posttest scores was significantly greater than would be expected by chance variation alone.

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

### Limitations

Since all LEP students are entitled to receive bilingual and E.S.L. services, OREA was unable to select an equivalent control group. However, the use of two sets of data, as outlined above, served in lieu of a control group.

### III. EVALUATION FINDINGS: IMPLEMENTATION

#### STUDENT PLACEMENT AND PROGRAMMING

Eligibility for the program was based on scores at or below the twenty-first percentile on the LAB; teacher-made tests of native language proficiency; placement interviews; evaluation of school records; information provided by feeder schools; and parental permission or request.

#### INSTRUCTIONAL ACTIVITIES

##### English as a Second Language

The project integrated academic instruction with career awareness in an E.S.L. context for the mastery of English language skills. The project also addressed the importance of students' native history and culture through the use of folk literature. All participating students were enrolled in ten periods of E.S.L. instruction per week on a beginning, intermediate, advanced, or transitional level.

An OREA field consultant observed an E.S.L. class at John Bowne High School. Students worked in pairs on question-and-answer exercises. The teacher appeared to have a good working relationship with the educational assistant who was present, and students seemed to enjoy what they were doing.

##### Native Language Arts

Project BEACON sought to increase students' proficiency in their native language and appreciation of their native cultures by making curriculum materials available for N.L.A. instruction.

Newtown High School offered Spanish N.L.A. classes at five levels, and John Bowne High School offered them at four. Francis Lewis and Forest Hills High Schools offered five levels of Chinese N.L.A.

#### Content Area Courses

The program offered content area courses taught bilingually or with an E.S.L. approach to help students into the mainstream.

At Newtown and John Bowne High Schools, students enrolled in Spanish bilingual classes in mathematics, science, and social studies. Project BEACON students at all sites could also enroll in E.S.L. social studies, science, mathematics, speech, and typing, with the educational assistant providing translations when necessary.

An OREA consultant observed two classes at Newtown High School. The first was a ninth grade elementary-level mathematics class of 26 students. The lesson was well-planned. The teacher lectured primarily in Spanish but wrote in English, translating occasionally. Students communicated in Spanish.

The OREA consultant also observed a bilingual Spanish global history class of 16 students. The teacher wrote the unit lesson, "Introduction to Japan," on the board in English, with a few sentences in Spanish. The teacher lectured in Spanish while pointing to English translations on the board. This complied with the requirement established by the social studies chair/assistant principal that while lectures could be in

Spanish, all writing on the board had to be in English. No Spanish-language social studies books were evident.

### Career Subjects

Participating schools offered such subjects as typing, word processing, and plant science taught with an E.S.L. approach.

An OREA consultant observed a horticulture class at John Bowne High School in which science was joined with mathematics as students calculated costs of materials and labor for a project. The teacher spoke in direct, simple English, and the educational assistant provided occasional Spanish translations. The students appeared interested in the hands-on part of the lesson.

### NONINSTRUCTIONAL ACTIVITIES

The program proposed noninstructional objectives for staff development and parental involvement.

### Staff Development

The program objectives for staff development were that by the end of the school year:

- Eighty percent of the staff will have participated in staff development activities, in-service training, or workshops offered by the program.
- Fifty percent of the staff will have completed a minimum of six credits in related college/university courses or have attained a master's degree in a related discipline.
- Seventy percent of the staff will have attended at least one local, regional, or national conference, meeting, or workshop dealing with bilingual, career, or E.S.L. education.

Staff attended five staff development workshops on the topics of child abuse, cultural conflict and acculturation, drug-abuse, crime prevention, and strategies for teaching bilingual students. Staff attended monthly conferences and meetings held by their departments. Project BEACON met its first staff development objective.

The program director reported that all staff had enrolled in relevant courses at local universities and completed at least six credits of college courses. Project BEACON met its second staff development objective.

Project staff attended outside workshops, such as one at the New York Multifunctional Resource Center (MRC). Two program staff members attended a conference on organizational culture at the New York MRC. Thus, project BEACON met its third objective in staff development.

#### Curriculum Development

No objective was proposed. However, the program developed student handbooks for Newtown High School in Chinese, Korean, and Vietnamese. It also converted computer software into Chinese for biology and global studies. The project developed other, original materials.

#### Parental Involvement

The program objectives for parental involvement were:

- At least 100 parents of LEP students will have participated in the parents' training classes offered by the program.

- At least 300 parents will have participated with their children in program and school meetings and functions and in cultural enrichment events.

More than 200 parents attended E.S.L./citizenship classes for parents at Newtown High School. Project BEACON met its first parental involvement objective.

The project also conducted two parent-teacher conferences; a May Fair and international extravaganza; "Dollars for Scholars," a college financial aid seminar presented in the parents' native languages; a career advancement orientation with outside speakers from various fields; and a Parents' Day/Night. The project director met with the Parents' Advisory Council to plan program activities and to discuss bilingual education and the program's support services. Over 300 parents participated in various project affairs and meetings. Project BEACON met its second parental involvement objective.

#### IV. EVALUATION FINDINGS: OUTCOME

##### INSTRUCTIONAL ACTIVITIES

The project proposed instructional objectives in E.S.L., N.L.A., content area subjects, and career subjects.

##### English as a Second Language

The evaluation objective for E.S.L. was:

- At the end of each school year, students will significantly improve their achievement in English as measured by the Language Assessment Battery (LAB).

The project supplied complete LAB pretest and posttest N.C.E. scores for 437 students. Students in all grades and schools demonstrated a statistically significant ( $p < .05$ ) gain mean. (See Table 2.) Thus, Project BEACON achieved its proposed E.S.L. objective.

##### Native Language Arts

The evaluation objective for N.L.A. was:

- As a result of participating in the program, and by the end of the 1988-89 school term, Hispanic, Chinese, and Korean students will show a significant increase in native language achievement.

Although Project Beacon reported no pretest/posttest N.L.A. data, passing rates in N.L.A. classes were available for students at three participating schools. Ninety-one percent of these students achieved passing grades in the fall and 81 percent passed their N.L.A. courses in the spring. (See Table 3.) This seemed to indicate that students had significantly increased

TABLE 2

Pretest/Posttest N.C.E. Differences on the  
Language Assessment Battery, by Grade and School<sup>a</sup>

Grade	Number of students	Pretest		Posttest		Difference		t Value
		Mean	S.D.	Mean	S.D.	Mean	S.D.	
9	67	10.3	13.4	15.3	16.2	5.0	12.0	3.42*
10	218	11.1	10.1	23.8	16.2	12.7	14.5	12.96*
11	94	16.4	11.2	24.8	15.4	8.4	15.5	5.24*
12	31	17.5	10.8	22.3	11.7	4.8	10.2	2.65*
<u>High School</u>								
John Bowne	162	13.2	12.1	19.1	16.0	5.9	11.8	6.37*
Francis Lewis	33	15.4	12.7	21.8	10.0	6.4	10.2	3.61*
Forest Hills	39	14.7	11.3	45.4	13.3	30.7	14.3	13.37*
Newtown	176	11.2	10.0	20.7	13.3	9.5	13.4	9.46*
TOTAL	410	12.7	11.3	22.5	16.0	9.9	14.4	13.88*

\*  $p < .05$

<sup>a</sup>Includes only students who were in the program at least five months.

- Students in all grades made statistically significant gains on the LAB.
- Students in all four schools made statistically significant gains on the LAB.



TABLE 3

## Student Achievement in Native Language Arts Subjects

School <sup>a</sup>	Fall		Spring		TOTAL	
	Number of Students	Percent Passing	Number of Students	Percent Passing	Number of Students	Percent Passing
John Bowne	119	92.4	123	82.1	242	87.2
Francis Lewis	17	100.0	6	83.3	23	95.7
Newtown	204	88.7	209	80.9	413	84.7
TOTAL	340	90.6	338	81.4	678	86.0

17 <sup>a</sup> No data were submitted for Forest Hills High School.

- Overall, 86 percent of participating students passed their N.L.A. courses.

their native language achievement. However, OREA could not evaluate the N.L.A. objective as stated.

### Content Area Courses

The evaluation objective for content area subjects was:

- At the end of each school term, 70 percent of the target students will achieve a passing grade of at least 65 in mathematics, science, and social studies.

In the fall, the program met the passing rate in science and social studies but not in mathematics. (See Table 4.) In the spring, there was a drop in all subject areas due to sharp declines in the passing rates at John Bowne High School. Based on averages for both semesters, however, Project BEACON met its content area objective in science and social studies.

### Career Subjects

The evaluation objective in career subjects was:

- At the end of each school term, 70 percent of the students participating in career courses or activities will improve their knowledge of careers by either passing teacher-made tests in instructional units relative to the above areas or achieving a satisfactory rating in the mastery of job-related activities, such as interview skills, writing a resume, designing an ornamental flower arrangement, etc.

For those in the program at least five months, 66 students, Project BEACON reported passing grades for 82 percent in the fall. During the spring, 59 students took career subjects, and 86 percent passed. Thus, the project met its career subjects objective.

TABLE 4

Student Achievement in Content Area Subjects<sup>a</sup>

School	Area	Fall		Spring		TOTAL	
		Number of Students	Percent Passing	Number of Students	Percent Passing	Number of Students	Percent Passing
John Bowne	Mathematics	120	64.2	111	49.5	231	57.1
	Science	104	87.5	101	59.4	205	73.7
	Social Studies	114	94.7	120	78.3	234	86.3
Francis Lewis	Mathematics	2	100.0	--	--	2	100.0
	Science	--	--	--	--	--	--
	Social Studies	1	0.0	--	--	1	0.0
Forest Hills	Mathematics	--	--	51	94.1	51	94.1
	Science	27	100.0	--	--	27	100.0
	Social Studies	42	120.0	--	--	42	100.0
Newtown	Mathematics	231	66.7	127	66.9	358	66.8
	Science	171	76.0	145	79.3	316	77.5
	Social Studies	231	84.4	175	71.4	406	78.8
TOTAL	Mathematics	353	66.0	289	65.1	642	65.6
	Science	302	82.1	246	71.1	548	77.2
	Social Studies	388	88.9	295	74.2	683	82.6

<sup>a</sup> Includes only students who were in the program at least five months.

- In the fall and overall, students achieved the objective in science and social studies.
- In the spring, students achieved the objective only in social studies.

## NON-INSTRUCTIONAL ACTIVITIES

The program offered an objective for only one non-instructional activity, dropout rate.

### Dropout Rate

The evaluation objective for dropout rate was:

- As a result of participation in the program, by the end of the 1988-89 school year the dropout rate for program students will be equal to or less than that of mainstream students.

As schoolwide dropout data for 1988-89 were unavailable for inclusion in this report, dropout data for 1987-88 were used on the assumption that schoolwide rates probably would remain fairly consistent from year to year. The program dropout rates at the four public high schools were much lower than were the respective schoolwide dropout rates. (See Table 5.) Project BEACON appears to have met its student dropout objective.

TABLE 5

## Program and Schoolwide Dropout Rates

School	Number of Program Students	Program Dropout Rate	Schoolwide Dropout Rate <sup>a</sup>
Newtown	310	.02	6.0
John Bowne	288	.01	3.6
Francis Lewis	76	0	5.9
Forest Hills	79	0	4.4

<sup>a</sup>The Annual Dropout Rate Report, 1987-1988.

- In every school, the program dropout rate was appreciably lower than was the schoolwide dropout rate.

## V. CONCLUSIONS AND RECOMMENDATIONS

Project BEACON, in its fourth year of funding, integrated career awareness with academic subject instruction and E.S.L. skill development.

Students' performance declined from the fall to spring semester, primarily due to substantial declines in passing rates in all subject areas at John Bowne High School. However, the project met its E.S.L. objective, as participating students at all four public school sites achieved statistically significant gains in their LAB N.C.E. scores. Although the project did not submit the data required to evaluate the N.L.A. objective as proposed, a high proportion of students achieved passing grades in their N.L.A. courses, indicating that Project BEACON would probably have met the objective. Project BEACON met its content area objectives in science and social studies but not mathematics in the fall semester. The project achieved its objective in career subjects during both semesters.

The project met its non-instructional objectives for student dropout rate, parental involvement, and staff development.

BEACON had a generally successful year in 1988-89, though it did have a number of problems. Chiefly, it did not seem to adequately serve Hispanic students. Despite the high percentage of Spanish-speaking students among the target population, the project could only provide a Spanish-speaking resource specialist 40 percent of the time. OREA's consultant also observed an apparent lack of Spanish language content area materials.

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

- If funds permit, secure the services of a full-time Spanish-speaking resource specialist for both John Bowne and Newtown High Schools.
- Acquire and use Spanish language materials for content area courses.

END

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