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ABSTRACT

This program, funded under Title I of the Elementary and Secondary Education Act was designed to provide continuity of instruction in reading and mathematics for eligible pregnant school age girls in New York City. It was also designed to provide bilingual English-Spanish instruction for eligible students. The target population for the program was pregnant girls who were in attendance during the regular school year at one of the six facilities for pregnant girls in New York City. Approximately 1900 pregnant secondary school age students participated during the school year. The corrective reading program was designed to foster independence in the use of word-attack and comprehension skills. Through testing, weaknesses were diagnosed and treatment recommended during the pupil teacher and teacher guidance counselor conferences. Students were selected for participation in the corrective reading and corrective mathematics programs on the basis of their being at least two years retarded in either subject, according to national norms, in attained grade equivalent scores. Each participant was to attend the program five days a week, five hours a day, from nine to three during the 1974-75 academic school year. Based on an analysis of test results and site visits it was determined that the program provided a vital service to pregnant school-age girls who were two or more years retarded in reading and/or math. (Author/JM)

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ED137463

EVALUATION REPORT

Function No. 09-51683

CORRECTIVE READING, CORRECTIVE MATHEMATICS AND BILINGUAL INSTRUCTION OF PREGNANT SCHOOL AGE GIRLS

SCHOOL YEAR 1974-1975

DAN BERGER

An evaluation of a New York City school district educational project funded under Title I of the elementary and Secondary Education Act of 1965 (PL 89-10) performed for the Board of Education of the City of New York for the 1974-1975 school year.

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CHAPTER I: THE PROGRAM

This program was designed to provide continuity of instruction in reading and mathematics for eligible pregnant school age girls and, for a portion of that population, bilingual English-Spanish instruction for the same purpose.

The school population was composed of pregnant girls who were in attendance during the regular school year at one of the six facilities for pregnant girls in New York City. Approximately 1,900 pregnant secondary school age students participated during the school year.

The program was under the supervision of the Office of Special Education.

Student Activities in the area of corrective reading were devoted to developing skills in reading. The entire program was designed to foster independence in the use of word-attack and comprehension skills. Through diagnostic testing and analysis: weaknesses were diagnosed, and treatment recommended during the pupil-teacher and teacher-guidance counselor conferences.

Students were selected for participation in the corrective reading and corrective mathematics programs on the basis of their being at least two years retarded, according to national norms, in attained grade equivalent scores on standardized tests of reading and mathematics. Students who received instruction within the Bilingual Component in one of the 6 facilities were those pregnant students on register to whom English is a second language and who

have scored two or more years below grade level in reading and/or mathematics on tests given in English, and below achievement levels comparable to 2 year retardation on the tests in Spanish.

Each participant was to attend the facility 5 days a week, 5 hours a day, from 9 to 3 during the academic school year, September 1, 1974 through June 30, 1975.

CHAPTER II: EVALUATIVE PROCEDURES

Evaluation Objective #1: To determine whether, as a result of participation in the Corrective Reading Program, the reading grade of the students will show a statistically significant difference between the real post-test score and the anticipated post-test score.

Evaluation Objective #2: To determine whether, as a result of participation in the Corrective Mathematics Program, the mathematics grade of the students will show a statistically significant difference between the real post-test score and the anticipated post-test score.

Evaluation Objective #3: To determine whether, as a result of participation in the program of Bilingual Instruction in reading, the reading grade of the non-English speaking pregnant students in both English and Spanish will show a statistically significant difference between the pre-test scores and the post-test scores.

Evaluation Objective #4: To determine whether as a result of

participation in the program of Bilingual Instruction in mathematics, the mathematics grade of the non-English speaking pregnant students will show a statistically significant difference between the pre-test scores and the post-test scores.

Evaluation Objective #5: To determine the extent to which the program, as actually carried out, coincided with the program as described in the Project Proposal.

The Metropolitan Achievement Tests (Reading) were administered for Evaluation Objective #1. Objective #2 was assessed by use of the California Achievement Test. The Prueba de Lectura was used for Evaluation Objective #3, and the Mathematics Component of the Cooperative Inter-American Tests was used for Evaluation Objective #4.

Most girls who enter one of the Schools for Pregnant Girls do not stay for a year. They tend to stay in their school of origin until the third or fourth month of their pregnancy and often return shortly after they give birth. And, of course, girls become pregnant at various times of the year. As a result the program admits and discharges girls throughout the school year. Consequently it was not possible to test all the girls "shortly after the beginning of the program, ...and shortly before the termination of the program." as specified in the evaluation design, because most of the girls who participated in the program were not enrolled at these times. To cope with this limitation on implementing the evaluation, all girls were pretested whenever they entered the program up to March 1975. In addition post tests

were given as early as January 1975 to girls who were in their eighth or ninth month of pregnancy. The historical regression analyses were accordingly based on the difference between the dates of the pre and post tests, for each student, rather than the duration of the program.

Evaluation Objective #5 was evaluated by two site visits to each of the schools.

CHAPTER III: FINDINGS

1. Evaluation Objective #1: To determine whether, as a result of participation in the Corrective Reading Program, the reading grade of the students will show a statistically significant difference between the real post-test score and the anticipated post-test score.

As can be seen from an inspection of the MIR forms attached to this report this evaluation objective was attained. Students who were in grades seven through nine had a mean pre-test reading grade equivalent (GE) of 5.15, a predicted post-test GE of 5.47 and an actual post-test GE of 5.75. The actual post test GE was significantly greater than the predicted, at the .01 level. The equivalent scores for students in grades ten through twelve was: pre-test = 6.20, predicted post-test = 6.46, actual post-test = 6.88. The actual post-test mean was significantly greater than the predicted post-test mean at the .01 level. Seventy-one girls in grades seven through nine and 181 in grades ten through twelve, could not be included in the analyses because their post-test scores

were not reported.

2. Evaluation Objective #2: To determine whether, as a result of participation in the Corrective Mathematics Program the mathematics grade of the students will show a statistically significant difference between the real post-test score and the anticipated post-test score.

An inspection of the MIR form attached to this report indicates that this objective was attained. Girls in grades seven through nine had a mean math pre-test GE of 5.53, a mean predicted post-test GE of 5.83 and an actual post-test GE of 6.88. The actual post-test GE was significantly greater than the predicted at the .01 level. For girls in grades ten through twelve the equivalent data was: pre-test = 6.32, predicted post-test = 6.58 and actual post-test = 6.87. The actual post-test mean was significantly greater than the predicted at the .01 level. One hundred and seventeen girls in grades seven through nine and 300 in ten through twelve could not be included in the analyses because they did not take the post test.

3. Evaluation Objective #3: To determine whether, as a result of participation in the program of Bilingual Instruction in reading, the reading grade of the non-English speaking pregnant students in both English and Spanish will show a statistically significant difference between the pre-test scores and the post-test scores.

The MIR forms appended to this report reveal that this objective was attained. The girls in grades seven through nine

had a mean pre-test GE of 1.46, a predicted mean post-test GE of 1.52 and an actual mean post-test GE of 1.87. The actual mean post-test GE was significantly greater than the predicted at the .01 level. The equivalent data for students in grades ten through twelve was: pre-test = 1.75, predicted post-test = 1.80, actual post-test = 2.21. The actual post-test GE was significantly greater than the predicted at the .01 level.

4. Evaluation Objective #4: To determine whether as a result of participation in the program of Bilingual Instruction in mathematics, the mathematics grade of the non-English speaking pregnant students will show a statistically significant difference between the pre-test scores and the post-test scores.

As was the case with the previous evaluation objectives, this one was also attained. The results may be found in the attached MIR forms. Students in grades seven through nine had a mean pre-test GE of 2.57, a mean predicted post-test GE of 2.70 and an actual post-test GE of 3.12. The actual post-test GE was significantly greater than the predicted at the .01 level. The equivalent data for girls in grades ten through twelve was: pre-test = 2.28, predicted post-test = 2.37, actual post-test = 2.90. The actual post-test mean was significantly greater than the predicted at the .01 level.

5. Evaluation Objective #5: To determine the extent to which the program, as actually carried out, coincided with the program as described in the Project Proposal.

Eleven site visits were made to the program sites. During these visits, principals, teachers, social workers and guidance counselors were interviewed and approximately 40 classes were observed. Based on the visits, interviews and observations it was concluded by the evaluator that the program as carried out, largely coincided with the program as described in the project proposal.

During the site visits it was observed that reading instruction was mostly individually oriented. On entering the reading program students were given diagnostic tests and prescriptions made of their reading problems. In most of the reading classes observed, students were working on individual assignments in workbooks, skill kits, teacher made materials or at tachistascopes. The material for the reading program appeared to be quite adequate and very abundant. The math class instruction tended to be mostly group oriented, following the traditional teaching approach, rather than having an individual instruction approach. Although some students had work folders with individual assignments, most observed classes had a group lesson in progress.

The social workers and guidance counselors were a significant part of the program. In combination they facilitated the academic and social adjustment of the students, such that they could attend, function and, presumably learn in the classroom. In the opinion of several social workers, girls who became pregnant during the high school years may have done so as a sub-conscious act against society, their school and parents. Once pregnant they are presented with a host of new problems to cope with, in preparing for the physical and psychological problems of having a baby.

All these factors combine to mitigate against an interest in, and adjustment to schoolwork. The social workers helped the girls work these problems through and therefore, by eliminating these blocks to learning, could facilitate the learning process. The guidance counselors tended to focus more on the day to day academic functioning of the students. They worked on program scheduling, study and work schedules. They also acted as liasons with the students' school of origin. The duties of the social worker and guidance counselor tended to overlap, but in all schools they appeared to work cooperatively and provide vital services to the girls' personal and academic development.

6. The materials and supplies at all schools were generally quite adequate and sufficient according to the staff personnel who were interviewed. However, several schools reported a need for more equipment such as tachistascopes for reading instruction, cassette players, screens and calculators. Teachers at two schools suggested transferring funds from the material budget which was ample to the equipment budget which was insufficient for the needs of most schools.

7. The quality of facilities varied from school to school but in general they were adequate, with the exception of P-941 in Queens. P-941 is approximately 10 feet from an elevated subway line. Several times each period the remedial classrooms are wracked with the rumbling of a train passing by. Instruction and learning becomes severely hampered during these moments. While closing the windows provides some relief in the cooler months, during April,

May and June the rooms became very hot and teachers were presented with the alternative of stifling heat or noise and pollution. Installations of heavy curtains and extension of an existing air circulation system would greatly alleviate this problem.

8. In the opinion of staff members involved in bilingual instruction, the tests used to evaluate this aspect of the program were inadequate. The tests were developed about 20 years ago and were intended for Mexican-American students. A more relevant test developed for Puerto Rican students seems warranted.

9. The bilingual teacher had to teach in several subject areas and as a result her efforts were "spread thin". There is a clear need for at least one more bilingual teacher.

10. Absence is a significant problem in the program. Many girls are absent from school because of illness, scheduled doctor's visits for check-ups and caring for their baby after it is born.

Many staff members felt that the program could provide services to significantly reduce the absentee rate. Having a nurse and doctor regularly available to handle day to day illnesses and complaints, as well as to conduct regular check-ups would permit girls in need of medical attention to take only a part of the day off, rather than the entire day. Indeed, for many girls it would provide an added incentive to attend school and obtain medical care rather than remain home when they are not feeling well.

Another service that could be provided is day-care facilities. Many girls stay home with their babies after giving birth. While social workers have had success in arranging coverage for the

babies, many girls quite naturally wished to be with their babies. Providing day-care facilities and attendants would provide the opportunity for the girls who have given birth to be close to their babies and attend school. The interruption of attendance, to be with their babies, is for many girls a break with the routine of going to school that continues to the point that motivation and interest is lowered; many girls do not in fact ever return to school. Providing day-care facilities would, in the opinion of the evaluator and staff members, give many girls the incentive and opportunity to continue their education.

11. Recommendations from the last prior study were:

a. Earlier approval of the program so as to facilitate planning and selection of personnel.

b. Reduction of class size, improved selection of teachers and use of teaching machines in reading classes.

c. Provision of day-care services.

The suggested improvement in reading instruction appear to have been implemented. Earlier approval of the program is beyond the control of the program staff. Funding was not available for day-care services.

CHAPTER IV: SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Based on an analysis of test results and site visits it was determined that the program provided a vital service to pregnant school-age girls who were two or more years retarded in reading and/or math. It is strongly recommended that the program

be continued.

The following are recommendations for next year's program:

1. The physical plant at P-941 needs to be improved so as to significantly reduce noise and pollution from a nearby elevated train.

2. The equipment budget should be expanded so as to include funds for additional tachistascopes, cassette players, screens and calculators.

3. A bilingual test should be used that is more up to date than the Cooperative Inter-American tests and more relevant to Puerto Rican and Latin American students.

4. One more bilingual teacher should be added to the program to meet the needs of bilingual students.

5. Medical care facilities should be expanded to reduce the absentee rate.

6. Day-care facilities should be provided at all schools so as to increase students' motivation to attend school after giving birth.

CORRECTIVE READING, CORRECTIVE MATHEMATICS AND BILINGUAL INSTRUCTION OF PREGNANT SCHOOL AGE GIRLS

Use Table 30A. for Historical Regression Design (6-Step Formula) for Reading (English); Math (English); Reading (Non-English); Math (Non-English).

30A. Standardized Test Results.

In the Table below, enter the requested information about the tests used to evaluate the effectiveness of major project components/activities in achieving desired objectives. This form requires means obtained from scores in the form of grade equivalent units as processed by the 6 step formula (see District Evaluator's Handbook of Selected Evaluation Procedures, p. 45-49). Before completing this table, read all footnotes. Attach additional sheets if necessary.

Component Code	Activity Code	Test Used 1/	Form Pre	Form Post	Level Pre	Level Post	Total N 2/	Group I.D. 3/	Number Tested 4/	Pretest Date	Pretest Mean	Predicted Posttest Mean	Actual Posttest Date	Actual Posttest Mean	Statistical Data: Obtained Value of t	Statistical Data: Level 5/ of significance
60815	720	MAT-71 Read	G	H	Int.	Int.	248	15	177	a	5.15	5.47	a	5.75	3.62	p≤01
60816	720	MAT-71 Read	G	H	Int.	Int.	624	16	443	a	6.20	6.46	a	6.88	6.04	p≤01
60915	720	CAT-70 Math	A	B	2,3	2,3	285	15	168	a	5.53	5.83	a	6.08	4.76	p≤01
60916	720	CAT-70 Math	A	B	2,3	2,3	665	16	365	a	6.32	6.58	a	6.87	7.33	p≤01

1/ Identify the test used and year of publication (MAT-58, CAT-70, etc.).
2/ Total number of participants in the activity.
3/ Identify the participants by specific grade level (e.g., grade 3, grade 5). Where several grades are combined, enter the last two digits of the component code.
4/ Total number of participants included in the pre and posttest calculations.
5/ Specify level of statistical significance obtained (e.g., p ≤ .05; p ≤ .01).

a. Students were tested as they entered and left the program. Average number of months of remediation in program was 4 months per student.

CORRECTIVE READING, CORRECTIVE MATHEMATICS AND BILINGUAL INSTRUCTION OF PREGNANT SCHOOL AGE GIRLS

Use Table 30A. for Historical Regression Design (6-Step Formula) for Reading (English); Math (English); Reading (Non-English); Math (Non-English).

30A. Standardized Test Results.

In the Table below, enter the requested information about the tests used to evaluate the effectiveness of major project components/activities in achieving desired objectives. This form requires means obtained from scores in the form of grade equivalent units as processed by the 6 step formula (see District Evaluator's Handbook of Selected Evaluation Procedures, p. 45-49). Before completing this table, read all footnotes. Attach additional sheets if necessary.

Component Code	Activity Code	Test Used 1/	Form		Level		Total N 2/	Group I.D. 3/	Number Tested 4/	Pretest		Predicted Posttest Mean	Actual Posttest		Statistical Data	
			Pre	Post	Pre	Post				Date	Mean		Date	Mean	Obtained Value of t	Level 5/ of significance
66715	7200	a	A	A	HS	HS	30	15	30	c	1.46	1.52	c	1.87	3.62	p≤.01
66716	7200	b	A	A	HS	HS	43	16	43	c	1.75	1.80	c	2.21	5.83	p≤.01
66815	7200	a	A	A	HS	HS	29	15	29	c	2.57	2.70	c	3.12	8.92	p≤.01
66816	7200	b	A	A	HS	HS	45	16	45	c	2.28	2.37	c	2.90	9.26	p≤.01

1/ Identify the test used and year of publication (MAT-58, CAT-70, etc.).
2/ Total number of participants in the activity.
3/ Identify the participants by specific grade level (e.g., grade 3, grade 5). Where several grades are combined, enter the last two digits of the component code.
4/ Total number of participants included in the pre and posttest calculations.
5/ Specify level of statistical significance obtained (e.g., $p \leq .05$; $p \leq .01$).

a. Prueba de Lectura

b. Cooperative Inter-American Tests: Mathematics Component

Students were tested as they entered and left the program. Average number months of remediation was 3 months per student

OFFICE OF EDUCATIONAL EVALUATION - DATA LOSS FORM
(attach to MIR, item #30) Function # 09-51683

In this table enter all data loss information. Between MIR, item #30 and this form, all participants in each activity must be accounted for. The component and activity codes used in completion of item #30 should be used here so that the two tables match. See definitions below table for further instructions.

Component Code	Activity Code	(1) Group I.D.	(2) Test Used	(3) Total N	(4) Number Tested/ Analyzed	(5) Participants Not Tested/ Analyzed N	(5) %	(6) Reasons why students were not tested, or tested, were not analyzed	Number Reason
6 0 8 1 5	7 2 0	15	MAT-71	248	177	71	29%	Missed post test	71
6 0 8 1 6	7 2 0	16	MAT-7[illegible]	624	443	181	29%	Missed post test	181
6 0 9 1 5	7 2 0	15	CAT-70	285	168	117	41%	Missed post test	117
6 0 9 1 6	7 2 0	16	CAT-70	665	365	300	45%	Missed post test	300

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(1) Identify the participants by specific grade level (e.g., grade 3, grade 9). Where several grades are combined enter the last two digits of the component code.

(2) Identify the test used and year of publication (MAT-70, SDAT-74, etc.).

(3) Number of participants in the activity.

(4) Number of participants included in the pre and posttest calculations found on item#30.

(5) Number and percent of participants not tested and/or not analyzed on item#30.

(6) Specify all reasons why students were not tested and/or analyzed. For each reason specified, provide a separate number count. If any further documentation is available, please attach to this form. If further space is needed to specify and explain data loss, attach additional pages to this form.

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