DOCUMENT RESUME

ED 087 831 UD 014 069

TITLE	District Number 22, ESEA Title I Projects.
INSTITUTION	New York Univ., N.Y. Center for Field Research and School Services.
SPONS AGENCY	New York City Board of Education, Brooklyn, N.Y.
PUB DATE	Aug 72
NOTE	95p.; Function Number 75-2-1631
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Compensatory Education Programs; Ecology; Environmental Education; Individualized Instruction; Open Enrollment; *Program Evaluation; *Reading Programs; Remedial Reading Programs; *School Districts; Student Attitudes; Teaching Methods; Urban Education
IDENTIFIERS	Elementary Secondary Education Act Title I; ESEA Title I; *New York City

ABSTRACT

This report includes evaluations of four New York City school district educational projects funded under Title I of the Elementary and Secondary Education Act of 1965. The Intensive Reading Program offered concentrated, individual reading instruction to needy open enrollment children as well as some indistrict pupils. The program's objectives were: (1) to raise substantially the reading levels of those needy open enrollment pupils, and (2) to change positively their attitudes toward and use of books and related reading materials. The Reading Skills Center focused primarily on open enrollment fourth, fifth, and sixth grade children in need of remedial reading. The major goal of the program was to significantly raise the reading skills of these open enrollment children as well as their in-district classmates. A second, ancillary goal was related to altering the classroom approaches of teachers to reading. The Junior High Reading Laboratory Program focused largely on open enrollment children in junior high grades who were two years behind in their reading levels. The major objectives of the program were to substantially raise the reading levels of these children and to effect positive change in their self-images and their attitudes toward reading, books, and school. The purpose behind the Environmental Center Program was to develop in low-achieving, fifth grade children a greater understanding and appreciation of the interdependency of plants, animals, and their natural habitats. The Program placed special emphasis upon the problems of ecology, pollution, and man's effect on his surroundings. (Author/JM)

DISTRICT #22

ESEA TITLE I PROJECTS

ESEA TITLE I PROJECTS

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 under contract with the Board of Education of the City of New York for the 1971-72 school year.

Evaluation Director
Professor Herbert London

Evaluation Coordinator
Professor Joseph Giacquinta

CENTER FOR EDUCATIONAL RESEARCH AND FIELD SERVICES
School of Education
New York University

August, 1972

New York University

School of Education
Center for Educational Research and Field Services
Office of Off-Campus Courses

51 Press Building
Washington Square
New York, N.Y. 10003
Telephone: (212) 598-2898, 3425

September 30, 1972

Dr. David Abramson
Acting Director
Bureau of Educational Research
BOARD OF EDUCATION
OF THE CITY OF NEW YORK
110 Livingston Street
Brooklyn, New York 11201

Dear Dr. Abramson:

In fulfillment of the agreement dated June 13, 1972 between the New York City Public Schools and the Center for Educational Research and Field Services, I am pleased to submit three hundred copies of the final report, District #22, ESEA Title I, 1971-1972.

The Bureau of Educational Research and the professional staff of the New York City Public Schools were most cooperative in providing data and facilitating the study in general. Although the objective of the team was to evaluate a project funded under Title I, this report goes beyond this goal. Explicit in this report are recommendations for modifications and improvement of the program. Consequently, this report will serve its purpose best if it is studied and discussed by all who are concerned with education in New York City -- the Board of Education, professional staff, students, parents, lay leaders, and other citizens. To this end, the study team is prepared to assist with the presentation and interpretation of its report. In addition, the study team looks forward to our continued affiliation with the New York City Public Schools.

You may be sure that New York University and its School of Education will maintain a continuing interest in the schools of New York City.

Respectfully submitted,

ARNOLD SPINNER
Director

AS:jh

PREFACE

This evaluation comprises an effort by a carefully selected New York University team to assess the Title I program in District 22. Commencing in October 1971 this evaluation team proceeded to administer various tests, conduct numerous observations and intensive interviews, compute and analyze scores, develop and disseminate instruments and examine results and consequently evolve recommendations. The entire process lasted only ten months before the report was completed - a fact that undoubtedly makes this assessment somewhat tentative. Nonetheless the careful scrutiny given each project and the concern for honest appraisal demonstrated by the team make this report a valuable guide for future Title I planning.

As director I deeply appreciate the assistance offered by my colleagues, the research assistants and the secretary whose labors often went beyond the call of duty. Additionally, I wish to extend my gratitude to the District 22 Title I administration for the assistance it provided in completing this report. Tasks of this kind are often inhibited by personal pique, community politics and mandated constraints - factors which are present in District 22 - nonetheless this final report transcends these issues to an extraordinary degree and comes to grips with the ostensible concerns of Title I programs. This is undeniably a tribute to the evaluation team.

Herbert London
July, 1972

GENERAL DISCUSSION OF EVALUATION ACTIVITIES FOR TITLE I PROGRAMS

From October, 1971 through June, 1972 over 100 visits were made to the four Title I compensatory programs: Intensive Reading Program (46 visits); Reading Skills Center (23 visits); the Environmental Center (15 visits); and Junior High Reading Labs (18 visits). These visits were made in order to collect information about each of the programs (e.g., staff, names and schedules, number of students enrolled in each program, pre-and-post-test scores on MAT's), to distribute and collect from staff, questionnaires dealing with program objectives, program activities, student characteristics (see Appendix A:1), and the role of the para-professional in each program (see Appendix A:9). Visits were also made to pilot test various instruments prepared by New York University for measuring changes in attitudes and knowledge (see Appendices A:2, A:3, A:4 A:5). A substantial number of visits were for observing and interviewing staff about the programs.

One Semantic Differential Test, which was developed, piloted, revised, and then administered as a pre-and-post-test, was used to measure changes in the attitudes of poor readers toward reading and related areas in the Junior High Reading Laboratory Program (see Appendix A:8). Another was used to assess changes in attitudes toward ecology and related matters among fifth graders who visited the Environmental Center Program (Appendix A:7). A two-part knowledge test was also developed and used in this program (see Appendix A:6).

Several other test-like questionnaires, not specifically required by the original evaluation contract, were prepared to explore possible attitude changes among children in the Intensive Reading Program and the

Reading Skills Center toward books, reading, and related matters (see Appendicies A:3 and A:2 respectively). Unfortunately, the results of the pilot testing demonstrated the shortcomings of administering paper-and-pencil instruments to children who have serious reading difficulties, especially those in the primary grades.

In summary below are the major evaluation activities carried out by New York University in its assessment of the four Title-I, compensatory education projects in School District 22.

Phase I (September 1971-January 1972)

1. Meetings with District #22 Administration officials
2. Introductory visits to schools and programs
3. Gathering of basic program documents and information
4. Construction of tests and questionnaires
5. Collection of MAT pre-scores
6. Pilot testing of instruments developed by New York University
7. Pre-testing of students in various projects
8. Interviews with program staff
9. Observations of ongoing projects

Phase II (February-April)

1. Preparation of progress report for District 22
2. Continued collection of program documents, observation of ongoing program activities, interviewing of project staff
3. Distribution and collection of paraprofessional questionnaires
4. Pre-testing of students in one project
5. Construction of questionnaires about program implementation,

staff satisfaction, and student characteristics.

Phase III (May - June 1972)

1. Post-testing of students in some projects and collection of MAT post test scores in others
2. Distribution and collection of Implementation, Satisfaction, and Student-Characteristic Questionnaires from various staff members
3. Reduction and analysis of data
4. Writing of Final Report for District 22.

INTENSIVE READING PROGRAM

Program Objectives

The Intensive Reading Program offered concentrated, individual reading instruction to needy open enrollment (OE) children as well as some in-district pupils. The program's objectives were:

1. to raise substantially the reading levels of these needy OE pupils and,
2. to change positively their attitudes toward and use of books and related reading materials.

Program Operations

This year the program involved nine elementary schools (P.S. 52, 139, 152, 193, 203, 206, 217, 255, and 312.) Open enrollment children in grades 1-4 were the main focus. A corrective reading teacher located in each of the schools, with the aid of one or two paraprofessionals, worked with the school's most retarded readers. In some schools, the CRT worked alone. The program concentrated on a group of nearly 250 pupils each of whom was thoroughly diagnosed upon entry into the program, both formally and informally. The largest remedial group in any one school was about 45 students. Throughout the year these students would come individually from various classes in the school, usually each day of the week, to work for about 45 minutes to an hour.

The paraprofessionals (one or two) directly under the supervision of the CRT worked individually, on a one-to-one basis, with the most retarded OE readers in a separate room from the regular classroom. The paraprofessionals supervised the OE children during their daily bus rides to and from the District's schools. Programmed workbooks, phonics books and other materials designed to increase word pronunciation and comprehension skills were used.

In addition to the reading materials already mentioned, each CR classroom had its own paper back library. One library, the largest reported, contained 328 books. Children were free to check books out and take them home for after school reading.

Staff Reactions to the Program

A number of questions designed to determine how project staff (both teachers and paraprofessionals) felt about the program were included in a questionnaire distributed to them in May, 1972. They were asked about their initial response (1=Very Positive, 2=Positive, 3=Ambivalent, 4=Negative, 5=Very Negative) and similarly about their present reaction. They were also asked to give the reason for any difference that might have occurred between their initial and present responses. Staff were also queried about their desire to change the program and presented with five basic areas under which they could recommend changes: staffing, students, materials, program organization, and "other." Nearly all the staff selected returned completed questionnaires. Summarized in Table Ia are the staff responses.

As is evidenced from the data, both teachers and paraprofessionals on the Intensive Reading staff were positive throughout the year toward the program and these responses remained highly stable. Moreover, even though 7 of 15 said that they wanted to change the program, the majority indicated that the change be one of expansion of the program to include more OE children and children living in the District. The other desired change involved hiring additional, properly trained paraprofessionals so that the one-to-one relationship for children requiring remedial reading could be intensified.

Assessment of Program Effects

To assess whether the program had the effect of changing the pupils' attitudes toward reading and the use of books, teacher-kept records of the number of books taken out by children from their paperback libraries were used.

At the beginning of the year each of the eight Intensive Reading Classes was visited for the purpose of examining its library. Teachers were asked to compile and submit a listing of the number and kind of books available. In April, four of the eight libraries were selected randomly and the records of book use were analyzed.

To determine whether the average reading level of these pupils was raised substantially as a result of their exposure to the year-long intensive reading program, pre-and-post test scores on the Metropolitan Reading Achievement Test were collected for the children from the four randomly selected classes used in the paperback-library analysis. This resulted in a sample of slightly over 100 pupils, which reduced to 92 because of student absences during testing and transfers during the treatment.

Since no appropriate control group was available, an alternate procedure was employed in determining whether the effects, if found, could have resulted from factors other than the program. The children's actual post test scores were compared to post test scores predicted for them based on their normal continuance in school without exposure to the program. This predicted, or anticipated, score was calculated in the following manner. Each child's actual pre-test score in October was treated as an index of his total progress in reading up to the time of his exposure to the project. This progress (in months) was divided by the number of months

he had been in school until the time of the program (10 months = 1 year). The result was the average monthly increase a child had exhibited in reading during his school career up until the beginning of the program. Since the MAT post tests were administered in the early part of April, 1972, the number of months of treatment for a pupil beginning in the program in September was determined as seven. When the calculated average monthly increment of a child was multiplied by seven and added to his pre-test score, the result was a post test score for that child which one would have predicted had no treatment been given. Comparison of mean predicted post test scores to actual post test scores served as the basis for assessment of the effects of the program on reading skills. This procedure was employed in the assessment of changes in reading levels of children exposed to the Reading Skills Centers and the Junior High Reading Labs.

While this form of analysis is useful in determining whether a program has a general effect on a group of children, it sheds very little light on why some children gain more than others, even though they are exposed to the same program. Teachers were asked to complete a "student's characteristics" questionnaire for each of the children randomly selected. Information about such matters as school attendance, psychological stability, and prior school performance was gathered. These data were designed to provide, when correlated with the actual changes in reading from September to April, information about why some children responded more favorably than others to the program. This kind of analysis and the requisite procedures were also carried out for the Reading Skills Center and Junior High Reading Laboratory Programs.

Changes in Reading Attitudes as Measured by Student Use of the Paperback Libraries

Of the nine paperback libraries, complete book listings for three of them were never finalized and submitted to the NYU Team. While the four which were randomly selected for analysis were obtained either through urgings from the team or its direct copying, in only two were the records of child use kept carefully enough to serve as the basis of analysis. Moreover, while some teachers acknowledged that many students were taking books out without really reading them, even the teacher having the best kept library reported no formal systematic follow-up on what the children had read. This information in itself shows that the paperback libraries were not treated by the staff as a central aspect of the Intensive Reading Program, even though, as two University Reading Specialists reported after examining the listings, the libraries contained an excellent selection of books in terms of their subject matter, reading difficulty, and appeal of publication format for the students.

Tables Ib and Ic summarize overall and mean book use during a seven month period for each school, and present both the overall frequency of students using from zero to over thirty-six books and the frequency within each school.

While the books were appropriate for students in this program, both experts felt that a child could easily manage one a week. Consequently, reading one a week would represent a moderate frequency. Allowing for vacations as well as several periods during the year in which use of the library might be minimal, a rating of moderate use was given to pupils who had taken out between 16 and 25 of these paperback books between September and April. Zero to four books was judged as low use, five to

fifteen books as moderately low use, twenty-five to thirty-five books as moderately high and thirty-six books or more as high use.

In the two randomly selected schools where careful records of student use were kept, the data summarized in Tables Ib and Ic reveal that there was generally moderately low use of the libraries. Curiously, though interest was relatively minimal in both schools, it seemed to peak in November and December, and by April almost no use was evidenced. It is also interesting that School A, which had a total listing of 92 books, demonstrated more use than School B, which had a total listing of 328 books. It may be noted that while average per pupil use never rose above 2.87 even during the best months, some students indeed checked out as many as 45 books during the period between September and February.

In the section below involving correlation analysis, the absolute number of books used by pupils is analyzed in relation to the amount of change pupils exhibited in their reading scores. Suffice it to say here that the hoped for general gains in reading attitudes of (and book use by) pupils as a result of their exposure to the Intensive Reading Program and its paperback library were not reflected by this analysis.

Changes in Average Reading Scores as Measured by the Metropolitan Reading Achievement Test

The two-way analysis of variance program, Anovar, was employed in analyzing the differences between the anticipated mean and actual mean post-test scores on the MAT for the randomly selected group of 92 students exposed to the Intensive Reading Program. By specifying a one group, two-trial analysis, the significance of the difference between these correlated means was determined.

Presented below in Table Id are the results of this analysis.

The mean reading score predicted for the post testing of the 92 pupils in April 1972, on the basis of their school performance up to the time of their exposure to the program, was 23.5 months (2 years, 3.5 months). The actual post test mean was 26.9 months (2 years, 6.9 months). The difference between these means, significant beyond the .001 level, reveals an average increase in the group of 3.4 months above the expected increase for a seven-month period. This reflects a substantial compensatory effect. In Table Ie are the summary statistics for the pre, anticipated, and post testing as well as for gains in reading.

Another way of assessing the effects of the program on the children's reading skills is to analyze the frequency of actual gains (in months of reading) of pupils as a result of this seven month treatment. A child with normal skills exposed to a regular reading program would gain from six to eight months in reading. Without the treatment these children could be expected to gain less than the normal six to eight months. So that, if a sizable proportion does well as the typical child, this would be evidence of the program's success. Moreover, if a sizable number gains even more than the typical child, then this would provide even greater evidence of the program's success.

Table If summarizes the data gathered on the actual changes in reading scores for children in each school as well as across schools, overall. The range of changes went from a low of -1 (a loss of one month in reading for a child during this seven-month period) to a high of 23 (a gain for one child of 23 months). Two observations are of most importance. First, the overall summary percentages show that substantial numbers of the 92 children demonstrated either normal gains (26%), above normal gains (27%), or far above normal gains (14%). In light of the fact that nearly

all of these children under standard circumstances would have exhibited below normal gains, the strength of this program becomes clear. Second, Schools C and D are those for which adequate library data were available and analyzed earlier. Children in School C (coded before in Table Ic as School A) demonstrated greater gains than children in School D (coded earlier in Table Ic as School D). The children from School C also exhibited greater use of the paperback library than did School D. It is quite difficult at this time to determine whether greater use of the library may have contributed to the greater gains in reading or whether growing reading skills led to greater library use.

Differential Effect of the Intensive Reading Program or Students' Gains in Reading According to Selected Student Characteristics

As was demonstrated in the last section, students responded very differently to the same intensive reading program. Some increased as much as 23 months in reading while others gained only 2 or 3 months, some even dropped a month in reading level during the seven-month period. The student characteristics questionnaires distributed to teachers for their completion were designed to gather information that would be pertinent to the explanation of the variation in reading gains of students. Included in the questionnaire were items about student place of residence, change in residence, past record of school performance, family stability, diet, absence from school, psychological stability, sex, grade, classroom conduct, prior exposure to reading programs, time spent in school on reading each day, parental participation in school and, family socio-ecomonic status. These data are summarized in Tables I and II of Appendix A:1.

Unfortunately, the breadth of analysis originally planned could not be executed because of several conditions. First, nearly one-half of the

distributed questionnaires were either not returned or, if returned, left many items blank; for example, of the 46 (out of 92) returned questionnaires, 30 left father's occupation blank. Much of this absence of information can no doubt be attributed to the lack of information available to or held by teachers, an interesting fact in itself. Second, even though information was reported, frequently not enough variation in students on a characteristic was present in order to permit the variable's correlation with reading gains, for example, almost none of the children had prior records of grade failure. This characteristic, therefore, would not be helpful in understanding why some, having been exposed to the same program, gained more than others in reading.

As a result of the disappointing amounts of information reported or reflecting sufficient variability for analysis, adequate data for only eleven of the originally proposed conditions were available for correlational analysis. Table Ig contains each variable's correlation with student gain in reading, ranked according to magnitude and level of significance.

Keep in mind that sufficient data were not available for a number of potentially important conditions influencing the reading gains made by students. Among the nine conditions for which sufficient data were available, three stand out as having particularly strong associations with amount of gain in reading among students in the Intensive Reading Program: the stronger the pupil's general academic performance, the greater the gain; the larger the size of instructional group in reading, the smaller the gain; and father's presence in the home (a socio-economically linked attribute) is related to higher gains in reading. More modest relations with reading gains were found for degree of parental participation in school affairs, (the greater the participation, the greater the gain).

number of changes in residency (the greater the number, the smaller the gain), and use of paperback library books (the more books checked out, the greater the gain). No significant correlations were found with the three remaining conditions: classroom conduct, grade level, or sex.

Conclusions and Recommendations

Given its major objective--raising the reading levels of open enrollment children who were retarded in reading--the evidence that was gathered and analyzed demonstrates that the program was very effective. Moreover, the findings about the use of the paperback libraries (although based on limited data) suggest that the use of these books and reading gains were related. Lastly, the child responding best to the program appeared in composite profile to be the one who, coming from an intact, non-mobile home that participates in school affairs, already does better than his or her classmates and who was exposed to a smaller-sized reading group during the seven months of treatment.

1. The first recommendation is that the intensive reading program should be refunded for next year, at least at the same level as it was this year. To the extent that money, facilities, and the availability of competent personnel permit, consideration should be given to expanding the program to include more children both within the district and those on open enrollment. Its expansion, however, should not be permitted at the expense of its intensity, for example, expanding it by increasing the pupil-paraprofessional ratio . This would be self-defeating, since much of its effect appears to be related to its concentrated nature.
2. Related to this last point, to the extent possible, District administration should focus on promoting the small-group, individualized

approach to reading and maintaining effective use of the paperback libraries, since both appear to be correlated with reading gain and are conditions that can be manipulated at least to some extent by the school.

3. The relationship of the paperback libraries to the Intensive Reading Program should be more clearly defined for staff and more carefully monitored in their implementation by district administrators. If these libraries are to be viewed as serious aspects of the program, they will require far more rigorous control by teachers than was given by them this year. Teachers must be formally encouraged to maintain careful, accurate records of book use and to evaluate the use of these books by children through such procedures as follow-up quizzes or reports.

4. If information about attitudinal changes in the children is desired by the District, then specific areas of change must be more clearly delimited for the evaluation next year, and the feasibility of obtaining measures of change in those areas must be explored thoroughly with measurement experts before this objective is written into the program and its evaluation. It is very difficult and expensive to measure attitudes of children of this particular age on a program-wide basis. Paper-and-pencil tests are generally unreliable, personal, individual interviewing is often fraught with contaminating conditions even when done by the best of professionals, and unobtrusive measures such as the rate of book use from a paperback library are difficult to keep unobtrusive, let alone to interpret.

TABLE 1a

Responses of Intensive Reading Staff to Questions about their reactions to the Program (8 schools, 15 staff members)

Item	Frequency of Staff Responses														
	Reading Specialist					Paraprofessional					General				
	VP	P	A	N	VN	VP	P	A	N	VN	VP	P	A	N	VN
Initial Response to Program in September, 1971	6	1	-	-	-	4	4	-	-	-	10	5	-	-	-
Present Response to Program in May, 1972	6	1	-	-	-	4	4	-	-	-	10	5	-	-	-
Desire to Change Program in Some Way	Yes 3		No 4			Yes 4		No 4			Yes 7		No 8		

Code: VP=Very Positive; P=Positive; A=Ambivalent; N=Negative; VN=Very Negative

TABLE Ib

Frequency of Library Use by Students In Two Schools According to Five Ratings (N=74)

Books	Number of Books and Their Use: Low (0-4)	Moderately Low (5-15)	Moderate (16-25)	Moderately High (26-35)	High (36+)	N
School A N=31 92 Book Library	41.9% (13)	25.8% (8)	23.5% (7)	8.8% (3)	--	100% (31)
School B N=31 325 Book Library	79.0% (34)	18.6% (8)	2.4% (1)	--	--	100% (43)
Overall Use	63.5% (47)	21.6% (16)	10.8% (8)	4.1% (3)	--	100% (74)

TABLE Ic

Total Number of Books Used In Two Schools
Per Month as well as Average Book Use
For Each Pupil

Periods By Month

	Sept/ October	Nov	Dec	Jan	Feb	March	April
School A (N=31) (Books Available=92)							
Total Number of Books used	47	89	83	81	55	47	10
Average Book Use per Pupil	1.51	2.87	2.67	2.60	1.77	1.51	0.32
School B (N=43) (Books Available=328)							
Total Number of Books used	24	38	47	10	2	1	--
Average Book Use per Pupil	0.56	0.88	1.09	0.23	.04	.02	0.00

TABLE Id

Anticipated as Compared to
Actual Post Test MAT Means of a Group of Randomly
Selected Students Exposed to the Intensive Reading
Program for Seven Months (N=92)

Source	Mean Square	D. F.	F Ratio	P
Total	49.9397	183		
Between	79.3731	91		
Trials	542.6957	1	35.961	<.001
Error	15.0913	91		

Anticipated Group Mean for Reading = 23.5 months (2 years, 3.5 months)

Actual Group Mean for Reading = 26.9 months (2 years, 6.9 months)

TABLE Ie

Summary MAT Data for a Randomly Selected Sample
of 92 Students Exposed to the Intensive Reading Program

Variable	$\bar{X}$	SD	(N)
Pretest Score on the MAT	19.45	5.99	(92)
Anticipated Post Test Score	23.48	6.66	(92)
Post Test Score on the MAT	26.91	7.08	(92)
Actual Gain in Reading for a Seven-Month Period	7.58	4.91	(92)

TABLE If

Actual Gains in MAT Reading Scores Among 92 Students Exposed to the Intensive Reading Program over a Seven-Month Period

Gain in Reading (in months) during a 7 Month Treatment	Percentage* of Students in Each Category by School				
	School A (N=9)	School B (N=9)	School C (N=31)	School D (N=43)	Overall (N=92)
loss in Months	-	-	3%(1)	7% (3)	4% (4)
Below Normal Gain (0-5 mos.)	22%(2)	44%(4)	22%(7)	33%(14)	29%(27)
Normal Gain (6-8 mos.)	22%(2)	44%(4)	17%(5)	30%(13)	26%(24)
Above Normal Gain (9-12 mos.)	34%(3)	12%(1)	29%(9)	28%(12)	27%(25)
Far Above Normal Gain (13-23 mos.)	22%(2)	-	29%(9)	2%(1)	14% (12)
	100%	100%	100%	100%	100%

*Rounded to nearest percentage point

TABLE Ig

Correlations of Nine Characteristics of Students in the Intensive Reading Program with their Gains in Reading on the MAT

Rank	Characteristics[a] for which Sufficient Data were Available for this Project	(N)	Correlation with Gain in Reading	Significance
1	General Academic Performance	(46)	.57	**
2	Father's Presence in Home (SES related condition)	(26)	.52	**
3	Size of Instructional Group in Reading	(46)	-.48	**
4	Parental Participation in School Affairs	(46)	.38	**
5	Change in Residency	(46)	-.27	*
6	Number of Paperback Library Books	(74)	.22	*
7	Classroom Conduct	(46)	-.18	N.S.
8	Grade Level	(92)	-.13	N.S.
9	Sex	(92)	-.11	N.S.

[a]Based on teacher estimate of

*.05 level of significance (one-tailed)

**.01 level of significance (one-tailed)

READING SKILLS CENTERS

Program Objectives

The Reading Skills Center Program focused primarily on open enrollment 4th, 5th, and 6th grade children in need of remedial reading. The major goal of the program was to significantly raise the reading skills of these OE children as well as their in-district classmates. A second, ancillary goal was related to altering the classroom approaches of teachers to reading. As a result of the teachers' exposure to this program, it was hoped that their styles of teaching reading in their own classrooms would change in directions away from the traditional, basal-reader approach.

Program in Operation

Reading Skills Centers were located in four elementary schools (P.S. 193, 206, 251, 269). Servicing a total of nearly 600 pupils, in each school from 5 to 6 entire classes (approximately 150 students) came to the Center, most classes attending 45-minute sessions four times a week.

The reading specialist in charge of each Center, a paraprofessional, and the teacher of the attending class comprised the staff that worked with each group of children. Each Center, housed in one room, contained between 25 and 30 individual reading corrals, each with a controlled reading machine. Filmstrips, workbooks, and other materials ranging in difficulty from the first through the sixth grade level were used by children in their corrals according to their reading level at the time. Detailed daily and cumulative records of each child's progress were kept by the specialist and paraprofessional. Each day, the children coming in as a class would go to their individually assigned corrals and begin working where they had ended the day before. The three-person staff would

help students during the sessions as needed. Each child worked alone and at his or her own pace.

Pupils were, after being pre-tested at the beginning of the year, given materials appropriate to their reading levels, and as the year progressed, each advanced to the next level as soon as the reading specialist determined that he or she was ready for it. The primary focus was on word recognition and reading comprehension. A substantial amount of the materials each child used were self-marking, thereby providing immediate and personal feedback about progress.

Staff Reactions to the Program

Procedures, similar to those in the Intensive Reading Program, were used to measure the reactions of Reading Skill Center staff to the program. As part of a questionnaire distributed to them in May, they were asked for their initial reaction to the program, their subsequent reaction at the end of the year, an explanation of any change which might have taken place, whether they were desirous of making future changes in the program and, if so, what the changes would be. Table IIa summarizes their responses by position as well as by Center. Nearly all (24) of the staff members originally asked returned their questionnaires. The picture here on the basis of these data is one of increasing satisfaction with the program over the year both by school as well as position, even though the staff was at the outset already positively oriented. The reasons offered for this positive shift were related to staff members' perceptions that the Centers were really helping the children. One staff member put it this way, "Gains made by the children were very encouraging-more than we had expected at the beginning." Another said, "Using the individual machines and having children work at their own

TABLE IIa

Responses of Reading Skill Center Staff to Questions about their Reactions to the Program by Center and Position (N=24)

	Frequency of Staff Responses										Total by School				
	Teachers (16)					Paraprofessionals (4)					Specialists (4)				
	VP	P	A	N	VN*	VP	P	A	N	VN	VP	P	A	N	VN
Center A															
Present Reaction	3	-	1	-	-	1	-	-	-	-	1	-	-	-	-	5	-	1	-	-
Initial Reaction	3	1	-	-	-	-	1	-	-	-	-	1	-	-	-	3	3	-	-	-
Center B															
Present Reaction	2	2	-	-	-	1	-	-	-	-	1	-	-	-	-	4	2	-	-	-
Initial Reaction	-	3	1	-	-	1	-	-	-	-	1	-	-	-	-	2	3	1	-	-
Center C															
Present Reaction	3	1	-	-	-	1	-	-	-	-	1	-	-	-	-	5	1	-	-	-
Initial Reaction	1	3	-	-	-	1	-	-	-	-	1	-	-	-	-	3	2	-	-	-
Center D															
Present Reaction	2	2	-	-	-	1	-	-	-	-	1	-	-	-	-	4	2	-	-	-
Initial Reaction	1	2	1	-	-	1	-	-	-	-	1	-	-	-	-	3	2	1	-	-
Total by Position															
Present Reaction	10	5	1	-	-	4	-	-	-	-	4	-	-	-	-	18	5	1	-	-
Initial Reaction	5	8	2	-	-	3	1	-	-	-	3	1	-	-	-	11	10	2	-	-

*Code: VP=Very Positive; P=Positive; A=Ambivalent; N=Negative; VN=Very Negative

levels and speed is a great improvement." A third noted, I can see definite progres in (the pupils') reading comprehension and speed."

In three of the four centers, the teachers polled (12) unanimously reported spending four periods, each 35-45 minutes long, in the lab each

week. Teachers (4) in the forth lab reported spending three 50-65 minute periods a week there. Responses of staff when asked whether they would like to change future programs are summarized in Table IIb by Position and Center.

TABLE IIb

Staff Desire to Change Future
Reading Skill Center Programs
(N=24)

Center	Frequency Desirous of Change						Total by School	
	Teachers		Paraprofessionals		Specialists			
	Yes	No	Yes	No	Yes	No	Yes	No
A	1	3	1	-	1	-	2	4
B	2	2	-	1	-	1	3	3
C	-	4	1	-	1	-	2	4
D	3	1	1	-	1	-	5	1
Total by Position	6	10	3	1	3	1	12	12

The data suggest that in some centers staff members were more desirous of change than in others, and that specialists and paraprofessionals were more in favor of changing present operations than teachers. In general, however, about half the staff returning questionnaires specified changes. Taken as a group, the six teachers specified desired changes in the areas of staffing, students, materials and program organization as did the paraprofessionals (3) and specialists (3). Several recommendations emerge from their comments: 1) increase number of assistants (in the form of paraprofessionals and

school aides) in order to intensify the individual help to needy children, 2) remove from the program all children who refuse to cooperate, 3) provide a greater variety of reading materials to offset eventual student boredom coming from repetition, 4) set up regular meetings between classroom teachers and specialists to discuss remediation progress and plan regular classroom follow-up lessons and 5) vary the instruction approach with students having acute problems-e.g., non-readers and those who lack perceptual discrimination or have psychological difficulties in adjusting.

Assessment of Program Effects

In order to judge the effectiveness of the Centers in raising the reading skills of the pupils exposed to them during the year, pre-and-post test scores on the MAT were gathered for four classes of children, one class randomly selected from each of the centers. An original sample of over 100 students was reduced to 88 because some students changed schools during the year and others were absent during testing. Anticipated post test scores were generated for the sample, in the same manner as done for the Intensive Reading Program, in order to compensate for the lack of an adequate control group for the analysis. Also as in the case of the Intensive Reading Program, information about the characteristics of these randomly selected students was collected in an effort to understand why some students responded more favorably to the program than others.

Moreover, to gather information about whether or not teacher exposure to these centers led to changes in their regular approach to reading in the classroom, questionnaires were distributed to most of the classroom teachers (16) participating in the four centers. Originally, the evaluation

design proposed the possibility of doing systematic observations of teachers in the regular classrooms during periods of reading instruction.

Several conditions, however, militated against this procedure. First and foremost, systematic "pre-treatment" observations would not have been realistically possible until late November, perhaps early December, because of the numerous other evaluation activities required of the NYU Team, which were not begun until late September when the contract between NYU and District 22 was consummated. Second, even when observations were tried in one Center on a two-week random basis in February, daily changes in the reported schedules of teachers often prevented NYU representatives from observing reading instruction in the classroom. To have announced visits ahead of time would most likely have generated the viewing of periods containing activities not normally a part of the class's reading instruction. The decision was made, therefore, to use a less desirable but still adequate way of obtaining information about possible changes in teacher classroom performance: asking them to judge on an overall basis whether certain kinds of instructional procedures, in which they might have engaged, increased during the year, stayed about the same, or decreased in frequency. Five indices for measuring possible changes in reading approaches were specified, as a result of discussions with several of the reading specialists who directed Centers. It was decided that if the teachers were being influenced positively as a result of their exposure to these Centers, they would have, during the year, shifted to greater individualization of reading instruction in the classrooms and more small group activities, placed more emphasis on instruction involving materials such as reading games, phonics cards, and available audio-visual aids, given more emphasis to promoting class interaction during reading through such mechanisms as dramatizations, board work, and follow-up lessons, and ced greater emphasis on

permitting students who have mastered certain reading skills to help other students who have not done so.

In addition to the quality of changes in classroom instruction in reading, the teachers were also asked about the reasons for these shifts (if they occurred) and about the average quantity of time they actually spent on reading in their classrooms each week.

Changes in Classroom Reading Approaches of Teachers

Tables IIc and IId contain information about the amount of time teachers spent in classrooms on reading (in addition to Center time) and the changes which took place in their approaches to reading during the year.

Table IIc reveals that the classroom time devoted to teaching instruction, averaged over all four schools was more than 3-1/2 hours (215 minutes) a week, per teacher (in addition to student time spent at the Center). While the additional time spent by teachers did vary within each of the Centers (Center A, 220 minutes; Center B, 155 minutes; Center C, 320 minutes; and Center D, 170 minutes), the modal amount of time any teacher spent on a given day was from 35 to 45 minutes.

The carry over of approaches used during these classroom periods from teacher exposure to the Center is reflected by Table IId. Unfortunately, the individual school analyses from which this Table is developed do not reflect consistent trends in the desired direction. In School D, teachers tended to engage in less overall individualized instruction, less game emphazing activities, less use of students as teachers, more board work and class interaction activities, and about the same amount of small group instruction. School A, on the other hand, spent more time on individualized instruction, game-type activities, class interaction

activities, somewhat less time on using students as teachers, and less time on small group activities. Schools B and C fall in between Schools A and D with their teachers reporting little or no change in their approaches on these dimensions. Table IId reveals that desired changes, to the extent that they took place, were strongest in the area of placing greater emphasis on class interaction, although 43.7% of the teachers still reported no change in or lesser emphasis on this aspect of reading instruction. In each of the other four areas where it was hoped that at least a simple majority would report greater emphasis, the results were negative. Indeed, only a small percentage reported greater emphasis on the use of pupils (25%) and small group activities (13%), with the majority of teachers reporting the same or lesser emphasis during the year in the other two areas.

These results fail to meet the high expectations of the program planners for spill over from the Center to the classroom. Moreover, while a few of the teachers (4 out of 16) made comments, none were reasons explicitly tied to changes or lack of changes in the specific areas for which reports were requested.

Changes in Average Reading Scores as Measured by the Metropolitan Reading Achievement Test

The two-way analysis of variance program, Anovar, was also used here to analyze the reading score data obtained from the MAT testing. By specifying a one group, two-trial analysis, group means in months for the anticipated post test and the actual post test were calculated and then tested for whether or not the difference between them was significant or due to chance.

Presented below in Table IIe are the results of this analysis. On the basis of their prior school performance up to the time of their exposure to the program, the predicted mean score at the point of the post-testing in

April, 1972 for this randomly selected group of 88 students was 3 years, 4.6 months. The actual post test mean for the group was 3 years, 9.3 months. The difference, significant beyond the .001 level, reflects an average increase for the group of 4.7 months over the expected increase for the seven month period, nearly a half year's growth in reading in addition to that predicted. This represents a strong compensatory effect. Summarized in Table IIf are the overall statistics for pre, anticipated, and post testing on the MAT as well as gains in reading.

As in the case of the Intensive Reading Program, a second way of viewing the effects of the Skills Centers is through an analysis of the frequency of actual gains pupils made in months of reading during their seven-month exposure to the Centers. A typical child without benefit of the special program should increase from six to eight months, whereas these particular children, if exposed to the normal reading program, should increase less than six to eight months.

Table IIg summarizes the actual changes in reading scores for students in each school center and across school centers. The range of change scores went from -4 months to +23 months. Again, two observations are important here. First, nearly 3/4's (73%) of the students demonstrated at least normal gains with many of them (32% and 25%) showing more than normal gains. Secondly, there appears to be no clear, direct relationship between the amount of time teachers reported spending in their classrooms, in addition to time in the center and frequency of normal and above normal reading gains made by children. The most time reported was 320 minutes per week per teacher in Center C, the least was 155 minutes per week per teacher in Center B. The average for School A was 220 minutes per week

per teacher and for School D, 170 minutes. Yet Centers A and D, the two spending more moderate amounts of time, demonstrate more extremes in gains, with Center D showing the greatest frequency of normal and above normal gains (81%) and Center A showing the least (55%). No clear interpretation is available for these results.

What is interesting to note, but again with its interpretation being difficult, is the fact that teachers in School A reported greater change toward individualization of instruction as the year progressed than the other three, while School D reported greater emphasis on a group orientation. Presumably the apposite results were expected-i.e., greater gains in classes where greater individualization is reported and not where greater group orientation is reported.

Differential Effect of the Reading Skills Centers on Students' Gains in Reading According to Selected Student Characteristics

As was the case with students in the Intensive Reading Program, some students increased as much as 23 months in reading while others gained little. The information gathered from the student characteristics questionnaire is summarized in Tables 3 and 4 of Appendix A:1. For this program, sufficient data for 14 of the original conditions were accumulated to permit correlational analysis. Among these 14, as noted in Table IIh, seven did not correlate significantly with reading gain. These were classroom conduct, in-district residency, prior exposure to other reading programs, changes in residency, parental participation in school affairs, grade level, and sex. The two strongest correlates were general academic performance (the greater the performance, the greater the gain) and father's occupation (a socioeconomically-linked condition). Reading readiness, school time spent on reading, family stability, and psychological stability all showed modest, positive, significant relations with reading

gain. School absence correlated negatively with reading gain as expected.

Conclusions and Recommendations

In terms of its major objective--raising the reading levels of classes of children with large numbers of open enrollment children retarded in reading--the evidence clearly shows that the program was outstandingly successful, with some children increasing as much as two years. Less clear is the extent to which the Centers had the desired spillover effect on changing teachers' styles of reading instruction back in their own classrooms. Indeed, what exactly the changes should have been were never clearly spelled out. Even less clear was whether the changes that did occur--either toward greater individualization in classroom reading instruction or toward greater group activities--contributed appreciably to the gains made by children, beyond the effect of the Centers per se. In composite form, the child who did best in the program tended to be from a stable family setting, himself or herself psychologically stable as well, who already doing relatively better in school than his or her classmates, spent considerably more time in school on reading without much absence.

1. The first recommendation is that the Reading Skills Centers Program be refunded for next year, at least at the same level as it was this year. To the extent that money, facilities, and the availability of competent personnel permit, consideration should be given to expanding the Centers to other schools in order to include more children. Under no circumstances should its concentrated focus be "watered down," however, in its attempted expansion.

2. The daily role of the classroom teacher while at the Center

should be made much clearer for next year. Although most teachers did come into the Centers during their classes' hours there, some did not. Moreover, the division of labor between teachers and the staff of the Centers was not very clear.

3. Clearer definition should be given to how the classroom teacher's experience in the Center should affect his or her classroom teaching of reading. The Centers are very mechanized and, without these kinds of facilities in classrooms, the link between Center activities and teacher performance in the classroom is not obvious. Moreover, the relationship between the Specialists in the Centers and the classroom teachers should be more carefully spelled out, as well as the relationship between Center and classroom reading activities. For example, it may be that follow-up classes may be desired as a formal aspect of the program. It may also be that the Reading Specialists should hold regular weekly meetings with teachers to discuss children with reading difficulties and new approaches to reading instruction. At this time, no clear expectations in these areas have been formally set fourth.

TABLE IIc

Amount of Time Spent on Reading Instruction
During Regular Classroom Hours, Self-Reports by School
(N=16)

School By Day	Frequency of Time Spent Per Day As Reported by Teachers						Total Additional Minutes Per School	Average Per Teacher Per Week
	0-9 min.	10-30 min.	35-45 min.	50-65 min.	70-85 min.	90-105 min.		
School A								
Monday		2	1			1	160*	
Tuesday		2	1			1	160	
Wednesday		--	2			1	180	
Thursday		2	1			1	164	
Friday		2	1			1	140	220 min./ week/ Teacher
Sub Total		7	6			5	880	
School B								
Monday		2	2				120	
Tuesday		1	3				140	
Wednesday		2	2				120	
Thursday		1	3				140	
Friday		1	2				100	155 min./ week/ Teacher
Sub Total		7	12				620	

(continued)

TABLE IIc continued

	Frequency of Time Spent Per Day As Reported by Teachers						Total Additional Minutes Per School	Average Per Teacher Per Week
	0-9 min.	10-30 min.	35-45 min.	50-65 min.	70-85 min.	90-105 min.		
School C								
Monday			2		1	1	258	
Tuesday			2		1	1	258	
Wednesday			2		1	1	258	
Thursday			2		1	1	258	
Friday			2		1	1	258	320 min/ week/ Teacher
Sub Total			10		5	5	1290	
School D								
Monday		-	4				160	
Tuesday		-	4				160	
Wednesday		1	3				140	
Thursday		1	3				140	
Friday		-	2				180	170 min/ week/ Teacher
Sub Total		2	16				680	
Frequency of Periods	0	16	44	0	5	10	3470	215 min.

*Minutes based on multiplying frequency by the mid point of the time period.

TABLE IIe

Predicted as Compared to Actual
Post Test Means for Students Exposed to
Reading Skills Centers for Seven Months
(N=88)

Source	Mean Square	D. F.	F-Ratio	P
Total	134.6202	175		
Between	240.3223	87		
Trials	931.9602	1	47.180	<.001
Error	19.7533	87		

Anticipated Reading Mean = 34.6 months (3 years, 4.6 months)

Actual Reading Mean = 39.3 months (3 years, 9.3 months)

TABLE IIf

Summary MAT Data for a Randomly Selected Sample of
88 Students Exposed to the Reading Skills Centers

Variable	$\bar{X}$	SD	(N)
Pretest Score on the MAT	30.16	9.14	(88)
Anticipated Post Test Score	34.64	10.17	(88)
Post Test Score on the MAT	39.25	12.51	(88)
Actual Gain in Reading for a Seven-Month Period	9.08	6.56	(88)

TABLE IIe

Predicted as Compared to Actual
Post Test Means for Students Exposed to
Reading Skills Centers for Seven Months
(N=88)

Source	Mean Square	D. F.	F-Ratio	P
Total	134.6202	175		
Between	240.3223	87		
Trials	931.9602	1	47.180	<.001
Error	19.7533	87		

Anticipated Reading Mean = 34.6 months (3 years, 4.6 months)

Actual Reading Mean = 39.3 months (3 years, 9.3 months)

TABLE IIf

Summary MAT Data for a Randomly Selected Sample of
88 Students Exposed to the Reading Skills Centers

Variable	$\bar{X}$	SD	(N)
Pretest Score on the MAT	30.16	9.14	(88)
Anticipated Post Test Score	34.64	10.17	(88)
Post Test Score on the MAT	39.25	12.51	(88)
Actual Gain in Reading for a Seven-Month Period	9.08	6.56	(88)

TABLE IIg

Actual Gains in MAT Reading Scores Among 88 Students Exposed to Reading Skills Centers Over a Seven-Month Period

Gain in Reading (in months) During a Seven-Month Treatment	Percentage* of Students in Each Category by School Center				
	School Center A (N=20)	School Center B (N=20)	School Center C (N=28)	School Center D (N=20)	Overall (N=88)
No Gain, Instead Loss	25% (5)	10% (2)	-	6% (I)	9% (8)
Below Normal Gain (0-5 mos.)	20% (4)	12% (3)	21% (6)	13% (3)	18% (16)
Normal Gain (6-8 mos.)	10% (2)	26% (4)	28% (8)	6% (1)	16% (14)
Above Normal Gain (9-12 mos.)	25% (5)	40% (8)	41% (12)	12% (3)	32% (28)
Far Above Normal Gain (13-23 mos.)	20% (4)	12% (3)	10% (3)	62% (12)	25% (22)
	100%	100%	100%	100%	100%

*Rounded to nearest percentage point

TABLE IIh

Correlations of 14 Characteristics of Students in the Reading Skills Centers with Gains in Reading on the MAT

Rank	Characteristics[a] for which Sufficient Data were available for this project	(N)	Correlation with Gain in Reading	Significance
1	General Academic Performance	(88)	.42	**
2	Father's Occupation (SES)	(47)	.37	**
3	Reading Readiness	(39)	.30	**
4	School Time Spent on Reading	(88)	.30	**
5	Family Stability	(66)	.27	**
6	School Absence	(88)	-.25	**
7	Psychological Stability	(88)	.22	*
8	Classroom Misconduct	(88)	-.16	N.S.
9	In-district Residency	(88)	.16	N.S.
10	Prior Exposure to Other Reading Programs	(86)	-.14	N.S.
11	Changes in Residency	(88)	-.13	N.S.
12	Parental Participation in School Affairs	(88)	-.09	N.S.
13	Grade Level	(88)	.07	N.S.
14	Sex	(88)	.04	N.S.

[a]Based on Teacher estimates of

*.05 level of significance (one-tailed)

**.01 level of significance (one-tailed)

JUNIOR HIGH SCHOOL READING LABORATORIES

Program Objectives

The Junior High Reading Laboratory Program focused largely on open enrollment children in junior high grades who were 2 years behind in their reading levels. The major objectives of the program were to substantially raise the reading levels of these children and to effect positive change in their self-images and their attitudes toward reading, books and school.

Program in Operation

There were two Laboratories, one located in P.S. 234 and one in P.S. 278. Most, although not all, of the approximately 75 students in each of the labs were open enrollment children in the 7th and 8th grades. Some came from 9th grade classrooms. Most of the nearly 150 students in the program had a full year's exposure to it, though a few students who began the year either left the school, or improved enough to go back to regular English classes.

Each lab had a reading specialist who directed activities and several aides who were under the specialist's direction. The typical procedure was for a student to come to the lab for approximately an hour each day, either 4 or 5 days a week. Class size averaged about 15-20 students.

The students usually worked in small flexible groups under the direction of either the specialist or one of the two aides. Often, however, students worked individually. The 3-member staffs moved about giving help when necessary, evaluating student performance and correcting work in progress. Diagnostic tests were administered at the outset of the year to determine the appropriate starting level and activities for each of the students, for whom detailed daily and cumulative records were thereafter kept.

The labs contained moveable work tables and chairs, controlled readers, Audio-X's, tachistoscopes, tape recorders, various workbooks and sheets and film strips. All of these were an integral part of the student's daily work regimen while in the lab.

Staff Responses to the Program

Four of the six staff members, including both reading specialists, returned questionnaires usable for judging their satisfaction with the program. Here, as generally the case in the other three Title I projects, staff were either very positive at the beginning and remained so or they increased in their already positive orientation. Only one of the four reported an initially ambivalent response. This, as reported, was due to the member's lack of experience with the use of machines as a basic part of a reading program, which caused the member to be initially anxious about the students' reactions to them.

Although their responses at the end were reported as positive, all has a desire to change the program in various ways. Their recommendations fell generally under two headings: staffing and students. In summary, their recommendations were: 1) increase educational assistants [to 3 or, if possible, 4 rather than 2] to afford as much individualization of instruction as possible since many of the students are severely retarded and require a one-to-one approach, 2) separate from regular remedial classes students who are often truant, have deep emotional problems, or who have definite perceptual disabilities, and 3) expand the program to permit more in-district children and perhaps a few brighter students who could probably benefit greatly from the enrichment materials being used. One staff member noted that the purchase and use of more visual materials (e.g., filmstrips with captions) for slower readers and additional auditory materials (e.g., story tapes and records) to develop listening skills would also be helpful.

Assessment of Program Effects

To assess whether the program influenced pupil attitudes positively toward such matters as reading, books, and self-image, semantic differentials were administered in November and then again during the month of April. On each semantic differential pupils were presented with six pairs of opposites: good-bad, right-wrong, fun-not fun, happy-sad, safe-unsafe, and fair-unfair. These adjective pairs have been found to load very highly on the evaluative dimension (a measure of attitude) of semantic differentials. A child's responses to the five pairs of items for each of the fifteen concepts were summed. These summated scores could range from a low of six, which would reflect the most negative attitude possible toward an object on this test, to a high of 18, which would reflect the strongest positive orientation. Pre-and post scores for attitudes toward fifteen objects were calculated for each student. Originally, six classes of students from the two junior high school labs were randomly selected for testing. The resulting sample of slightly over 100, however, was reduced to 76 because various students left the school before the end of the year or were absent at the time of pre-or-post testing.

To determine whether the average reading level of pupils exposed to the program was substantially raised, pre-and-post MAT test scores for the above mentioned, randomly selected students were gathered. Each student's anticipated post test score was calculated according to the procedures spelled out in the discussion of the Intensive Reading Program. Teachers were asked to complete a student characteristics questionnaire for each of these randomly selected students in order to conduct the correlational analyses also discussed in the section on the Intensive Reading Program.

Changes in Average Reading Scores as Measured by the Metropolitan Achievement Test

The two-way analysis of variance program, Anovar, was employed here as in the analyses of the Intensive Reading Program and Reading Skills Centers. On the basis of their prior school performance up to the time of their exposure to the reading laboratory, the predicted mean reading score of the group of 76 randomly selected students was 56.5 months, as reported in Table IIIa. The actual post test mean was 63.3 months. The difference between these means, significant beyond the .001 level, reveals an average increase in the reading level of the group of nearly seven months above the expected increase for a seven month period. This additional increase reflects a "staggering" compensatory effect. Summarized in Table IIIb are the overall statistics for pre, anticipated, and post testing on the MAT as well as gains in reading.

As in the analysis of reading gains in the Intensive Reading and Reading Skills Center Programs, the frequencies of gains in reading for students in each junior high lab as well as overall across labs are summarized in Table IIIc. The change scores ranged from -11 to an incredible +35. Eight of the 76 or 11% of the sample showed gains of 2-1/2 to 3 years in reading during this seven month period. Discussion of this high rate of extreme gains will be reserved for the conclusions-and-recommendations section. Suffice it to say here that the rate of normal, above normal, and far above normal gains is very high.

Changes in Pupil Attitudes Toward Reading, School and Self

The results of the attitude testing are reported in Table IIId. It was expected that pupils, as a result of their experiences in the reading laboratories, would develop more positive attitudes toward such matters as reading, school, themselves, and their futures. The table, however, reveals

no significant changes in their attitudes in the hoped for positive direction. Indeed, with the exception of one significant change, which is in a negative direction, the table reveals that the group's attitudes, initially positive in these areas at the outset of the program, remained surprisingly stable throughout the year.

The group demonstrated stable, positive attitudes in the following areas: reading (#4), learning (#5), selves (#10), college (#14), and their future lives (#15). The one significant pre-post difference was in their attitude toward their school, where they became somewhat less positive going from 13.74 on the pre-test to 12.80 on the post test. Since the possible range of mean scores was from a low of 6.00 to a high of 18.00, this shift does not represent a very important change. The children were also asked about their attitudes toward television and sports, areas in which no basic changes were expected. Their consistent responses here give more confidence in the reliability of their answers.

Since the analysis of these data reveals that students who were exposed to the reading labs exhibited initially positive attitudes that remained so throughout the year, two interpretations are possible. The labs did not aid in increasing the students' already positive attitudes. Another interpretation, more reasonable in light of their initially strong positive feelings, is that the students' experiences in the labs helped to support their initially positive feelings. In light of the kinds of gains they made in their level of reading skills, the latter interpretation seems even more reasonable.

Differential Effect of the Junior High Reading Labs on Students' Gains in Reading According to Selected Student Characteristics

The variation in gains in reading among students in the Junior High

Reading Labs was even far more dramatic than in the other two programs. Some students increased over 30 months in reading. Student characteristics are summarized in Tables V and VI of Appendix A:1. Unfortunately, sufficient data for only five conditions were available for correlational analysis.

As seen in Table IIIe, of the five conditions, school absence and classroom misconduct were moderately and negatively correlated at a significant level with reading gain. Sex, place of residence and grade level were not found to be related.

Conclusions and Recommendations

In terms of its major objective-raising the reading levels primarily of Open Enrollment students who were at least 2 years behind in reading-the evidence made available and analyzed reveals outstanding success. Generally speaking, students with good records of attendance and who exhibited little misconduct in the classrooms tended to gain more in reading than their classmates who did not. In terms of changing the attitudes of these children toward school, reading, self, and their futures, the program seemed to have no effect; however, the students were already very positive at the outset. This may be the reason behind the "apparent" lack of program success with changing attitudes.

It is appropriate at this time to discuss the enormous gains which substantial numbers of students manifestly made in reading. It is difficult to understand how so many students who were relatively poor readers could exhibit 2 to 3-1/2 years of real gain in reading during a seven month treatment. Several factors taken together could explain why such gains wer spuriously high. First, a number of these students may not have actually been poor readers, but for many reasons may have tested poorly on the MAT's administered to them earlier. Second, less difficult forms of the MAT might have been used in the post testing thereby raising the

scores. Third, consistent reporting errors may have occurred, errors that led to exaggerated gains in some students where none really existed. Attempts to check on the prevalence of each of these possible conditions (as well as other sources of error) were made. None led to satisfactory answers. The plain fact is that some of the gains are so enormous that it is difficult to interpret all of it as effects of the actual treatment. Having said this, it is also important to stress that a great deal of these gains are no doubt real and attributable to the intense program that was in operation at the two junior high schools.

1. With this important caveat in mind, the first recommendation is still that the laboratories should be refunded for next year, at least at the same level as they were this year. To the extent that money, facilities, and the availability of competent personnel permit, consideration should be given to expanding the Laboratories in order to include more students. Under no circumstances should their concentrated focus be "watered down," in attempting expansion.
2. The second recommendation is that the District must support (both in greater cost and cooperation) more control over and surveillance of the pre-and-post MAT testing procedures by next year's evaluators, as well as their greater control over subsequent recording of the scores of the students used in their analyses. This recommendation should be followed as a precaution in the Intensive Reading Program and the Reading Skills Centers as well.
3. With the desired attitudes of students in the program as high as they were at the outset of the program this year, there is little sense in making this a central objective of future laboratories

assuming that future targets are similar. Much more attention, instead, should be given to developing ways of getting students to attend laboratories without absence and minimizing misconduct.

4. Possible follow-up studies of students in this year's programs should be discussed by the District's administration and local Board. In the final analysis only longitudinal studies of students as they progress though their years at school will provide a sound basis for remedial programs, especially in reading.

TABLE IIIa

Anticipated as Compared to Actual Post Test MAT Means of a Group of Randomly Selected Students Exposed to the Junior High Reading Laboratories for Seven Months (N=76)

Source	Mean Square	D.F.	F Ratio	P
Total	120.0603	151		
Between	185.7546	75		
Trials	1772.1118	1	54.799	<.001
Error	32.3385	75		
Anticipated Group Mean for Reading	= 56.5 months (5 years, 6.5 months)			
Actual Group Mean for Reading	= 63.3 months (6 years, 3.3 months)			

TABLE IIIb

Summary MAT Data for a Randomly Selected Sample of 76 Students Exposed to the Junior High Reading Laboratories

Variable	$\bar{X}$	S D	(N)
Pretest Score on the MAT	51.47	8.17	(76)
Anticipated Post Test Score	56.47	8.77	(76)
Post test Score on the MAT	63.30	11.88	(76)
Actual Gain in Reading for a Seven-Month Period	11.84	8.16	(76)

TABLE IIIc

Actual Gains in MAT Reading Scores Among 76 Students Exposed to Junior High Reading Laboratories over a Seven-Month Period

Gain in Reading During a Seven-Month Treatment	Percentage* of Students in Each Category by School		
	School A (N=41)	School B (N=35)	Overall (N=76)
No Gain, Instead Loss	7% (3)	-	4% (3)
Below Normal Gain (0-5 mos.)	23% (9)	11% (4)	18% (13)
Normal Gain (6-8 mos.)	12% (5)	15% (5)	13% (10)
Above Normal Gain (9-12 mos.)	24% (10)	31% (11)	27% (21)
Far Above Normal Gain (13-23 mos.)	27% (11)	28% (10)	27% (21)
Outstanding Reading Gains (24+mos.)	7% (3)	15% (5)	11% (8)
	100%	100%	100%

*Rounded to nearest percentage point

TABLE IIId

Comparison of Pre and Post Test Means of Junior High Students on 15 Attitudes Related to Reading, School, Self, and Future as Measured by Semantic Differentials (N=76)

Object of Attitude	Means Pretest	Means Posttest	F Ratio (D.F.=1275)	Significance of Difference
1. Television	15.09	15.55	1.67	N.S.
2. Sports	15.59	15.66	0.11	N.S.
3. Books	15.34	15.18	0.35	N.S.
4. Reading	15.82	15.76	0.03	N.S.
5. Learning	16.00	16.03	0.03	N.S.
6. My School Skills	15.03	14.55	1.62	N.S.
7. My School This Year	13.74	12.80	4.10	<.05
8. My Day at School	14.04	14.04	0.00	N.S.
9. My School Teachers this Year	13.91	13.66	0.35	N.S.
10. Me as a Person	15.75	15.53	0.86	N.S.
11. What my Teachers Think of Me	13.97	13.79	0.27	N.S.
12. What the Kids at School Think of Me	15.14	15.04	0.11	N.S.
13. What I think of the Other Kids at School	14.36	14.39	0.10	N.S.
14. College	15.50	15.38	0.10	N.S.
15. What My Life Will Be Like When I Grow Up	16.29	16.25	0.02	N.S.

TABLE IIIe

Correlations of 5 Characteristics of Students
in Junior High Reading Laboratories with Their Gains
in Reading on the MAT

Rank	Characteristics[a] for which Sufficient Data were available for this Project	(N)	Correlation with Gain in Reading	Significance
1	School Absence	(65)	-.38	**
2	Classroom Misconduct	(76)	-.29	**
3	Sex	(76)	.04	N.S.
4	Place of Residence	(76)	.03	N.S.
5	Grade Level	(68)	.01	N.S.

[a]Based on teacher estimates of
*.05 level of significance (one-tailed)
**.01 level of significance (one-tailed)

Environmental Center

Program Objectives

The purpose behind the Environmental Center Program was to develop in low-achieving, fifth grade children a greater understanding and appreciation of the interdependency of plants, animals, and their natural habitants. The Program placed special emphasis upon the problems of ecology, pollution, and man's effect on his surroundings.

Program Operations

The Center, located in P.S. 286, is physically housed in two adjacent rooms. One is a laboratory classroom containing a small natural science library, work tables, acquaria of various kinds, plant-life, microscopes, and other natural science equipment and materials. The other room contains a mini-museum with both live and preserved flora and fauna. Charts and instructions for using various parts of the museum accompany the displays, which are arranged in the room so as to permit classes of children to move about easily.

The two lowest-achieving, fifth grade classes having large numbers of OE students from most of the 22 elementary schools in the District participated. The Center's staff consisted of a teacher-director, a naturalist and a paraprofessional aide. Before the first visit of a class to the Center, the staff went to the school to prepare the students for the experience. Although each class's regular teacher was expected to be in attendance during the entire program, no formal participation was expected.

Typically, a class bussed to and from the Center, spend four days there, two days one week and two days the following week. During these four days, pupils were given lessons in ecology and conservation and engaged in many natural science activities including the observation and

performance of experiments, exploration of the mini-natural museum, and the study of plant and animal life and interdependency, using film strips, books, and other materials. Nearly all the classes took at least one field trip, usually to Jamaica Bay Wildlife Refuge, Plumb Beach, or Prospect Park. While there, the staff would lecture on what the students were seeing as it related to ecology and conservation, and they brought back various specimens for further study and experimentation. Nearly 700 children were exposed to this program during the year.

Staff Reactions to the Program

The teacher-in-charge, naturalist, and paraprofessional were asked about their reactions to the program and for any recommendations they might make for future programming. All three reported having very positive initial responses to the program; two reported, however, that while still positive about the program, their feelings have changed slightly. One said that the Board of Education's "bureaucratic institutionalism" led to some "disillusionment," and the other said that the bus company (which is critical in the successful operation of the program) presented almost more trouble than what it was worth. All three proposed that certain changes be made in subsequent programs, which are in summary: 1) increase staffing to handle more students, 2) do not limit classes to only those heavy with open enrollment students, and 3) allow the staff to make bus arrangements directly, rather than through the Bureau of Pupil Transportation, since difficulties with scheduling buses through the Bureau presented great problems and seriously influenced the successful implementation of the program for many of the classes during the year.

Assessment of Program Effects

To assess the degree to which the students developed greater understanding of plant life, animal life and their interdependency, 75 students from three randomly selected classes, which visited the environmental center, were tested at three points in time by means of the knowledge test developed by NYU. They were tested in October, then just before they were exposed to the program, and then in April, after their exposure. Simultaneously with the knowledge testing, they were administered a series of semantic differentials to determine their attitudes toward pollution, ecology and other related areas. This meant that students had two pre-tests and a post test relating to their knowledge and their attitudes.

For each of the fifteen semantic differentials used in assessing student attitudes (e.g., pollution, study of ecology), six bipolar adjective pairs were employed. Scores could range from a possible low of 6 to a high of 18 for each of the fifteen concepts, as in the case of the Junior High semantic differentials. The knowledge test was divided into two parts. In the first part, children were asked to list mammals, birds and plants living naturally in Brooklyn. They were asked to draw a tree and to list the essentials that a tree would need to grow, and to specify a number of living plants and animals that need trees. Finally, they were asked to complete two puzzles which, when successfully completed, reflect how living plants and animals in two instances depend upon each other for their survival. In the second part, they were asked to agree or disagree with a number of statements about conservation, pollution, and man's dependency on the world surrounding him. Scores for each part were computed and analyzed separately.

Because of the extended nature of the testing, absences of a number of students did not permit them to participate in all the necessary testing, and reduced the number of usable subjects to 59. The 59 were then randomly assigned to one of two groups, one designated as the control group and the other as the experimental group. The mean scores on the two pre-tests for knowledge and attitudes of the "controls" were compared to the second pre-test and post test scores of the "experimentals."

Changes in Knowledge About and Understanding of Ecology and Conservation

In order to determine whether the program raised the level of these 5th graders' factual information about ecology and conservation, or their understanding of these two important topics, the pre-test and post test mean scores of the controls and the experimentals on the two part knowledge instrument were computed and compared, using the Anovar computer program to determine level of significance.

The results of this analysis are presented in Table IVa. Possible scores on the first part of the test (facts about animals and plants) could range from zero to 25, while scores on the second part (understanding of conservation and ecology) could range from a low of 10 to a high of 30. As is evidenced in this table, the mean scores of both groups on part I fell about mid-way on the scale. The experimentals started out with somewhat more factual knowledge (12.53) than the controls (10.17), the difference significant at the .02 level. The table also reveals that, while each group's mean score on the post test changed slightly, the difference between the two post test means (which was smaller than pre-test differences) was not significant. And, moreover, these shifts between each groups pre-and post test mean scores were not in the expected direction. The controls, without treatment, went up (10.17 to 12.57) rather than remaining the same, and the experimentals, with treatment,

went down (12.53 to 11.23).

The findings on part two differed only slightly. Both groups initially fell at the mid-point on the scale of understanding. Furthermore, while the pre-and post test means for the controls did remain fairly stable this time (21.17 and 21.38), so did the pre-and post test means for the experimentals (23.97 to 23.00), with the small change in their mean score again in the unexpected direction, dropping from 23.97 to 23.00. The experimentals started out with somewhat more understanding of ecology and conservation than the controls (the difference significant), and this difference did not appreciably change as a result of the treatment.

Changes in Attitudes Toward Ecology and Conservation

In Table IVb, the results of the attitudinal testing are summarized. With one exception, no significant differences were found between the controls and experimentals on either the pre-tests or post tests. The one exception, "Seagulls who eat fish," proved to be in the wrong direction. The controls demonstrated a more positive attitude at the time of the post test than the experimentals.

It was hoped that children, when exposed to the Center, would become more understanding of the necessary predatory nature of animal life and thus less negative toward specific examples of it, such as birds who eat fish in order to survive. Whether or not they received treatment, both groups evidenced stable and relatively negative attitudes toward pollution, bumble bees, frogs who eat grasshoppers, and eskimoes who kill seals and fish. They exhibited stable, positive attitudes toward planting trees, neighborhood clean-up clubs, kids who belong to 4-H clubs, and the study of ecology. The remaining areas of attitude (also stable) fell in between these two extremes. The results suggest that any differences between controls and experimentals in the attitudes they had about the

aspects of ecology and conservation measured by the semantic differential instrument, existed before the exposure of the experimentals to the program, and that the program had no effect on altering these to any appreciable extent.

Conclusions

These findings support the conclusion that the environmental center had little affect on the knowledge or attitudes of students exposed to it as they relate to ecology or conservation. However, before any judgment is made about this program's actual or potential value, a number of points should be considered. First, the instruments used to measure changes in attitudes and knowledge, developed specifically for this program, might benefit from further refinement and thereby become more sensitive to actual changes in children. Although we have confidence in them, it is possible that, with greater refinement, changes which might have occurred in the areas measured would become apparent. Moreover, it is also possible that the Center affected children in areas of knowledge and attitudes not measured by these instruments. These are two general criticisms that can be made of all tests and that have greater relevance here, since the tests were designed especially for this program and, therefore, underwent minimum refinement before they were employed. They cannot be dismissed as possible reasons for the lack of program effects evidenced.

However, there are several issues related to the basic conception and operation of the Center which, more likely, account for the absence of positive results. The first relates to the duration of the program for any one child. Although the experience a child had at the Center "sounds" substantial, in actuality he or she typically spent two days one week and two days a second week, with a large portion of the four days spent riding

buses to and from the home school and Center or from the Center to field trip locations. Often, because of bus scheduling problems, even less time was spent at the Center. Moreover, there were no systematic follow-up activities in the home schools built into the program. It is overly optimistic, if a program is to lead to significant and lasting changes in the knowledge and attitudes children have about ecology and pollution, to expect an, at best, four-day experience to do it.

The second point, somewhat related to the first, has to do with the kind of child who was exposed. The two, academically-lowest 5th grade classes from each of the District's elementary schools were selected as subjects, for the earnest purpose of enrichment. Yet, these pupils represent that position of the overall student body which learns at the slowest rate and which, therefore, requires the most time. Moreover, many of these students not only have learning difficulties but also fail to follow directions well and are dicipline problems. It may be somewhat unrealistic to expect a bright, well-behaved class to get very much from the four day experience at the Center, and it seems much more unrealistic to expect these slow, difficult classes to do so, even though direct observations of classes and the reports of the Center's staff showed that the large majority of children enjoyed the time spent. In short, though enjoyable to both children and staff, the program may be misdirected in its conception as well as too brief for any group of students to reap any benefit.

Recommendations

The staff of the Center was hardworking and very enthusiastic about the subject matter, the nature of its jobs, and the children who came. The District clearly got "its money's worth in staff effort this year,

if not in program effects. Thus, the following recommendations are proposed:

1. Before deciding whether or not to recycle the program, which must ultimately be decided by its effects on children, the District's Central Administration and local board should meet with the Center's staff to discuss the value of trying some combinations of the following steps:
   a) cut down on the number of 5th grade, low-achievement classes attending the Center during the year and expand the time any one class spends there, up to two or three full weeks;
   b) increase the formal involvement of classroom teachers in follow-up activities, back in their home classrooms, related to the experiences the children had at the Center;
   c) expand the program to include classes closer to the other end of the achievement spectrum;
   d) specify exactly what changes are expected in children and whether they are measurable as well as worth the money and effort.
2. With the start-up costs already paid for, if concrete agreements about changes in program conception and a more reasonable itenerary of classes for the next year can be worked out, NYU recommends recycling for one year, and, if at the end of this period no real effects in the children's level of knowledge or attitudes are detected, the program should be discontinued.

TABLE IVa

Pre- and Post Test Means of Control and Experimental Groups of 5th Grade Children on Knowledge About Animal and Plant Facts and Understanding of Conservation and Ecology

Test	Group Means Controls (N=29)	Group Means Experimentals (N=30)	F Ratio (D.F.=1858)	Level of Significance
Knowledge I (Facts about animals and plants)				
Pretest	10.17	12.53	5.28	.02
Posttest	12.57	11.23	1.98	N.S.
Knowledge II (Understanding of Conservation and Ecology)				
Pretest	21.17	23.97	16.53	$<.01$
Posttest	21.38	23.00	4.44	$<.05$

TABLE IVb

Comparison of Group Means of 5th Grade Control and Experimental Children on Pre and Post Tests of 15 Attitudes Toward Conservation and Ecology as Measured by Semantic Differentials

Object of Attitude	Group Means Controls (N=29)	Experimentals (N=30)	F Ratio (D.F.=1 58)	Level of Significance
1. POLLUTION				
Pretest	7.17	7.13	0.00	N.S.
Posttest	7.14	6.93	0.15	N.S.
2. BIRDS WHO EAT WORMS				
Pretest	13.55	12.23	2.32	N.S.
Posttest	13.76	12.97	0.87	N.S.
3. SEAGULLS WHO EAT FISH				
Pretest	11.48	11.10	0.13	N.S.
Posttest	13.51	11.43	4.70	<.05
4. TV COMMERCIALS ABOUT POLLUTION				
Pretest	13.59	13.67	0.00	N.S.
Posttest	13.86	14.27	0.17	N.S.
5. CARS				
Pretest	12.52	12.10	0.16	N.S.
Posttest	12.66	12.33	0.12	N.S.
6. PLANTING TREES				
Pretest	16.10	15.83	0.12	N.S.
Posttest	15.79	17.00	2.63	N.S.
7. BUMBLE BEES				
Pretest	10.10	9.73	0.15	N.S.
Posttest	10.83	9.97	0.67	N.S.
8. FROGS WHO EAT GRASSHOPPERS				
Pretest	11.83	11.13	0.46	N.S.
Posttest	11.55	12.67	1.36	N.S.
9. NEIGHBORHOOD CLEAN-UP CLUBS				
Pretest	16.66	16.40	0.14	N.S.
Posttest	16.07	16.10	0.00	N.S.

TABLE IVb (Cont'd.) Comparison of Group Attitudes

Object of Attitude	Group Means Controls (N=29)	Experimentals (N=30)	F Ratio (D.F.=1'858)	Level of Significance
10. "NO FISHING" AND "NO HUNTING"SIGNS				
Pretest	12.62	12.53	0.00	N.S.
Posttest	12.62	12.70	0.00	N.S.
11. KIDS WHO BELONG TO 4-H CLUBS				
Pretest	16.62	16.47	0.04	N.S.
Posttest	16.03	15.73	0.11	N.S.
12. TURNING OFF THE WATER WHILE BRUSHING YOUR TEETH				
Pretest	12.52	14.23	0.40	N.S.
Posttest	12.52	12.53	0.00	N.S.
13. WILD LIFE PRESERVES				
Pretest	14.14	13.13	0.88	N.S.
Posttest	15.57	14.30	2.40	N.S.
14. ESKIMOES WHO KILL SEALS AND FISH				
Pretest	9.24	9.07	0.03	N.S.
Posttest	10.10	10.60	0.18	N.S.
15. STUDY OF ECOLOGY				
Pretest	15.31	15.77	0.37	N.S.
Posttest	15.14	15.40	0.11	N.S.

District Administration

The avowed purposes of the administration of the Title I program is to supervise the implementation of projects, specify project objectives, administer funds, resolve problems stemming from projects and communicate the projects' progress to community representatives.

The one administrator in this program has demonstrated a willingness and a reasonable degree of competence in undertaking an unreasonable task. Regardless of who had this position structural problems would inhibit the realization of effective administrative practices. Cited below are descriptions of several of these more egregious problems.

With eleven projects in more than a score of schools it is virtually impossible for the Title I supervisor to actively monitor each one. Moreover, despite the desire of principals to house projects in their schools, they, with few exceptions, do not take an interest in supervising them. As a result projects tend to operate autonomously within schools, remaining detached from the regular academic programs.

Related to this matter is the general articulation problem that besets the district. Project goals are not clearly understood at any administrative level. Moreover, aside from the target populations, there appears to be no discernible distinction between Title I and State Urban programs. Project objectives seemingly reflect a desire to conform to New York State guidelines rather than project purposes. As a result neither principals nor implementors accept the objectives, although their projects are evaluated by those standards. It is apparent that these goals are vitiated at every administrative level once removed from district headquarters. And even in the district office, coordination between general educational policy and Title I projects is often lacking.

This articulation problem applies not only to communication between district administration and schools, but within these institutions as well. In Schools where there is no evident supervision of paraprofessionals, teachers and paraprofessionals not only perceive projects differently, but act on different sets of assumptions about projects. For example, in one project teachers thought paraprofessionals were assistants available for any assignment; paraprofessionals, on the other hand, perceived their duties as a teaching function exclusively. Similarly, employees in the district office and members of the community advisory board have different conceptions of the administration's role. And the differences were very often significant.

In a questionnaire specifically designed to obtain an "ideal view" of the district administration's role it was apparent that the divergence of opinion was very great on several critical issues. Even on the question of "taking responsibility for the execution of all Title I and State Urban Projects" (what would appear to be the singularly significant activity) one respondent answered that one should spend "none of one's time" doing that, while others suggested one should spend "some of one's time" and "a good deal of one's time" on that activity. Obviously this was one of many issues on which there was no concensus. (See Appendix 10). While this would not be critical if authority were clearly delineated, the combination of obscure lines of authority and a lack of consensus on role definition contribute to a haphazard communication process at every administrative level in the district.

Another problem which selectively interferes with the smooth operation of projects is the awkward relationship between principals and paraprofessionals. Although principals have a mandate to deploy their staff, including paraprofessionals, in such a way

as to ensure school safety and effectiveness and to monitor the activities of all employees in the school, a conflict of interest among paraprofessionals often inhibits the realization of these goals. It has been observed that in several instances paraprofessionals hold positions on the Advisory Board or as officers in the P.T.A. As members of these organizations they are often able to evaluate the very same principals who are presumably evaluating them. Under these conditions the exercise of the principal's authority is severely limited, even in those cases when paraprofessionals scrupulously avoid having decisions in one role influence those in another.

Perhaps the most serious omission on the administrative level is not having directors for each project. Undoubtedly financial and manpower constraints created this situation, but the confusion surrounding goals can be partially attributed to the lack of identifiable project directors. Although it is always difficult to retrench, this author would suggest the elimination of marginal projects in order to hire directors in those projects that have the potential for effectuating significant changes.

Recommendations:

1. The administrative staff, in consultation with the advisory board, should attempt to redress the articulation problem by pursuing one or a combination of the following options:

   a) Orient principals about project goals;

   b) Select directors for each project who meet with their staff periodically;

   c) Have principals, directors, advisory board and administrative staff identify educational objectives before proposals are submitted to the N.Y. State Office of Education;

d) Encourage cooperation between teachers and paraprofessionals by planning training sessions chaired by the principal.

2. In order to avoid the "conflict of interest" issue from arising, the district should take a stand even more firm than federal guidelines and prohibit the hiring of any paraprofessional who is simultaneously a member of the P.T.A. or the Advisory Board.

3. There must be more communication between the administrative staff and the Advisory Board. Since assumptions and goals are so dramatically different in each group, a way should be found to test assumptions and present a unified front for the statement of programmatic goals.

Appendix A:1

Name_____
Title_____
Program_____
School_____
District_____

New York University
Center for Educational Research

GENERAL AND TERMINAL OBJECTIVES

1. What is the project you are participating in supposed to achieve?

2. What do you think the project can achieve by June 1?

3. What specific activities characterize your project?

4. How would you describe your program?

5. Describe the degree and types of support your program receives from community residents and organizations?

6. How cooperative is local administration?

7. How did your project begin?

8. Who was responsible for its initiation?

9. What is your conception of an ideal program (list activities)?

10. Number of students in program and attendance rate?

11. How do you think the program should be evaluated?

12. What are the greatest problems in implementing the program?

13. Have you sufficient resources to achieve your goals?

Reading Skills Center Program - District 22

Below are some questions that will assist the evaluation team in judging the effectiveness of state and federally supported programs. The time you take in answering them will be most appreciated and will help improve these programs. Thank you very much for assisting us in this important evaluation task.

1. What is your present response to the Reading Skills Center Program in your school? ___1. Very Positive ___2. Positive ___3. Ambivalent ___4. Negative ___5. Very negative

2. What was your initial response to it at the beginning of this academic year? ___1. Very Positive ___2. Positive ___3. Ambivalent ___4. Negative ___5. Very Negative

   If your initial response and your present response are different, below, please briefly explain why.

3. Please circle the amount of time that your class spends each day during a typical week at the Reading Skills Center.

	Minutes						
Monday	0	10-30	35-45	50-65	70-85	90-105	110-120
Tuesday	0	10-30	35-45	50-65	70-85	90-105	110-120
Wednesday	0	10-30	35-45	50-65	70-85	90-105	110-120
Thursday	0	10-30	35-45	50-65	70-85	90-105	110-120
Friday	0	10-30	35-45	50-65	70-85	90-105	110-120

4. Would you change the program in any way from the way it is now? ___Yes__ No

   If Yes: Please indicate below under the appropriate heading(s) what you would do.

   Staffing:

   Students:

   Materials:

   Program Organization:

   Other:

5. In addition to time spent at the Skills Center, do you devote a regular amount of classroom instruction time specifically to reading each week? ___Yes ___No

If Yes: Please indicate the day and amount of time.

	Minutes						
Monday	0	10-30	35-45	50-65	70-85	90-105	110-120
Tuesday	0	10-30	35-45	50-65	70-85	90-105	110-120
Wednesday	0	10-30	35-45	50-65	70-85	90-105	110-120
Thursday	0	10-30	35-45	50-65	70-85	90-105	110-120
Friday	0	10-30	35-45	50-65	70-85	90-105	110-120

Please characterize your approach to reading during these periods by checking the appropriate lines below:

As this academic year has progressed I have:

a) ___spent more time ___spent about as much time ___spent less time on individualized instruction.

b) ___spent more time ___spent about as much time ___spent less time on small group activities.

c) ___spent more time ___spent about as much time ___spent less time on large group activities.

d) ___spent more time ___spent about as much time ___spent less time on instruction with materials like games, phonics cards, audio-visual aids.

e) ___spent more time ___spent about as much time ___spent less time on fostering classroom interaction in forms such as board work, dramatizations, discussions and follow-up lessions.

f) ___spent more time ___spent about as much time ___spent less time on using students to teach other students.

If you feel that your approach to reading in the classroom has changed during this year, please note briefly why this occurred.

DISTRICT 22 EVALUATION

Below are some questions that will assist the evaluation team in judging the effectiveness of state and federally supported programs. The time you take in answering them will be most appreciated and will help improve these programs. Thank you very much for assisting us in this important evaluation task.

1. Your position: ___1. Classroom Teacher ___2. Paraprofessional ___3. Specialist
___4. Other (specify)_____

2. What is your present response to this program?
___1. Very Positive ___2. Positive ___3. Ambivalent ___4. Negative ___5. Very Negative

3. What was your initial response to it at the beginning of this academic year?
___1. Very Positive ___2. Positive ___3. Ambivalent ___4. Negative ___5. Very Negative

If your initial response and your present response are different, below, please briefly explain why.

4. Would you change the program in any way from the way it is now? ___Yes ___No

If Yes: Please indicate below under the appropriate heading(s) what you would do?

Staffing:

Students:

Materials:

Program Organization:

Other:

DISTRICT 22 EVALUATION

Below are some questions that will assist the evaluation team in judging the effectiveness of state and federally supported programs. The time you take in answering them will be most appreciated and will help improve these programs.

When there is no evidence available on student records, we would appreciate your best estimate.

Thank you very much for assisting us in this important evaluation task.

STUDENT'S NAME_____ 1 2 3 4 5 6 7 8 9

(Circle his or her present grade level)

TEACHER-S NAME_____

1. Is this student bussed into the district? Yes___ No___ Don't Know___

2. How often has the student changed his place of residence during the past two years? Circle the appropriate number. 1 2 3 4 5 or more

3. Has this student repeated any grades? Yes___ No___ Don't Know___
If yes, please circle the total number of times. 1 2 3 4 5 or more.

4. Does this student come from an unstable family situation (where serious marital or family conflict is evident? Yes___ No___ Don't Know____

5. To your knowledge, does this student have a well-balanced diet? Yes___No___ Don't Know_____

6. Circle the percentile below nearest to the student's percentile score on the Reading Readiness Test taken during the first grade.

0 10 20 30 40 50 60 70 80 90 100

7. To what extent does this child's parents participate in school activities?
_____(1) Not at all
_____(2) Occasionally
_____(3) Often

8. Characterize his or her general academic performance.
_____(1) Superior
_____(2) Above Average
_____(3) Average
_____(4) Below Average
_____(5) Poor

9. How much time does this child spend daily in school specifically on reading?
_____(1) Up to 1 hour
_____(2) 1 hour up to 1 1/2 hour
_____(3) More than 1 1/2 hours

District 22 Evaluation Continued

10. What is the size of this child's instructional group in reading?
_____(1) Individualized
_____(2) Small group (up to 10)
_____(3) Entire class

11. Primarily to what reading program has the student been exposed this academic year?
_____(1) Programmed instruction (like Distar)
_____(2) Basal reader
_____(3) Individualized program (like SRA)
_____(4) Individualized reading through classroom library books
_____(5) Other, please specify_____

12. Approximately how often has this student been absent from school this academic year?
_____(1) Seldom or never absent (missing 0 - 7 days)
_____(2) Occasionally absent (8 - 15 days)
_____(3) Often absent (16 - 30 days)
_____(4) Almost never in attendance

13. From what you know, how would you characterize this student's typical classroom conduct?
_____(1) Cooperative
_____(2) Indifferent
_____(3) Uncooperative

14. From your knowledge, what degree of psychological assistance does this student appear to require?
_____(1) Considerable
_____(2) Some
_____(3) None at all

15. To your knowledge, to what extent has this student participated in compensatory reading programs in the past, either in school or non-school programs?
_____(1) None
_____(2) Several
_____(3) Many

16. Father's Occupation
_____(1) Professional-Managerial
_____(2) Clerical-Sales
_____(3) Skilled Worker
_____(4) Semi-skilled Worker
_____(5) Unskilled Worker
_____(6) Unemployed
_____(7) No basis for judging
_____(8) Not present in the home

17. Mother's Occupation
_____(1) Professional-Managerial (other than educational)
_____(2) Educational (Teacher)
_____(3) Educational (Paraprofessional)
_____(4) Secretarial-Clerical
_____(5) Factory Worker
_____(6) Domestic
_____(7) Homemaker
_____(8) No basis for judging
_____(9) Not present in the home

TABLE 1

Frequency Distributions of
Selected Personal and Social Characteristics of 46*
Randomly Selected Students from the Intensive Reading Program

Characteristic	Categories	N
1. Sex	Male	55
	Female	37
2. Grade	2nd	36
	3rd	26
	4th	30
3. School	A	9
	B	9
	C	43
	D	31
4. Balance in Diet	Yes	27
	No	3
	Blank	16
5. Psychological Stability	Low	10
	Moderate	18
	High	16
	Blank	2
6. Family Stability	Yes	6
	No	23
	Blank	17
7. Father's Presence in Home	Yes	15
	No	11
	Blank	20
8. Father's Occupation	Professional-Managerial	2
	Clerical-Sales	1
	Skilled	2
	Semi-Skilled	7
	Unskilled	4
	Blank	30
9. Mother's Presence	Yes	28
	No	1
	Blank	17
10. Mother's Occupation	Professional-Managerial	1
	Educational (teacher)	-
	Educational (Paraprofessional)	7
	Secretarial-Clerical	5
	Worker in Factory	-
	Domestic	3
	Homemaker	11
	Blank	19

*Variables 1, 2, 3 are for the total sample.

Based on Teacher's estimates (from records when available). Original Sample included 92, but returns on the Student Characteristics Questionnaire were low.

TABLE 2

Frequency Distributions of Selected Educational Characteristics of 46* Randomly Selected Students from The Intensive Reading Program

Characteristic	Categories	N
1. Place of Residence	Open Enrollment	45
	In-district	1
2. Changes of Residence	None	32
	One	8
	Two or More	5
	Blank	1
3. Repitition of Grades	None	38
	One	4
	Two or More	3
	Blank	1
4. Parental Participation in School Activities	Not at all	20
	Occasionally	21
	Often	4
	Blank	1
5. General Academic Performance	Superior	-
	Above Average	4
	Average	12
	Below Average	20
	Poor	10
6. School Time Spent on Reading	Up to One Hour	1
	One to One and half hours	10
	More than 1-1/2 hours	35
7. School Absence	Seldom (0-7 days)	12
	Occasionally (8-15)	26
	Often (16-30)	8
	Almost Never Here	-
8. Classroom Conduct	Cooperative	26
	Indifferent	10
	Uncooperative	10
9. Prior Exposure to Compensatory Reading Programs	None	11
	Several	23
	Many	1
	Blank	11

*Based on Teacher's estimates (from records when available). Original Sample included 92, but original returns on the Student Characteristics Questionnaires were low.

TABLE 3

Frequency Distributions of
Selected Personal and Social Characteristics* of 88
Randomly Selected Students from the Reading Skills Centers

Characteristic	Categories	Frequency (N=88 for each variable)
1. Sex	Male	49
	Female	39
2. Grade	3rd	28
	4th	20
	5th	40
3. School Center	A	20
	B	20
	C	28
	D	20
4. Balance in Diet	Yes	70
	No	2
	Blank	16
5. Psychological Stability	Low	11
	Moderate	37
	High	40
6. Family Stability	Yes	23
	No	43
	Blank	22
7. Father's Presence in Home	Yes	47
	No	12
	Blank	29
8. Father's Occupation	Professional-Managerial	3
	Clerical-Sales	4
	Skilled	10
	Semi-Skilled	9
	Unskilled	21
	Blank	41
9. Mother's Presence	Yes	62
	No	1
	Blank	25
10. Mother's Occupation	Professional-Managerial	1
	Educational (Teacher)	1
	Educational (Paraprofessional)	2
	Secretarial-Clerical	14
	Worker in Factory	-
	Domestic	5
	Homemaker	37
	Blank	28

*Based on Teacher's estimates (from records when available).

TABLE 4

Frequency Distributions of Selected Educational Characteristics* of 88 Randomly Selected Students from the Reading Skills Centers

Characteristic	Categories	Frequency (N=88 for each variable)
1. Place of Residence	Open Enrollment	30
	In-district	58
2. Change of Residence	None	68
	One	15
	Two or More	4
	Blank	1
3. Repitition of Grades	None	75
	One	10
	Two or More	-
	Blank	3
4. Parental Participation in School Activities	Not at all	64
	Occasionally	19
	Often	5
5. General Academic Performance	Superior	-
	Above Average	4
	Average	35
	Below Average	23
	Poor	26
6. School Time Spent on Reading	Up to One Hour	15
	One to One and half hours	24
	More than 1-1/2 hours	49
7. School Absence	Seldom (0-7 days)	36
	Occasionally (8-15 days)	29
	Often (16-30 days)	21
	Almost Never Here	2
8. Classroom Conduct	Cooperative	41
	Indifferent	27
	Uncooperative	20
9. Prior Exposure to Compensatory Reading Programs	None	74
	Several	12
	Many	-
	Blank	2

*Based on Teacher estimates (from records when available).

TABLE 5

Frequency Distributions of
Selected Personal and Social Characteristics* of 76
Randomly Selected Students from the Junior High Reading Labs

Characteristic	Categories	Frequency (N=76 for each variable)
1. Sex	Male	31
	Female	45
2. Grade	7th	28
	8th	26
	9th	22
3. School Lab	A	41
	B	35
4. Balance in Diet	Yes	19
	No	8
	Blank	49
5. Psychological Stability	Low	11
	Moderate	14
	High	10
	Blank	41
6. Family Stability	Yes	16
	No	11
	Blank	49
7. Father's Presence in Home	Yes	10
	No	2
	Blank	64
8. Father's Occupation	Professional-Managerial	3
	Clerical-Sales	-
	Skilled	3
	Semi-Skilled	1
	Unskilled	3
	Blank	66
9. Mother's Presence	Yes	17
	No	1
	Blank	58
10. Mother's Occupation	Professional-Managerial	2
	Educational (Teacher)	-
	Educational (Paraprofessional)	1
	Secretarial-Clerical	2
	Worker in Factory	-
	Domestic	-
	Homemaker	12
	Blank	59

*Based on Teacher's estimates (from records when available).

Table 6

Frequency Distributions of Selected Educational Characteristics* of 76 Randomly Selected Students from the Junior High Reading Labs

Characteristic	Categories	Frequency (N=76 for each variable)
1. Place of Residence	Open Enrollment	51
	In-District	25
2. Changes of Residence	None	73
	One	2
	Two or More	1
3. Repitition of Grades	None	10
	One	17
	Two or More	2
	Blank	47
4. Parental Participation in School Activities	Not at All	60
	Occasionally	16
	Often	-
5. General Academic Performance	Superior	-
	Above Averagw	-
	Average	-
	Below Average	28
	Poor	7
	Blank	41
6. School Time Spent on Reading	Up to One Hour	19
	One to One and half hours	57
	More than 1-1/2 hours	-
7. School Absence	Seldom (0-7 days)	15
	Occasionally (8-15 days)	33
	Often (16-30 days)	13
	Almost Never Here	4
	Blank	11
8. Classroom Conduct	Cooperative	42
	Indifferent	20
	Uncooperative	14
9. Prior Exposure to Compensatory Reading Programs	None	-
	Several	2
	Many	35
	Blank	39

*Based on Teacher's estimates (from records when available).

Appendix A:2
Appendix A:3
Appendix A:4
Appendix A:5

Limited copies of these preliminary questionnaires mentioned in the report are available to qualified personnel on request from the Center for Educational Research and Field Services.

Appendix A:6

ENVIRONMENTAL CENTER

NAME_____

1. Name three (3) mammals that live in Brooklyn naturally.

   a. _____

   b. _____

   c. _____

2. Name three (3) birds that live in Brooklyn naturally during spring and summer.

   a. _____

   b. _____

   c. _____

3. Name three (3) plants you see growing in Brooklyn.

   a. _____

   b. _____

   c. _____

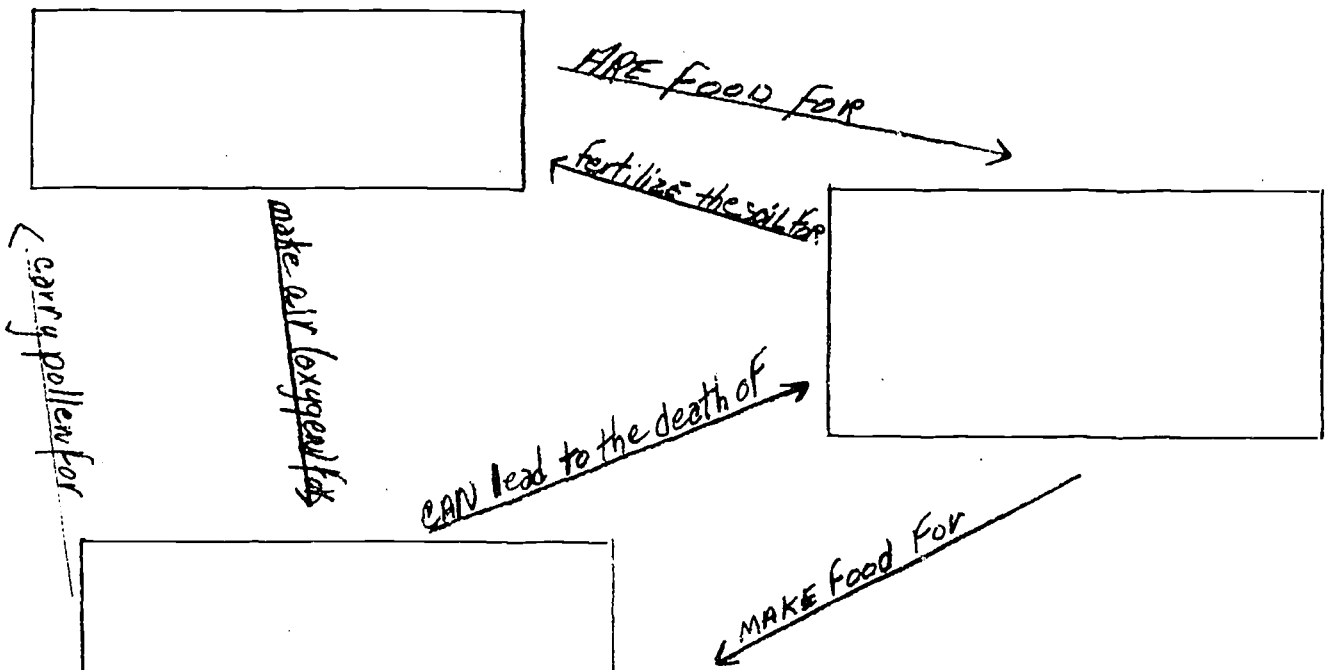
4. Draw a tree.

List the 4 most important things that a tree needs to grow.

Name 3 living things that need a tree.

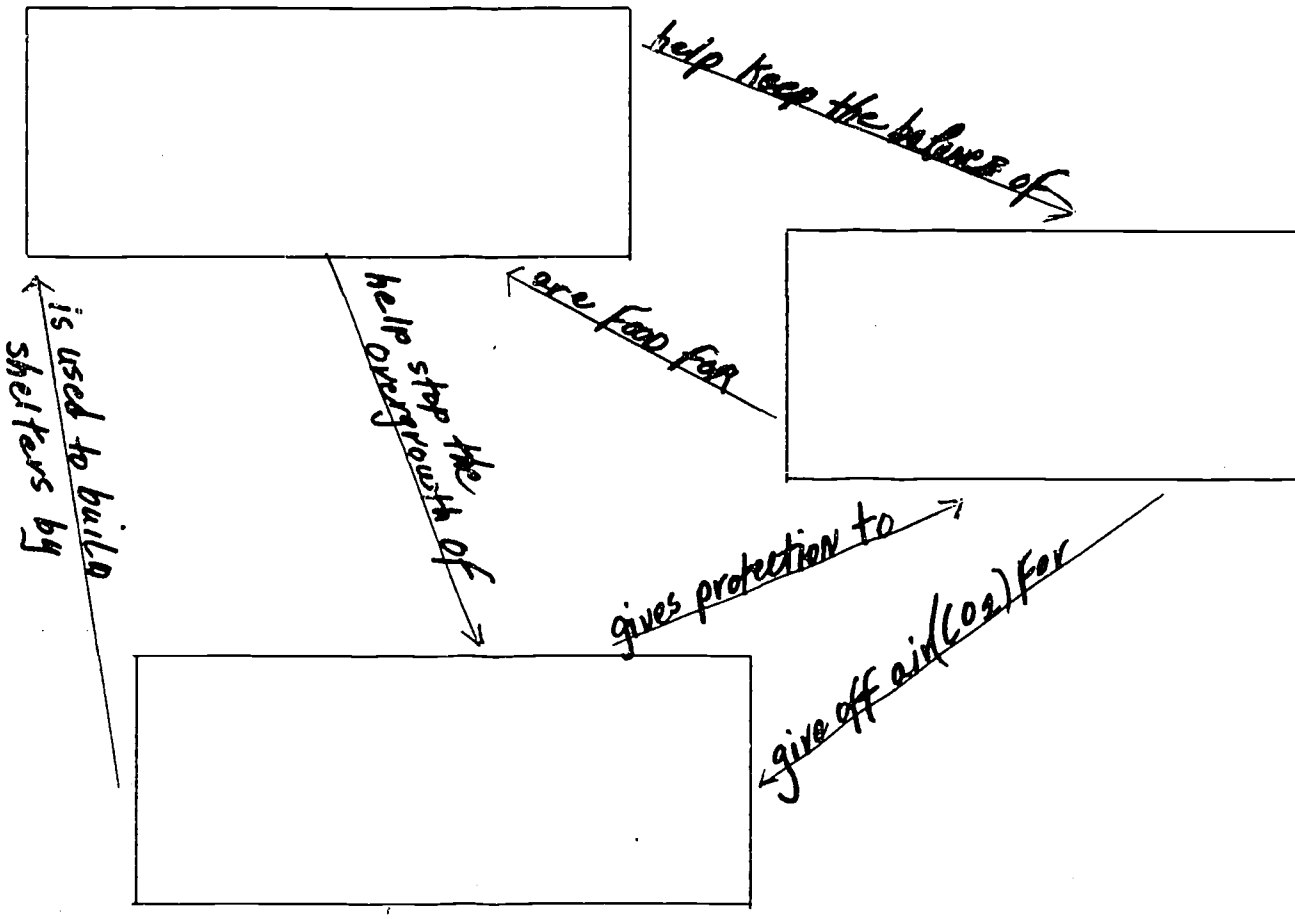
5. Who needs Whom? Here are three living things. If you put the right name in the correct box, you will see how they need each other.

MAMMALS GREEN PLANTS INSECTS



6. Who needs Whom? Here are three living things. If you put the right name in the correct box, you will see how they need each other.

SEA GULLS SEAWEED FISH



7. Here are some statements about the natural world. You may agree with, disagree with, or not be sure about each of them. After reading each statement, put an X on the line which shows how you feel.

		I Agree	I Disagree	I'm Not Sure
1.	Man depends on the natural world around him.			
2.	The population explosion is helping us conserve our resources			
3.	Sprays like D.D.T. should be used with caution because they may harm other living things.			
4.	Air, sunlight, water and rock last forever.			
5.	Soil, vegetation, animal life and fresh water can be made again.			
6.	All plant and animal life, including man can live very well without soil.			
7.	Forests are very important in preventing soil erosion and floods.			
8.	The rotation of crops and the addition of fertilizers hurt the soil.			
9.	Man, fire, insects, disease and wind are responsible for much forest destruction			
10.	Wildlife should be destroyed.			
11.	Wilderness is not valuable because no people live there.			
12.	As industry grows, the air pollution problem becomes more serious.			

Appendix A:7

DISTRICT 22 EDUCATION STUDY

This study is very important for making education better. We would like you to take part. THIS IS NOT A TEST and it will not take long. Thank you for your help.

Take a look at the next few pages. On each page is a word or phrase at the top, followed by opposites like GOOD and BAD, and RIGHT and WRONG. We want you to put an X on one of the three lines between the pairs of opposites. There are no right answers and no wrong answers. You are just going to show us how you feel about each word or phrase at the top. Your answers will be kept private. No one will see them.

Let's do a practice example together. Think of the word POLLUTION.

If you feel that pollution is mostly good, put an X on the line next to GOOD.

If you think that pollution is mostly bad, put an X on the line next to BAD.

If you feel that pollution is half good and half bad, put an X on the line in the middle.

If you can't decide where to put the X, put it on the middle line.

POLLUTION

GOOD	_____	_____	_____	BAD
RIGHT	_____	_____	_____	WRONG
FUN	_____	_____	_____	NOT FUN
HAPPY	_____	_____	_____	SAD
SAFE	_____	_____	_____	UNSAFE
FAIR	_____	_____	_____	UNFAIR

The following concepts were used:

1. Birds who eat worms
2. Sea gulls who eat fish
3. T.V. commercials about pollution
4. Cars
5. Bumble bees
6. Planting Trees
7. Frogs who eat grasshoppers
8. Neighborhood clean-up clubs
9. No fishing and no hunting signs
10. Kids who belong to 4-F Clubs
11. Turning off the water while brushing your teeth
12. Wildlife preserves
13. Eskimos who kill seals and fish
14. The study of ecology

Please fill in the following:

Your Name_____

Homeroom Teacher's Name_____

Date_____

Your Age_____

Boy_____ Girl_____

Your Grade_____

Appendix A:8

DISTRICT 22 EDUCATION STUDY

This study is very important for making education better. We would like you to take part. THIS IS NOT A TEST and it will not take long. Thank you for your help.

Take a look at the next few pages. On each page is a word or phrase at the top, followed by opposites like GOOD and BAD, and RIGHT and WRONG. We want you to put an X on one of the three lines between the pairs of opposites. There are no right answers and no wrong answers. You are just going to show us how you feel about each word or phrase at the top. Your answers will be kept private. No one will see them.

Let's do a practice example together. Think of the word TELEVISION.

If you feel that television is mostly good, put an X on the line next to GOOD.

If you think that television is mostly bad, put an X on the line next to BAD.

If you feel that television is half good and half bad, put an X on the line in the middle.

If you can't decide where to put the X, put it on the middle line.

TELEVISION

GOOD	_____	_____	_____	BAD
RIGHT	_____	_____	_____	WRONG
FUN	_____	_____	_____	NOT FUN
HAPPY	_____	_____	_____	SAD
SAFE	_____	_____	_____	UNSAFE
FAIR	_____	_____	_____	UNFAIR

The following concepts were used:

1. Sports
2. Books
3. Reading
4. Learning
5. My school skills
6. My school this year
7. My day at school
8. My school teachers this year
9. Me as a person
10. What my teachers think of me
11. What the kids at school think of me
12. What I think of the other kids at school
13. College
14. What my life will be like when I grow up

Please fill in the following:

Your Name_____

Homeroom Teacher's Name_____

Date_____

Your Age_____

Boy_____Girl_____

Your Grade_____