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ABSTRACT

The Central Elementary Secondary Education Act (ESEA) Remedial Services to Eligible Nonpublic School Pupils is a direct outgrowth of the ESEA Title I Act of 1965 and has been operating in New York City Public Schools since 1966. During the 1972-73 school year approximately 16,300 pupils were enrolled in the NPS program and were serviced by the following components: Corrective Reading, Corrective Mathematics, English as a Second Language, Clinical-Guidance, Speech Therapy, Homework Helper, and Services to Handicapped Children. Formerly the programs functioned as independent entities. This year, Federal and State guidelines required that children suffering from multiple handicaps be provided with concerted remedial services. Reading, Mathematics, and English as a Second Language were recognized as priority programs, to be supported by Clinical-Guidance, Speech, and the Homework Helper Program. The "umbrella" project, encompassing both instructional and supportive components, was conceived of in order to offer this spectrum of Remedial Services to Eligible Nonpublic School Pupils. Pupils receiving these supportive services had to be referred through the priority remedial instructional services. An overall evaluation sample of 30 schools was chosen in conjunction with the central offices of the NPS ESEA Title I program. (Author/JM)

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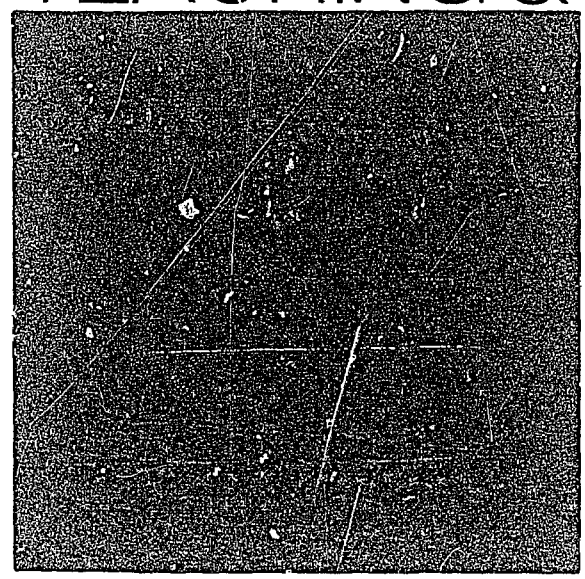

REMEDIAL SERVICES FOR ELIGIBLE NONPUBLIC SCHOOL PUPILS

1972-1973

Board of Education of the City of New York

FINAL REPORT

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FINAL REPORT

REMEDIAL SERVICES FOR ELIGIBLE NONPUBLIC SCHOOL PUPILS

Corrective Reading Services
Corrective Mathematics Services
English As A Second Language
Clinical-Guidance Services
Speech Therapy Services
Program for Handicapped Children
Homework Helper Program

An evaluation of a New York City School District educational project funded under Title I of the Elementary and Secondary Act of 1965 (PL 89-10) performed under contract with the Board of Education of the City of New York for the 1972-1973 school year.

Teaching & Learning Research Corp.
91-31 Queens Boulevard
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FUNCTION NO. 09-39625

"Umbrella"

REMEDIAL SERVICES FOR ELIGIBLE NONPUBLIC SCHOOL PUPILS

EXECUTIVE SUMMARY

The Central ESEA Remedial Services to Eligible Nonpublic School Pupils is a direct outgrowth of the ESEA Title I Act of 1965, and has been operating in New York City Public Schools since 1966. Eligibility for remedial services is determined by 1) residence in low income target areas and 2) educational deprivation.

During the 1972-73 school year approximately 16,300 pupils were enrolled in the NPS program and were serviced by the following components; Corrective Reading, Corrective Mathematics, English As A Second Language, Clinical-Guidance, Speech Therapy, Homework Helper and Services to Handicapped Children. Formerly the programs functioned as independent entities. This year, Federal and State guidelines required that children suffering from multiple handicaps be provided with concerted remedial services. Reading, Mathematics and English As A Second Language were recognized as priority programs, to be supported by Clinical-Guidance, Speech and the Homework Helper Program. The "Umbrella" project, encompassing both instructional and supportive components, was conceived of in order to offer this spectrum of Remedial Services to Eligible Nonpublic School Pupils. Pupils receiving these supportive services had to be referred through the priority remedial instructional services.

In order to facilitate the inter-relatedness of the "Umbrella" components, large and small group meetings were held with the program coordinators, field supervisors, Title I teachers and the Director and Assistant to the Director of the NPS ESEA Title I program. Principals were invited to participate in workshops to learn about the new "Umbrella" thrust. Small meetings were held for Title I personnel within schools, both with the nonpublic school staff and among the components, to discuss problems specific to the school and the individual students receiving services. Intercomponent staff meetings were designed to enhance morale, facilitate intercommunication, foster greater acceptance of the new guidelines and improve implementation of the program.

Evaluation Sample

An overall sample of 30 schools was chosen in conjunction with the Central offices of the NPS ESEA Title I program. Of the total population of schools receiving services, the stratified sample proportionally represents participation of schools by religious code and geographic area. In addition, the sample of 30 schools was chosen to proportionally represent combinations of services as well as individual "Umbrella" component services.

Corrective Reading

The Corrective Reading Program has been in operation in the New York City Public Schools since 1966 and is the most extensive remedial program in the NPS ESEA Title 1 Umbrella of services. Evaluation objectives were to determine: 1) if 80% of pupils in the program have improved in the areas of beginning reading, word attack skills and oral reading by 6 months; 2) if 80% of pupils enrolled in the program in the areas of comprehension skills of word meaning and paragraph comprehension have improved by at least 6 months; 3) if pupils enrolled in the program have shown evidence of good classroom performance in the areas of mathematics, social studies and science by achieving a passing grade in these subjects. The Dolch Word List or Gray's Standard Oral Reading Test, the Iowa Test of Basic Skills or the Metropolitan Achievement Test were used to measure the first two objectives. The third objective was measured by the comparison of pass/fail grades in subject areas from September, 1972 to June, 1973.

As a whole, the sample population made significant gains in word attack skills and oral reading. Analysis by grade level indicates that significant gains were achieved at all grade levels except 11 and 12. The Corrective Reading Program made a significant contribution to the reading growth of pupils enrolled in the program during the 1972-73 school year. In almost all cases 75% or more of the population received passing classroom grades. Recycling of the program for the 1973-74 school year is strongly recommended.

Corrective Mathematics

The Corrective Mathematics Program, in operation since 1966, currently includes about 120 teachers servicing approximately 160 nonpublic schools in grades 2 through 10. The evaluation objectives were: 1) the assessment of improvement by 80% of pupils in computational skills; 2) assessment of improvement by 80% of pupils in verbal problem solving and 3) whether 80% of the pupils being serviced manifested interest and curiosity. Pre and post administration of the Metropolitan Achievement Test was used in the measurement of the first two objectives and on-site observations, as well as responses by staff members to structured interviews were used to assess the third objective.

This program appears to be well organized and ably administrated, and should be continued. Students deriving real benefits from the program are evidence of the need for these services. This program has achieved the major objectives set for it for the 1972-73 school year. Such planned intervention, resulting in similar yearly gains, will do much to provide many students with the basic foundation that will greatly improve the prospect of their future education.

English as a Second Language

E.S.L. is one of the three priority instructional programs and has been in operation in the nonpublic schools since 1967. The evaluation objectives were: 1) to determine whether 90% of participating pupils increased by at least one grade level in ability to speak English; 2) to ascertain whether

75% of pupils in the program received passing grades of 65% or above in the subject areas of reading, mathematics, social studies and science. To measure the first objective, the New York City Scale of Pupils' Ability to Speak English and a Project Evaluation Test were used. To measure the second objective, pass/fail grades were collected by subject area and analyzed on a pre-post test basis. The two objectives were realized and recycling of the program has been recommended. Adding more supervisors to the program, intensifying teacher training and providing specific minimal goals for each grade level have also been suggested.

Clinical-Guidance

Students referred from primary remedial services for Clinical-Guidance were seen by guidance counselors, school psychologists, social workers, and in some instances, by school psychiatrists. Evaluation objectives were to ascertain: 1) whether 80% of referred pupils demonstrated positive, statistically significant achievement gains in remedial programs; 2) if at least one scale point of improvement in school adjustment was shown by 80% of the pupils serviced. Metropolitan Achievement Test scores in reading and mathematics were used to measure the first objective, A School Adjustment Scale, developed by the program coordinators, and a post referral rating scale, prepared by the evaluating agency, were used to measure the second objective.

There is strong support for the conclusion that clinical guidance services had a strong influence on the achievement, in subject areas, of the students being serviced. The changes in the behavior, school adjustment and social adjustment of the treatment group was even more striking. The data indicates that Clinical-Guidance services resulted in positive changes in the important adjustment areas. It is recommended that the program be continued next year.

Speech Therapy

Speech Therapy has been operating as a Title 1 remedial service in nonpublic schools since 1966. During the 1972-73 school year eligibility for supportive speech services was predicated on referral from one of the academic target areas; reading, mathematics and/or ESL. Evaluation objectives were to ascertain: 1) whether 80% of students referred for speech services improved in communication abilities, and 2) the percent of referred students discharged from the program as "corrected" (minimum criterion level of 20%). Pre and post analysis of the Photo Articulation Test scores was used to measure degree of improvement in communication abilities and pre and post recordings of samples of speech were rated by speech therapists as well as by two independent judges to establish a validity rating for teacher ratings.

Analysis of pre and post teacher ratings on the P.A.T. indicated that 25.5% of the children being serviced were discharged as corrected of their diagnosed speech defect. 84.7% of pupils improved their scores on the P.A.T. from pre to post administration. The evaluator found adequate speech defect diagnosis, but inadequate awareness of language interference patterns and non-speech related subjective judgements being occasionally confounded with diagnostics. 25% of all therapy cases were considered as foreign language interference. Content information obtained from other services, mainly reading,

Speech cont'd.

was incorporated into speech lessons. Diagnostic materials, therapy aids and teacher training sessions were all in evidence of being amply provided, supervision was adequate with very good communication between teachers and the Central office. Drawing caseloads from children enrolled in one of the target academic areas resulted in some confusion and dissastisfaction on the part of speech therapists. Recycling of the program was recommended.

Services to Handicapped Children

The major thrust of the program was to provide remedial reading and speech therapy services to intellectually and physically handicapped children in the onpublic schools. In addition, limited social and psychological services in addition to art education, had been offered. Methodology, media and equipment appropriate to the nature of their handicap was used. Evaluation objectives were to assess: 1) improvement in reading development by at least two months; 2) improvement in psycholinguistic functioning in reading and language by at least two months; 3) improvement in oral, receptive and expressive language and speech facility (2 month criterion); 4) improvement in self-concept and 5) the effects of art instruction on the pupils in the program. Instruments used in the evaluation were: a) Peabody or M.A.T. b) Illinois Test of Psycholinguistic Abilities c) Photo Articulation Test d) Project Rating Scale and e) Rating scale for Art Instruction. Qualitative assessment was based on site observations, case studies and rating scales.

The program received an excellent rating. Services were generally performed at a high level of competency by well trained, motivated professionals receiving high quality training and support from field supervisors and the Central office. The objectives of the program for the 1972-73 school year appear to have been reached. Pre and post test results confirm positive growth in academic areas and personal functioning. Recycling of the program in the coming school year is strongly recommended.

Homework Helper Program

The Homework Helper Program, a tutorial program in reading and mathematics, is presently operating in ten nonpublic schools. Approximately ten tutors, mainly high school students, tutor from 20 to 30 younger children in each school under the supervision of a Master Teacher. The program offers a unique opportunity for students to receive personalized help with reading and arithmetic on a concentrated basis over the school year. The child benefits not only from the specific remedial instruction being offered, but also from the personal attention he receives from his tutor.

The two evaluation objectives were to ascertain: 1) degree of improvement on reading and mathematics scores in areas in which children were being tutored; 2) degree of improvement in attitudes towards self and school. To measure the first objective, pre and post scores on reading and mathematics parts of the Metropolitan Achievement Test were used. As a control group was not available students acted as their own controls. The second objective was evaluated by means of a student attitude questionnaire developed by the

Homework Helper cont'd.

evaluating agency and the program coordinator. Qualitative assessment of the program was based on site visits to the three sample schools. Both of this year's objectives appear to have been realized. It has been recommended that this program be recycled and expanded to service more schools.

Principal Questionnaire

Of 28 questionnaires returned, 17 principals felt that Title 1 remedial services were meeting their pupils' needs. Others felt that the new State Education Department mandated eligibility requirements were too narrow. More service in all components was requested, while some schools not presently being serviced by speech, E.S.L. and Homework Helper would like to have these services included. Interrelatedness of services and teacher competence were highly rated. Principals generally responded favorably to the multiple thrust of the Umbrella Program although some felt that many problems need to be worked out; e.g. eligibility requirements, program priorities, scheduling problems. In those components where this evaluating agency was responsible for 1971-72 evaluations, principals appeared to be better informed about the program than last year. Many of them made a concerted effort to include Title 1 remedial workers in school staff meetings. In addition, they fostered interaction between classroom teachers and Title 1 workers by encouraging staff visits to remedial classes as well as by making these visits themselves.

Regression Analysis

With the exception of the ESL post test criterion, the attempt to relate such predictors as speech or Clinical-Guidance attendance and ratings did not reveal any additional useful information. In every case the analysis revealed that pre test data accounted for more of the criterion variable than did the predictor variables - an expected outcome.

The significant findings in the case of the ESL test as the criterion should not be dismissed too lightly simply because it is in the minority. From a pupil personnel service point of view it might well be appropriate to hypothesize that speech and guidance services would be more related to ESL change before a similar relationship is noted in the traditional academic area of reading and mathematics.

It is this evaluator's opinion that follow-up regression analyses are indicated using this year's predictor and criterion variables as predictors for next years' and the following years' criterion scores.

Summary of Recommendations:

1. All components of the Title I ESEA Program for Eligible Pupils in Nonpublic Schools should be recycled for the 1973-1974 school year.

2. The inter-relatedness concept of services to nonpublic schools, known as the "Umbrella" Program, should be continued and strengthened.

3. Closer communication should be fostered between the nonpublic school staff and Title I remedial teachers.

4. The schools should schedule meetings between school staff and Title I remedial staff on a regular basis.

5. Intercomponent meetings of Title I personnel within schools should be scheduled on a regular basis.

6. More workshops to reinforce and upgrade teacher skills should be scheduled.

7. Funds should be made available to enable per diem workers to attend teacher workshops.

8. Additional funding should be allocated for instructional materials.

9. Effort should be made for greater parental involvement; e.g. letters to parents and intercomponent meetings with parents, to explain and reinforce the benefits of the remedial programs.

10. The Dolch Word List should be dropped from the Corrective Reading Program as a formal evaluation instrument, and future evaluation objectives should be based primarily on results of silent reading measures.

11. In the Corrective Mathematics Program, more effective use of diagnostic materials should be sought.

12. The use of an individualized mathematics study program should be explored to foster greater flexibility of instruction and service pupils capable of working on their own.

13. Instructional objectives and learning tasks for the E.S.L. Program should be explicitly stated, and specific program objectives should be provided for each grade level.

14. For the evaluation of the Clinical-Guidance component, the research design should account for the fact that scholastic changes are effected slowly over a period of time and a two year time frame for measuring academic changes would be appropriate.

15. Career development and educational guidance should be formally incorporated into the Clinical-Guidance Program.

16. Diagnostic records and analysis in the Speech component should be more clinically and descriptively defined, so as to minimize subjective evaluative judgements for non-speech behaviors. Speech therapists should be more knowledgeable in the area of appropriate reading materials for diagnosis of specific speech disorders.

17. In the Services to Handicapped Pupils Program, reading test scores from only one test should be used if possible, for all students. The ITPA should not be used on a routine basis for collection of pre and post test instructional data.

18. The Homework Helper Program should be expanded to service a greater number of schools. More principals should be made aware of the unique features and benefits of this program.

19. Data analysis was hindered due to: 1) discrepancies between MIR form requirements and evaluation analysis requirements, and 2) the early deadline for completion of MIR forms. It is therefore recommended that all evaluation objectives be made totally congruent with MIR requirements, and further, that the MIR deadline be extended to allow a more appropriate time span for proper data analysis.

20. A review of State Education Department eligibility requirements for pupils should be undertaken to determine if eligibility for supportive services of Clinical-Guidance, Speech and Homework Helper should be predicated solely on enrollment in the priority instructional services of Corrective Reading, Corrective Mathematics and English As A Second Language. The possibility of utilizing alternative criteria should be explored.

Chapter I DESCRIPTION OF N.P.S. TITLE I REMEDIAL SERVICES

A. HISTORY OF PROGRAM

The Central E.S.E.A. Title I Remedial Services for Eligible Nonpublic School Pupils is a federally funded program operating in approximately 225 Nonpublic Schools in New York City during the 1972-73 school year.

The year 1965 marked the passage of Public Law 89-10, the Elementary and Secondary Education Act. The Act required that the local education agency (in this instance the Board of Education of the City of New York) provide special educational services for educationally deprived Nonpublic School enrolled pupils.

The Nonpublic Schools being serviced are divided into religious groups including Roman Catholic, Hebrew Day, Episcopal, Lutheran, Ukranian Catholic, Greek Orthodox and other nondenominational schools. Initially a Committee of Nonpublic School Officials was formed to work with the Board of Education to ascertain existing needs and target areas containing concentrations of socio-economically deprived pupils. Today the "Standing Committee" consists of religious representatives, the Board of Education representatives from the NPS ESEA Title I Central Office, and a parent group. The Standing Committee meets on a regular basis to discuss implementation of the program.

The Title I Remedial Services for Eligible Nonpublic School Pupils began with a six week Clinical-Guidance after-school program and a Corrective Reading program in the Spring of 1966. In September of that year, Corrective Mathematics, Services to Handicapped Children and Speech were added to the panoply of in-school remedial services. Clinical Guidance continued as a dual, in-school out-of school program, and then became solely an in-school program. English As A Second Language was made an official part of the Title I services to eligible Nonpublic School pupils in 1967, and Homework Helper was added in 1970. From its inception the focus of services was on the eligible child and not on the school per se. These are the seven component services presently being offered to eligible Nonpublic School pupils.

State Education Department guidelines required an assessment of the total percentage of low-income children from 5 to 17 years of age residing in a City School District. In New York City, prior to the 1972-73 school year, 36% of these children came from low-income families. Thus, those public school attendance areas with populations of 36% or more economically deprived children became Title I target areas. Any educationally deprived child residing within a target area was potentially eligible for Title I services, regardless of whether he attended public or Nonpublic School.

In 1972-73 approximately 36,000 New York City Nonpublic School pupils conformed to the dual criteria for Title I eligibility; 1) residence in a low-income target area, and 2) educational deprivation. The Board of Education criterion for educational deprivation is a child whose total reading scores on standardized reading tests fall below the 24th percentile. These children were placed on eligibility lists and from these lists pupils were chosen to receive specific remedial services. In rank order, services were to be concentrated on the following grades: a) Preschool through Grade 3, b) Grades 4 - 6, and c) Grades 7 - 12.

The program was designed to provide a saturation of services to project participants, with a $400 per pupil expenditure for the 1972-73 school year allotted for eligible nonpublic school pupils being serviced.

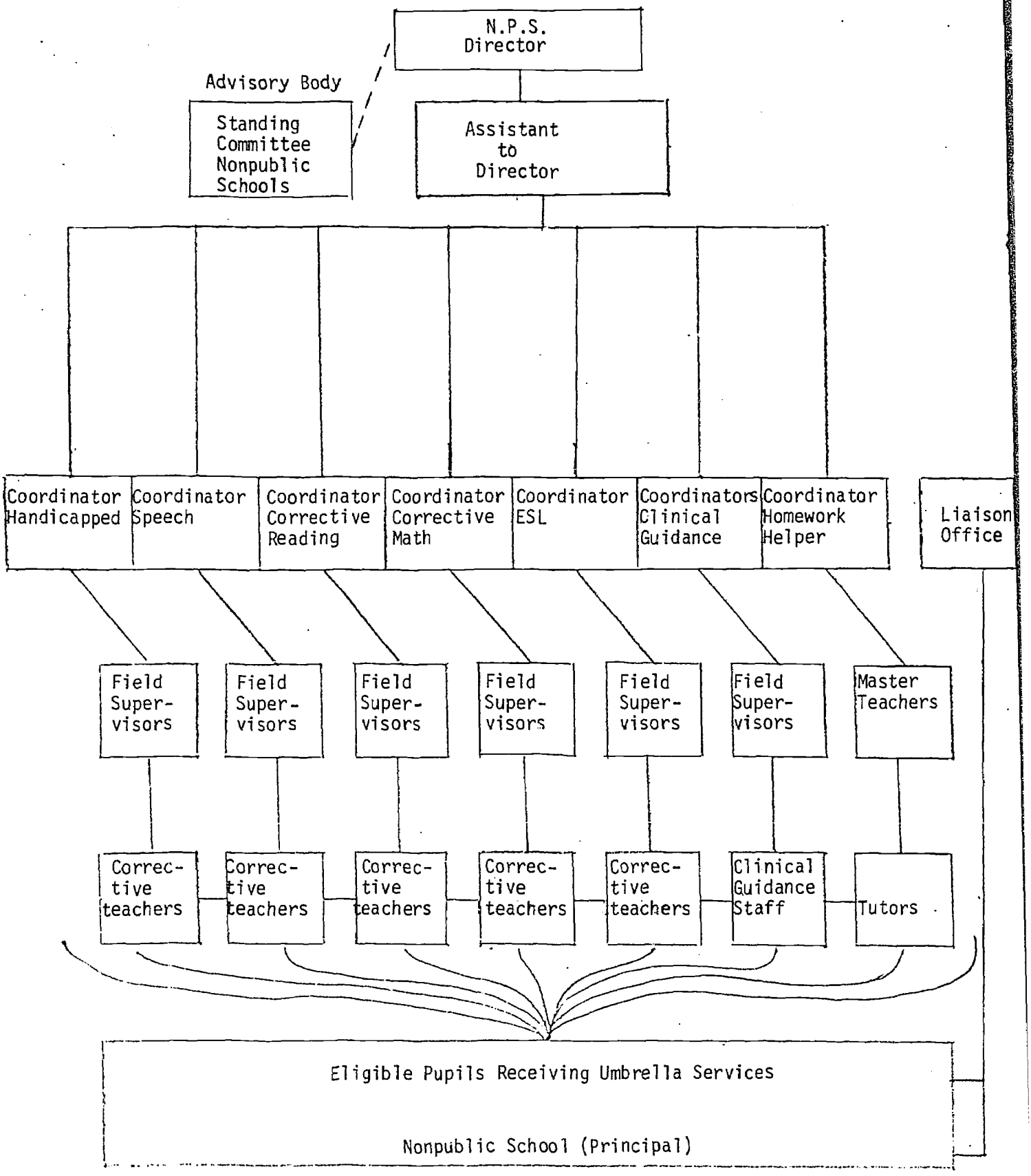
Formerly each component service was offered independently and children could be serviced by one without being enrolled in any other remedial program. It was not unusual, however, for the same child to be seen by more than one corrective teacher. (Children falling under the criteria of socially and economically disadvantaged were often deficient in more than one area.) This year the thrust evolved as an interdependence of services, reflected in the concept of the 'Umbrella" program, with disabilities in reading, mathematics, and language to be treated by a multiple effort. Direct personal services were to be provided to the educationally disadvantaged in all these activities. Remedial Reading, Remedial Mathematics and English as a Second Language, designated by the State Education Department as priority programs, were to be supported by Clinical-Guidance, Speech Therapy and Homework Helper services . These in turn were to be amplified from the specialized setting of the corrective class into the regular nonpublic school classroom, as well as the home.

A child seen by a speech therapist, social worker or clinician would necessarily be referred from one (or more) of the primary services, i.e. reading, mathematics and E.S.L. Similarly, a child in the Homework Helper Program would be referred from the Corrective Reading and/or Corrective Mathematics Program. The Program for Handicapped Children services designated students to improve their educational functioning, meet their special needs and enhance their academic potential. This program has its own teachers and workers who provide remedial reading, speech therapy and supportive clinical services.

Each remedial service has its own staff, headed by a program coordinator. Under the program coordinator are the field supervisors and office staff as well as the Title 1 remedial teachers and workers carrying the services to the nonpublic schools. The Clinical-Guidance component has two coordinators; one works directly with the guidance staff while the other, affiliated with the Bureau of Child Guidance, coordinates the efforts of social workers, school psychologists and psychiatrists. The Central offices of the program are located at 141 Livingston Street, Brooklyn, New York, part of the New York City Board of Education complex. The coordinators and the Assistant to the Director are responsible to the Director of the NPS ESEA Title 1 Program, who in turn is responsible to the ESEA Title 1 office of the Board of Education of the City of New York.

Provision has also been made for the professional development of teaching staff and the upgrading of ancillary services. Remedial teachers generally work with ten pupils in each session, for periods of from 40 minutes to one hour, and each child is seen from a maximum of 5 times a week to once a week, depending on the program priorities. Teachers work a 6½ hour day, with time for lunch and a preparation period. On occasion teachers use this preparation period to tutor individual pupils, see a parent or confer with a classroom teacher. Teachers are responsible for providing individual and group instruction, program planning, preparing instructional materials, testing of pupils, attendance and other record keeping.

Organization Chart
Central Offices, Nonpublic School
E.S.E.A. Title I Services



The program offers comprehensive guidelines for the interrelationship of every component with other components of the "Umbrella".* Much stress was placed on the elements common to various programs and the manner in which one supports the other, i.e. language handicapped children faced with a cumulative deficit in reading and mathematical skills were referred from the E.S.L. Program to the Corrective Reading and Corrective Mathematics Programs. Learning disabled children unable to benefit significantly from corrective programs due to emotional, social or functional problems, were referred for clinical and guidance services to enhance their chances for success in all learning situation. Speech handicaps, often discovered concomitant with instruction in English as a Second Language, need the supportive service of a speech therapist. "The cumulative deficit in the skills of reading and mathematics experienced by the non-English child will be compounded if he is not treated for the added burden of a speech handicap." Children enrolled in the priority programs received supportive instruction by Homework Helper tutors to reinforce needed skill instruction, in those schools where this program was in operation.

B. IMPLEMENTATION OF INTERRELATEDNESS CONCEPT

In order to facilitate the "Umbrella" concept and implementation of the new guidelines in the daily operation of the remedial services, intercomponent conferences were held at various levels. To facilitate attendance by Title I staff in all of the 31 districts participating in the program, nine large group conferences were scheduled by the Central NPS ESEA Title I offices at sites all over the city. The conferences held from the first part of December, 1972, through the beginning of February, 1973, were attended by nearly 600 staff members, including the Director and Assistant to the Director, Program Coordinators, Field Supervisors, remedial teachers and Clinical-Guidance workers.

These meetings, attended by all "Umbrella" components, covered such matters as: ESEA Title I as categorical aid, pupil eligibility, the nature of the services offered, input from the State Education Department, coordinated services for eligible disadvantaged children (the Umbrella project itself), communication between components, modes of communication and communication with nonpublic school staff. Intercomponent forms under discussion, and distributed at the meetings, were: Intercomponent Communication NPS Form #2; Speech Therapy Referral form; Clinical-Guidance referral forms and rating scales; Speech defects-classification and description form; Correlated Vocabulary for Speech Therapists (R-11); Rating Oral Language Ability form; Vocabulary for Verbal Problems and Vocabulary for Mathematical Terms.

Common problems identified at these meetings were: Several components working with the same child causing conflicts in scheduling with other Title I services and with the regular school instructional program; the reluctance of students to leave their classrooms; teachers unwilling to have their pupils absent themselves for remedial instruction and parents not wanting their children to leave the classroom for remedial instruction.

* The Program of Services to Handicapped Children will, due to its highly specialized nature, be examined separately from other components, in Chapter 7.

To effectuate the implementation of the "Umbrella" Program, Title I teachers were asked to submit the names of students being serviced to each of the other remedial workers in the school. Reading and speech teachers were to include mathematics vocabularies in pupil activities and all Title I services were to be planned in consultation with the school principal. To the extent that it was feasible, pupil programs were scheduled to avoid conflicts with other remedial services and with the regular school instructional program. The role of the principal in eliciting the cooperation of classroom teachers, pupils and their parents was recognized as being of paramount importance.

In a further effort to attenuate, and when possible, resolve these problems, and to enhance the encompassing aspects of the Umbrella concept, small staff meetings in individual schools were scheduled in include classroom teachers, school administrators and on occasion, parents of the pupils in the program. These meetings thus emerged as mutual problem solving workshops.

Scheduling of in-school monthly meetings (in some cases weekly) was hampered by the schedules of the workers in the schools. Rarely were all of the components represented in a single school on a single day. To overcome this difficulty, some workers were able to switch days on occasion, or make an extra trip to be present at one of these meetings. In other cases, however, this impediment was never fully overcome.

Field Supervisors reported that: intercomponent mailboxes were established in many schools to facilitate interchange of communication regarding pupils (confidential material was placed in sealed envelopes); there was greater knowledge about children involved in more than one Title I service, and more harmony and idea sharing among Title I services than existed previously. Teachers more readily referred to the expertise of another member of the Title I team in making a diagnosis of a child's problem; there was an interchange of books and other instructional materials and data pertaining to the pupils; and a better understanding of the "Umbrella" concept providing remedial and supportive therapeutic services to the educationally deprived child.

Following are examples of ways that the "Umbrella" concept was being implemented in the schools, excerpted from Field Supervisors' reports, and based on their observations made on site visits to schools receiving Title I remedial services:

1. Reading equipment was shared with speech teachers who in turn selected particularly difficult words for children in both the reading and mathematics components. These teachers were able to utilize them in their corrective classes, thereby reinforcing the work of the Speech teacher.

2. In a particular school, the guidance counselor and the corrective reading teacher conducted workshops for parents of children they were servicing, to discuss goals, materials being used, and how parents could help the children at home to reinforce the goals of the program. By having joint workshops, the counselor and reading teacher were further reinforcing the concept of inter-relatedness of services in the parents' awareness as well as for school staff members.

3. The Homework Helper Program Master Teacher met with the reading teacher and the principal of one school to plan the integration of reading needs of children in the Corrective Reading Program with with the Homework Helper Program. The Mathematics and Reading Coordinators, supervisors and teachers met with Master Teachers and Coordinator of the Homework Helper Program to discuss materials and activities; Corrective Mathematics Teachers offered to prepare individual guidelines for tutors working with particular children in the Homework Helper Program.

4. Teacher workshops were conducted in several schools, integrating Title I staff in an effective manner with faculty members. As a result of these meetings, school staff were able more easily to call upon Title I workers for help with children in the program. When meetings were held with the NPS faculty, administrative Title I staff were able to sensitize them to the needs of the target population in an effort to insure proper focus of teacher effort.

5. Parent meetings were established at several schools, and conducted by full Title I staff.

6. E.S.L. teachers were at times able to help classroom teachers in the selection of appropriate instructional activities for those students with particular learning difficulties.

7. Clinical-Guidance staff were able to contribute their understanding of possible causes for lack of progress to Title I teachers as well as to school staff. Suggestions for revised teaching approaches to meet the special needs of students with emotional and learning difficulties were offered where appropriate.

In sum, the Intercomponent staff meetings at both levels were designed to enhance staff morale, facilitate intercommunication, foster greater acceptance of the new "Umbrella" guidelines and generally improve the implementation and tone of the program.

C. SELECTION OF EVALUATION SAMPLE:

It was fitting in keeping with the "Umbrella" concept that the total program be evaluated by one agency. Not only was each component evaluated separately but an effort was made to measure the effectiveness of the inter-relatedness of the entire program.

An overall sample of thirty schools was chosen in conjunction with the staff of the Nonpublic Schools, E.S.E.A. Title I Central Office, in light of the focus of the evaluation on the "Umbrella" concept. The stratified sample proportionally represents participation of schools by religious code and geographic district in the overall population of the 225 N.P.S. schools serviced by the program. Further, the sample was stratified so that not only the individual "Umbrella" component is represented, but the inter-relatedness of combined services as well.

Of the thirty schools selected for the total Nonpublic School evaluation sample 16 included the English As A Second Language program which was in keeping with the proportion of the total Nonpublic School students receiving ESL assistance. In these 16 schools data was collected for all students for whom a pre and post test score was available.

Major modifications in the total 30-school sample were made for two components, as follows:

1. 16 of the 30 sample schools include the English As A Second Language Program, in keeping with proportional representation of this component in the total population.

2. 3 of the 30 sample schools include the Homework Helper Program (2 Hebrew Day and 1 Roman Catholic) in the ratio of the 10 schools in the total serviced population; i.e. 7 Hebrew Day and 3 Roman Catholic (codes 1 and 2). See Table 1.1.

On the following pages will be found two sets of tables:

Table 1.1 compared the Evaluation sample with the total population of Nonpublic Schools receiving E.S.E.A. Title I Remedial Services.

Table 1.2 compares combined services in the total population of schools serviced with combined services as they appear in the evaluation sample, by combined services and by religious code.

As will be seen on examination of the two tables, the figures are quite close. In some cases, concordance for a single component was sacrificed for the concept of inter-relatedness of services.

Table 1.1

Services for Total Population Compared with Evaluation Sample

Codes	1		2		3		4		5		6		7		
Services	N	%	N	%	N	%	N	%	N	%	N	%	N	%	Total N
Reading	89	45.4	67	34.2	28	14.3	5	2.6	5	2.6	1	.51	1	.51	196
T & L Sample*	13	43.3	12	40.0	3	10.0	2	6.6	0	0	0	0	0	0	30
Math	68	42.2	56	34.8	25	15.5	5	3.1	4	2.5	1	.62	2	1.24	161
T & L Sample	13	43.3	12	40.0	3	10.0	2	6.6	0	0	0	0	0	0	30
E.S.L.	34	42.5	35	43.7	3	3.7	6	7.5	1	1.3	0	0	1	1.3	80
T & L Sample	7	43.7	6	37.5	1	6.3	2	12.5	0	0	0	0	0	0	16
Speech	76	45.2	63	37.5	21	12.5	2	1.2	3	1.8	2	1.2	1	0.6	168
T & L Sample	13	43.3	12	40.0	3	10.0	2	6.6	0	0	0	0	0	0	30
Clin. Guid.	78	47.9	64	39.3	13	8.0	3	1.8	3	1.8	1	0.6	1	0.6	163
T & L Sample	13	44.8	12	41.3	2	6.8	2	6.8	0	0	0	0	0	0	29
Home Help	1	10.0	2	20.0	7	70.0	0	0	0	0	0	0	0	0	10
T & L Sample	1	33.3	0	0	2	66.6	0	0	0	0	0	0	0	0	3

*T & L = Teaching & Learning Research Corp.

Table 1.2

Combined Services for Total Population Compared with Combined Services in Evaluation Sample

Codes	1		2		3		4		5		6		7		
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	Total N
Reading, Math, E.S.L.	31	47.6	27	41.5	1	1.5	5	7.7	1	1.5	0	0	0	0	65
T & L Sample	7	43.7	5	31.2	2	12.5	2	12.5	0	0	0	0	0	0	16
Reading, Math, C.G.	67	47.1	55	38.7	13	9.1	3	2.1	3	2.1	0	0	1	.7	142
T & L Sample	13	46.4	11	39.2	2	7.1	2	7.1	0	0	0	0	0	0	28
Reading, Math, Speech	65	45.7	51	35.9	17	11.9	3	2.1	4	2.8	1	.7	1	.7	142
T & L Sample	12	41.3	12	41.3	3	10.3	2	6.8	0	0	0	0	0	0	29
Reading, Math, H.H.	1	12.5	2	62.5	5	62.5	0	0	0	0	0	0	0	0	8
T & L Sample	1	33.3	0	0	2	66.6	0	0	0	0	0	0	0	0	3

Key:

E.S.L. = English as a Second Language
C.G. = Clinical-Guidance
H.H. = Homework Helper
T & L = Teaching & Learning Research Corp.

D. SUMMARY

The Central E.S.E.A. Title I Remedial Services to Eligible Nonpublic School Pupils is a direct outgrowth of the E.S.E.A. Title I Act of 1965,* and has been in operation in New York City nonpublic schools since 1966. Eligibility for remedial services is determined by: 1) residence in a low income target area and 2) educational deprivation, determined by a score below the 24th percentile on standardized reading tests.

During the 1972-73 school year approximately 16,300 pupils were enrolled in Corrective Reading, Corrective Mathematics, English as a Second Language, Clinical Guidance, Speech Therapy, Homework Helper Program and Services to Handicapped Children. Federal and State guidelines require that children suffering from multiple learning handicaps receive concerted remedial services, with a $400 per pupil expenditure provided for the implementation of Title I projects in nonpublic schools. Due to limited funds, however, less than half of the 36,000 eligible children were serviced.

Although Central Title I remedial services initially functioned as independent entities, this year the State Education Department mandated that Reading, Math and Bilingual Education (including E.S.L.) be recognized as priority programs, to be supported by the Guidance, Speech and Homework Helper Programs. In order to effectively offer this spectrum of remedial services to eligible nonpublic school pupils, an "Umbrella" project was decided upon, encompassing both instructional and supportive components, with constant communication between Umbrella components provided for. Pupils receiving supportive services would be referred through the primary instructional remedial services. The Title I eligible pupil population with multiple learning disabilities would thus be subject to the intervention of various remedial and therapeutic disciplines.

To facilitate the interrelatedness of the components frequent meetings were held with the Director, Assistant to the Director, Coordinators, Field Supervisors and teaching and remedial staff. The teachers in turn have participated in workshops and special meetings in their particular schools. Principals have taken part in workshops designed to inform them of the new "Umbrella" thrust. The Central Office has devised methods of measuring the interactions between workers in the different parts of the program.

In large group meetings problems of program implementation were discussed; e.g. the need for establishing specific locations for exchange of correspondence among components. Small group meetings in individual schools served to further refine methods for dealing with problems and afforded direct communication among workers serving a single child. The intercomponent staff meetings at both levels served to enhance morale, facilitate intercommunication, foster greater acceptance of the new guidelines and generally improve the implementation and tone of the program.

An overall sample of 30 schools was decided upon in conjunction with the Central NPS ESEA Title 1 office. The sample was chosen consistent with the focus of the evaluation on the interrelatedness (Umbrella) concept. The stratified sample proportionally represents participation of schools

*Title I is compensatory education bringing categorical aid to eligible children in public and nonpublic schools.

Summary continued

by religious code and geographic district in the overall population of the 225 schools receiving remedial services. The sample was stratified so that not only the individual "Umbrella" component is represented, but the interrelatedness of combined services as well.

The following chapters contain reports by the evaluators of the individual components of the Title I remedial services to eligible pupils in New York City nonpublic schools.

FUNCTION NO. 09-39626

CORRECTIVE READING SERVICES

Chapter II Corrective Reading Services

Program Description

The New York City Board of Education under the Elementary and Secondary Education Act of 1965 (Title I) has instituted a program of special corrective reading services for disadvantaged children in Nonpublic schools. Under the program, the Board of Education through its Division of Funded Programs Office of ESEA Title I Programs for the Nonpublic Schools, recruits, selects, trains and assigns licensed New York City Board of Education teachers to nonpublic schools in order to improve the reading achievement of Title 1 eligible children who have been identified as having reading problems.

This program is designed to provide small group and individual instruction in correcting reading disabilities for pupils in grades two through twelve demonstrating reading retardation. Eligibility is based on USOE guidelines of residence in a public school Title I target area and achieving a score below the 24th percentile on the most recent New York State Pupil Evaluation Program (PEP) tests administered in grades 3, 6, and 9 or a comparable reading achievement test score when the PEP scores are not available. The final selection of pupils to be serviced was determined through a cooperative assessment by the nonpublic school principals and staff and the corrective reading teachers assigned to the respective buildings. The children with the greatest need were given first priority and those whose difficulty could be corrected rapidly were given second priority. All children serviced had to have some ability to understand the English language (a "C" Rating or above on the New York City Language Scale of Pupil's ability to speak English).

During the 1972-73 school year, the program was in its seventh full year of operation and encompassed 210 schools serving 10,309 children and was staffed by 207 corrective reading teachers. The corrective teachers were supervised by 7 Field Supervisors and one Coordinator. This was the first year in which the interdependence of the following programs were made operational: Corrective Reading Program, the Corrective Mathematics Program, the Clinical-Guidance Services, Speech Therapy, and the Homework Helper Programs.

An interflow procedure was established whereby through consulation with the other component specialists, reinforcement and support were provided for the pupils enrolled in the Corrective Reading Program.

The corrective reading teachers were involved in six basic activities: 1) selection, screening and placing pupils, 2) preparation of long range instructional programs to meet the needs of individual pupils, 3) conducting the instructional program, 4) evaluation of pupil achievement, 5) consulting with parents, classroom teachers, and principals and 6) conferring with other Title I staff under the intercomponent program.

During the corrective reading session participants were involved in three basic activities: a) verbal discussions to develop and enrich a basic meaning vocabulary, b) word analysis instruction to develop independence in decoding, and c) guided silent and oral reading to develop ability to comprehend written materials. These activities were designed to meet the

specific needs of the participants in order to correct diagnosed weaknesses. In addition, the later elementary grade participants received instruction in specific study skills, and the secondary school participants were engaged in activities geared to develop skills in reading in the content areas.

Group size and frequency of instructional sessions were determined by grade level of participants, severity of reading retardation and school schedules. Corrective reading sessions for pupils in grades 2 and 3 generally were small groups of five to ten pupils for about 30 minute periods from three to five times per week. Corrective sessions for pupils in grades four to twelve generally were small groups of eight to ten pupils for 45 to 60 minute periods two or three times per week. Each pupil had an individual folder containing a notebook in which he recorded answers to his work and the teacher recorded assignments and/or notations about his progress. Other materials kept in the folder were special materials geared to the pupil's needs, samples of complete work, and possibly a book for independent reading.

Approximately one-third of a period was spent on group reading and/or language arts activities with the remainder devoted to individually assigned work. During this time, the corrective reading teacher had individual conferences with the pupils to ascertain progress and to make appropriate assignments.

A total of 14 teacher training sessions were held in order to provide for an exchange of suggestions and materials to further the corrective reading teachers' competence. The coordinator of the Corrective Reading Program supervised and administered these sessions which were attended by all of the corrective reading teachers. The topics included an overview of the inter-component plan of all corrective services to nonpublic schools, individualization of instruction, teaching reading through a phonetic approach, organizing for quality reading instruction, diagnosing reading problems, classroom management, the language experience approach to reading, behavioral objectives, planning work for paraprofessionals, parent tutorial programs, bilingualism and ESL, and nonstandard English. Also discussed was the use of specific commercial materials. The speakers at these training sessions were leading authorities in the field of reading, university personnel, persons from City and State agencies, representatives of publishing companies and staff members of the Corrective Reading Program. On two days during the year, Code I nonpublic schools were closed. Visitation schedules were arranged so that teachers servicing these schools could visit and observe other teachers in the program and exchange ideas concerning effective teaching procedures. There were also special training sessions for newly hired corrective reading teachers.

Program Objectives

The major objectives of the program were:

A. To raise the reading performance of 80% of the pupils in grades 2 and 3 in beginning reading, word attack skills and oral reading by a mean of six months.

B. To raise the reading performance of 80% of the pupils in grades 4 to 12 in the basic comprehension skills of word meaning and paragraph comprehension by a mean of six months.

C. To improve the classroom performance in related subject and skill areas of science, mathematics and social studies, depending on the degree of retardation and causative factors, of students in grades 4 through 12.

Evaluation Objectives

A. To determine if 80% of the pupils enrolled in the program in the areas of beginning reading, word attack skills, and oral reading have improved by 6 months.

A1. Subjects: All pupils enrolled in the program from a selected sample of 30 of the 210 participating Nonpublic schools.

A2. Methods: The Dolch List or Gray's Standardized Oral Reading Paragraphs Test was administered by the corrective reading teachers as measures of word attack skills and oral reading respectively on a pre/post test basis.

A3. Analysis: Mean scores on either measure for each school was determined for the sample. Mean grade point increase from pre to post measure was used to ascertain achievement of at least six months for 80% of the sample.

A4. Schedule: Two measures (in some cases only one) were administered to the sample population during September 1972 and May 1973.

B. To determine if 80% of the pupils enrolled in the program in the areas of comprehension skills of word meaning and paragraph comprehension have improved by six months.

B1. Subjects: All pupils enrolled in the program from a selected sample of 30 participating nonpublic schools.

B2. Methods: The Metropolitan Achievement Test or the Iowa Test of Basic Skills was administered by corrective reading teachers as measures of basic comprehension skills of word meaning and paragraph comprehension on a pre/post test basis.

B3. Analysis: Mean scores on the pre and post administration of the measure were determined for each school for the sample. Mean grade point increase from pre/post measure was used to ascertain achievement of at least six months for 80% of the sample.

B4. Schedule: The pre measure was administered to the sample population during September 1972 and the post measure during June 1973.

C. To determine if the pupils enrolled in the program have shown evidence of good classroom performance in the content areas of mathematics, social studies and science by achieving a passing grade in these subjects. A Chi Square analysis was made comparing classroom teachers' evaluations of June 1972 and June 1973 events on a pass-fail basis.

Evaluation Procedures

In order to evaluate the program a stratified sample of 30 schools proportionally representing the schools in each code group was selected. Six of these schools were selected for site visits by the principal investigator. Site visits were made by the principal investigator to observe the work of the corrective reading teachers with different groups of students, the school facilities, the instructional program, the evaluation and follow-up of the students' progress, and the degree of interflow between the Corrective Reading Program and the other corrective and supportive services.

In order to assess the increase in pupils reading achievement standardized test scores on the Gray Standardized Oral Reading Paragraphs Test, the Metropolitan Achievement Reading Test, and the Iowa Test of Basic Skills were obtained from the Board of Education and were statistically analyzed to determine the presence of significant gains in general reading achievement.

In order to assess the reactions, opinions and insights of the principals of the nonpublic schools about the corrective services, a principal questionnaire was administered either personally or mailed to the principals during the Spring 1973 semester.

On January 10, 1973 the principal investigator met with the Coordinator of the Title I Nonpublic School Corrective Reading Program. During the course of the evaluation, the principal investigator and the Coordinator were in periodic communication via the telephone or through written correspondence. On December 8, 1972, the principal investigator addressed the corrective reading teachers at an in-service training session about the 1971-72 evaluation and individualization of instruction. The standardized test scores were obtained from the Board of Education at the end of June 1973.

General Evaluation of Program Implementation

Six sample schools were visited by the principal investigator to observe the implementation of the Corrective Reading Program. During each visit the investigator had the opportunity to speak personally with the Corrective Reading Teacher. Because a period of illness of the investigator forced rescheduling of visits, not all building principals were seen personally. However, each principal received a questionnaire and his or her comments were taken into account in the final evaluation. The major aspects of the program

observed were: instructional program, evaluation and follow-up. The information included in this General Evaluation section was obtained through direct observations of the sites and whenever possible, review of the lesson plans of the Corrective teachers, pupil instructional materials, pupil records and reports, and interviews with the reading teachers and principals.

On-site observations of the programs in progress revealed that:

a) There was definite evidence of interaction and exchange of information between the corrective reading teachers and other Title I nonpublic school staff. The teachers made use of the special forms provided by the Title I Central Office for exchanging information and scheduling regular meetings for discussing the special needs of students. The greatest amount of information seemed to flow naturally between the reading, guidance and speech components.

b) The teachers generally had good rapport with the pupils.

c) The teachers were making good use of the commercial materials provided by the Central Office. The rooms contained a large variety of current materials appropriate for the population being serviced, and a variety of teacher and pupil made materials in use.

d) The teachers observed showed evidence of making an effort to implement many of the teaching procedures and ideas obtained through the in-service training sessions and to vary the instructional program according to the needs and purposes of classroom teachers and pupils.

The general impression of the investigator was that the Corrective Reading Program has developed administrative procedures which allow it to function efficiently. Because of this the Coordinator, Field Supervisors and corrective teachers have been able to devote a great deal of their energies to the development and extension of professional skills and capabilities. Many of the recommendations of the 1971-72 Final Report have been implemented - particularly those relating to the application of newer psycholinguistic and sociolinguistic insights in the teaching of reading and the search for diagnostic instruments which will allow for qualitative assessment of pupils' reading ability. It was the investigator's impression that the corrective reading teachers were receiving valuable information and aiding the other Title I teachers through the intercomponent aspect of the "Umbrella" program.

Evaluation Results

The main objective of the program was to increase the average word attack and oral reading skills and the skills of word meaning and paragraph comprehension of the participating pupils.

A. Evaluation of Gains - Word Attack and Oral Reading

The pre-test and post-test scores on the Gray Standardized Oral Reading Paragraphs Test of the pupils in grades 1-6 were analyzed by means of a "t" test using an anticipated gains design. Table 2.1 summarizes the results of this analysis.

Table 2.1

Tests of Significance on Oral Reading Test by Grade Levels

Grade	Pre-test $\bar{X}$	Predicted $\bar{X}$	Actual $\bar{X}$	N	t
1	1.16	1.32	1.68	10	5.66**
2	1.31	1.46	1.99	210	5.07**
3	1.65	1.86	2.25	288	11.06**
4	2.27	2.56	3.12	315	12.28**
5	2.58	2.88	3.61	241	12.27**
6	3.52	3.91	4.67	154	3.12**
7	4.10	4.50	5.77	130	8.50**
8	4.55	4.96	6.24	61	6.75**
9	8.16	8.89	10.53	36	5.00**
10	9.56	10.34	11.16	26	1.97*
11	6.15	6.58	6.94	17	1.61
12	7.77	8.28	7.90	17	2.61
Total	2.81	3.12	3.80	1505	9.19**

*p $<$.05
**p $<$.001

The results indicate that the sample population as a whole made significant gains in word attack and oral reading. Analysis by grade level indicates that significant gains were achieved at all grade levels except grades 11 and 12.

The interpretation that can be given to these results is that the sample population as a whole made greater gains in word attack and oral reading than would have been expected under normal circumstances. Normal circumstances can be considered as school instruction without corrective reading services.

However, the specific evaluation objective of this investigator was to determine if 80% of the sample population made a gain in word attack and oral reading of six months or more.

Table 2.2 summarizes the results of this analysis.

Table 2.2

Test of Significance of Expected Gains in Word Attack and Oral Reading

Gain	Observed N		Expected N	
More Than or Equal to 6 Months	902	(56.4%)	1280	(80%)
Less Than 6 Months	698	(43.6%)	320	(20%)

N = 1600* X^2 = 557.25 ($p < .001$)

The results of this analysis indicate that the evaluation objective of 80% of the population achieving a gain of at least six months was not achieved. A gain of six months or more in word attack and oral reading was achieved by 56% of the sample population.

The pre and post tests scores on the Metropolitan Achievement Test for grades 1 through 6 and the Iowa Test of Basic Skills for pupils in grades 7 through 12 were analyzed by means of a "t" test using an anticipated gains design. Table 2.3 summarizes the results of this analysis.

*The discrepancy between N's shown in tables 2.1 and 2.2 are due to a loss in the computer analysis of Table 2.1 data because subjects with incomplete data of any kind were disregarded by the computer. This reason also applies to the discrepancy in N's between tables 2.3 and 2.4.

Table 2.3

Test of Significance of Gains in Word Meaning and Paragraph Comprehension

Grade	N	Pre	Predicted Post	Actual Post	t
2	24	2.20	2.77	2.82	0.23
3	185	2.31	2.72	3.03	7.14
4	279	2.69	3.08	3.40	9.95**
5	228	3.13	3.52	4.11	2.22*
6	142	3.61	4.01	4.23	1.25
7	129	4.34	4.78	5.12	5.03**
8	60	4.84	5.28	5.71	4.16**
9	37	6.42	6.97	9.51	8.49**
10	26	7.42	8.00	10.66	8.22**
11	21	7.60	8.14	8.59	2.02*
12	18	9.09	9.70	10.14	1.35
Total	1149	3.54	3.96	4.44	7.86**

*p $<$.05
**p $<$.001

The results indicate that the sample population as a whole made significant gains in Word Meaning and Paragraph Comprehension. Analysis by grade level indicates that significant gains were achieved in grades 4, 5, 7, 8, 9, 10 and 11.

The interpretation that can be given to these results is that the sample population as a whole made greater gains in Word Meaning and Paragraph Comprehension than would have been expected under normal circumstances. Normal circumstances can be considered as school instruction without corrective reading services.

However the specific evaluation objective of this investigation was to determine if 80% of the sample population made a gain in Word Meaning and Paragraph Comprehension of six months or more.

Table 2.4 summarizes the results of this analysis.

Table 2.4

Test of Significance of Expected Gains in Word Meaning and Paragraph Comprehension

Gain	Observed N		Expected N	
More Than or Equal to 6 Months	829	(63%)	1051	(80%)
Less Than 6 Months	485	(37%)	253	(20%)

N = 1314* X^2 = 234.19 ($p < .001$)

The results of this analysis indicate that the evaluation objective of 80% of the population achieving a gain of at least six months was not achieved. A gain of six months or more in Word Meaning and Paragraph Comprehension was achieved by 63% of the sample population.

C. Evaluation and Classroom Performance

The 1972 and 1973 final class grades (Pass-Fail) in the content areas of social studies, mathematics and science were compared by a two-way Chi Square analysis.

The figure below indicates the comparisons that were made.

Chi Square Comparisons between 1972 and 1973 Classroom Performance

1972 Fail 1973 Fail	1972 Pass 1973 Fail	
1972 Fail 1973 Pass	1972 Pass 1973 Pass	% of 1973 Pass
	% of 1972 Pass	

Table 2.4 summarizes the results of the Chi Square Analysis by grade level and content area and Table 2.5 summarizes the percent of population that received a passing grade in 1972 and 1973 by grade level and content area.

*The discrepency between N's shown in tables 2.1 and 2.2 were due to a loss in the computer analysis of Table 2.1 data because subjects with incomplete data of any kind were disregarded by the computer. This reason also applies to the discrepancy in N's between 2.3 and 2.4.

Table 2.5

Tests of Significance (Chi Square) of Classroom Performance by Grade Level and Content Area

Grade	Social Studies	Mathematics	Science	N
2	14.80**	18.36**	21.41**	147
3	9.70**	19.06**	7.59**	213
4	43.40**	67.44**	59.81**	250
5	29.07**	46.72**	47.27**	249
6	7.30**	24.92**	17.22**	148
7	25.45**	12.49**	9.64**	143
8	.422	1.82	1.16	63
9	.005	1.38	.26	33
10	2.52	2.49		26
11		.87	.46	16
12		.88	.50	9

df. = 1
**p $<$ .001

Table 2.6

Percent of Students Receiving a Passing Grade by Grade Level and Content Area

Grade Level	Social Studies		Mathematics		Science	
	1972	1973	1972	1973	1972	1973
2	87	96	80	90	87	96
3	89	86	82	82	83	83
4	79	83	74	77	77	79
5	78	88	64	80	76	87
6	76	85	71	81	76	86
7	83	87	72	75	84	88
8	81	92	83	89	76	91
9	91	85	88	97	82	85
10	81	77	92	96		
11			88	63	92	54
12			89	89	83	50

An examination of the Chi Square computations used to produce Table 2.5 reveals that in every case except for grades 11 and 12 the cell with the largest frequency - and therefore the cause of the significant Chi Square comparisons - was the cell representing "1972 pass, 1973 pass." An examination of table 2.6 reveals that in all but seven cases 80% or more of the population received passing classroom grades in 1973. Therefore the objective of improved classroom performance in content areas of social studies, mathematics and science seems to have been achieved.

Comments on Evaluation Results:

Two evaluation objectives of this investigator were based upon an arbitrarily set figure of 80% of the sample population achieving gains. The third was based upon the same figure for determining the program's effect on the students' classroom performance.

If this arbitrary criteria of 80% is used then only one of the evaluation objectives seems to have been met. This can lead to a false conclusion that the corrective reading services were unsuccessful. However, this conclusion is rejected by the investigator.

The tests of significance utilizing an anticipated gain design, a non-arbitrary test, indicate that the sample population made gains significantly greater than six months in both Word Attack/Oral Reading and Word Meaning/Paragraph Comprehension. In reality only 56% of the students made at least six months gain in Word Attack/Oral Reading, and 63% made at least six months gain in Word Meaning/Paragraph Comprehension.

The investigator raises the question: Why was the evaluation objectives set at 80% of the sample population? To the investigator's knowledge there is no support for this figure in any of the literature dealing with corrective reading services. No authority in the field of reading gives any evidence of support for suggesting that one can expect 80% of a population that exhibits such severe reading retardation to achieve such gains. In fact last year (1971-72), within a similar sample population, only 52% of the students achieved at least six months gain Word Meaning/Paragraph Comprehension. (See NPS Corrective Reading Services Final Report July 1972, page 15). Compared to last year, a greater percentage of students made at least a six month gain this year.

The third evaluation objective even though it was met, really does not give us any evidence of the impact of the corrective services on the classroom performances of the students. First of all, the arbitrary figure of 80% is again questioned as being an appropriate evaluation criteria. Secondly, the evaluation should not be concerned with just those students achieving a passing grade during the present year, but with the students who failed in previous years and who are passing this year.

In conclusion, the investigator believes that the corrective reading services has had a positive impact on the reading behavior of the students.

Comments on Instruments of Evaluation:

During the course of this program, four instruments were used to collect data for evaluative purposes. Two were orally administered, the Dolch list and the Gray Oral Reading paragraphs, and two were silently administered, the Metropolitan Achievement tests and the Iowa Test of Basic Skills.

The Dolch list is not a standardized instrument and there is no basis for its use for judging gains in any aspect of reading instruction. It was intended as a guide for reading instruction, not as a measure of achievement.

The Gray Standardized Oral Reading Paragraphs Test is an instrument which is primarily used in diagnostic situations. Although its content is standardized, the interpretation of the student's performance depends upon the teachers' proficiency. This investigator has found it to be very valuable in diagnosing the reading behavior of individual students. However, despite the fact that intra-examiner administration reliability may be high, inter examiner reliability may not be. As stated in last year's final report "Judgements about the program should not be made solely upon the basis of a test which is so highly dependent upon personal differences in discrimination and perception." (NPS Corrective Reading Services, Final Report, July 1972, page 16).

The Metropolitan and Iowa Tests are silent reading tests which measure, generally global reading behavior. Interpretation of student responses are not dependent upon individual perceptions. Just as these tests are inappropriate for individual diagnoses, the Gray Test is inappropriate for group comparisons.

Recommendations:

The following recommendations are offered:

1. In-service training for the corrective teachers should be continued and expanded. Special conferences, on-site small group meetings and intervisitations seem to be beneficial ways to further develop and refine the teachers' professional competencies.

2. The Dolch Word list should be discarded as a formal evaluation instrument. Its use should be limited to that of an informal diagnostic procedure by the corrective teachers.

3. Future evaluation objectives should be based primarily on the results of silent reading measures. Oral reading instruments are primarily diagnostic in nature, and should be used to formulate individual instructional programs.

4. Continued and additional funding should be allocated for instructional materials. One of the strong points of the program is the individualized and flexible instruction made possible by the great variety of materials that have been made available to the corrective teachers. This aspect of the program should continue to receive strong support.

FUNCTION NO. 09-39627

CORRECTIVE MATHEMATICS SERVICES

Chapter III Corrective Mathematics Services

Background

Under the Elementary and Secondary Education Act of 1965, the New York City Board of Education has instituted a program of corrective mathematics for disadvantaged children attending Nonpublic schools. The program was instituted in 1966 and is currently completing its seventh year of operation. The Board of Education, acting through its Division of Funded Programs Office, assumes the responsibility for the recruitment selection, training and appointment of teachers to eligible non-public schools for the purpose of improving the mathematics education of children identified as having specific disabilities in this content area.

During the 1972-73 school year, the Corrective Mathematics Program provided its services to some 160 non-public schools located within the confines of the thirty-one New York City school districts. Approximately 7,400 pupils in grades two through ten participated in the program this past year. An additional though unspecified number were declared eligible but had to be placed on waiting lists since adequate funding was unavailable. A staff of 135 teachers were assigned to the selected non-public schools involved on the basis of the number of pupils in a particular school who had met the eligibility requirements set by the Board of Education guidelines for the current school year. As a result of differences in the number of eligible pupils in a given building, the number of days that a teacher was assigned to a school varied. Thus, some schools had a corrective mathematics teacher assigned five days a week while others may have had a teacher available to them for as little as one day a week. Since the teaching staff of the mathematics program was composed of part-time as well as full-time teachers, the part-time staff could often be assigned to those schools which had less than a five day a week program. Some teachers contributed their services to two different schools. All personnel involved were fully qualified teachers, licensed by the New York City Board of Education.

Of the 135 teachers working in the program this year, 34 were on regular appointment. Of the remaining number, 15 were regularly assigned substitute teachers, 81 were per diem teachers and 5 teachers worked on a per session basis. The per diem teachers are employed on a day-by-day basis, though for the purposes of the program their actual assignment to a position would not have differed essentially from that of regular teacher except in terms of salary and other employee benefits. These teachers were fully licensed and assumed positions equal in responsibility to those filled by individuals on regular appointment. The 5 "per session" teachers conducted their program after school hours (3:45 - 5:45) in non-public schools where the number of pupils did not merit the assignment of a teacher for even one full day. Thus, there was a total of 135 teachers filling 94.5 positions in the program.

Some corrective mathematics teachers had para-professional aides available to help them. These aides, when available, were assigned by the District Title I Coordinator and were to assist the teachers in conducting instructional activities. The para-professionals received training from the teachers, field supervisors

and the project coordinator. They were asked to attend training conferences held for the corrective mathematics teachers.

For the 1972-73 school year, the assignment of teachers to schools was based on a ratio of one day of service for every twenty eligible pupils. Schools with 100 or more such pupils were serviced on a five day a week basis. A breakdown of the schools by boroughs and the schedule of time allocations is presented below.

Corrective Mathematics Program

Schedule of Time Allocations To Non-Public Schools

Sept. 1972 - June 1973

Location	5 Days	4 Days	3 Days	2 Days	1 Day	
Manhattan	13	3	8	16	10	
Brooklyn	14	4	12	28	15	
Bronx	8	2	6	8	7	
Queens	1	0	1	2	2	
Staten Island	0	0	1	2	1	
Totals	36	9	28	56	35	

Per Sessions

2 hours - 2 schools

4 hours - 4 schools

8 hours - 1 school

Program Description

The purpose of the Corrective Mathematics Programs was to provide individualized and small group instruction for pupils residing in disadvantaged areas who were in need of special remedial aid. The program was conducted entirely in the nonpublic schools although the teaching staff was both employed and supervised by designated personnel appointed by the New York City Board of Education. Instruction was given during the regular hours that the particular nonpublic school was open and participating students were released from their classrooms to attend

The professional staff of the Corrective Mathematics Program included the Project Coordinator and five Field Supervisors as well as the 135 teachers. In general, children admitted to the program attended two or more sessions per week. In order to provide as much individualization as possible, instructional groups usually consisted of from 6 - 10 pupils. The school day for the corrective mathematics teacher consisted of 240 minutes of teaching time and 60 minutes set aside for professional preparation. Teachers were responsible for organizing students into groups and while the time allocated for each group might vary according to building need or because of scheduling difficulties, the general pattern was to provide forty to fifty minutes of instruction for each group. Thus, most of the teachers met with five or six classes a day.

In order to adapt the program to the specific needs of the pupils, the corrective mathematics teacher was advised to consult regularly with classroom teachers, parents and the principals of the nonpublic schools. These teachers were also responsible for administrating a standardized test of mathematical achievement. The results of the test were to be used as an aid in determining general areas of student weakness as well as the amount of progress made by participants during the course of the school year. Additional diagnostic tests, commercial as well as teacher made, were also utilized as the occasion demanded. Assistance in this as well as other matters was offered by field supervisors under the direction of the Project Coordinator.

Once the diagnosis of pupil needs had been completed, a program of remediation was to be prescribed for each of the instructional groups which included the manipulation of discovery materials, exploration with mathematics laboratory materials, practice in mental and written computation, and practice in verbal problem solving. This program of study was not intended to replace but to supplement that which took place in the classroom under the auspices of the Nonpublic school teacher. It was expected that the two programs would complement each other with the teacher of corrective mathematics concentrating on remediation and the development of basic skills and concepts.

In addition to mathematics, remedial services were provided through Title I funds in the areas of speech, reading, clinical-guidance and English as a Second Language. The guidelines for this year's program directed that a planned and comprehensive integration of these services was to take place. This called for joint planning on the part of the corrective services staff and implied an exchange of information concerning the skill needs of children serviced by more than one component of the total program. The need for the mathematics and reading programs to correlate their services was given specific and direct sanction in the project proposal: "The teacher of corrective mathematics should be aware of the reading ability of each student sufficiently early in the year so that his reading demands upon his students do not result in immediate failure for those who fall considerably below the average reading level of the class.... The combined efforts of the corrective mathematics teacher and the reading teacher will at the very least insure that the student can maintain some lines of continuing communication with the subject matter and content of instruction. If the two teachers confer periodically, both will be better able to assist the student to improve his understanding of mathematics, the reading teacher emphasizing the general reading skills; the mathematics teacher emphasizing the application of these skills in the mathematics classroom."

The kind of cooperative effort expected between these two content areas was to be extended to the development of competencies in the interpretation of problems, capacity to read diagrams, graphs or maps and, of course, the command of a specialized vocabulary. Thus, integration of services was one of the major goals of the overall project and this was in no way confined to the areas of reading and math, though these two subjects were seen to complement each other in a special way. The clear expectation was that all the services offered would seek means of supporting each other in a manner that would greatly increase the full impact of the program.

Program Objectives

In the field of mathematics education the two areas that generally confront teachers and give cause for most concern are the improvement of basic computational skills and development of an understanding of the underlying concepts upon which the field of mathematics is built. The Corrective Mathematics proposal is built around a recognition of the need for students to attain a degree of mastery over the tools of computation. Since it is clear that the ability to effectively engage in verbal problem solving activities is closely related to an understanding of mathematical relationships, the entire area of conceptual development is also given attention. The priority items for children of elementary school age involved in the program were listed as follows:

(A) There is a need for developing proficiency in mathematical skills necessary for computation and problem solving; the retardation ranges from complete inability to limited ability in these skills.

(B) There is a need for intensified instruction in the basic skills of counting, fundamental arithmetic operations and mathematics.

(C) There is a need for guidance in the formation of work habits and the self-discipline necessary for success in all areas of mathematics.

The design of the program for those participating students in grades 7 - 10 is essentially similar in intent, with the obvious differences being in the type of subject matter covered and the level of conceptual understanding sought. An additional objective for the entire program is the attempt to arouse in students a deep intellectual curiosity about the entire field of mathematics that could result in a level of interest that motivates greater effort and deepens understanding. Such curiosity was intended both as the result of a growing sense of competence and as a spur to developing further insight. With these aims in mind, the proposal writers set forth the following three objectives for the program:

1. 80% of the pupils will improve their performance in computational skills by at least six months.

2. 80% of the pupils will improve their performance in verbal problem solving by at least three months.

3. 80% of the pupils will demonstrate increased interest and curiosity in mathematics through exploring ideas independently.

Evaluation Design:

The original program proposal included a program of evaluation designed to assess the three primary goals listed above. The first step involved the choice of a population to be studied. As was suggested in the proposal, a sample of 30 of the 160 schools involved in the program was randomly selected. All the pupils participating in the program in these thirty target schools as well as the corrective mathematics teachers involved became the sample population for the study.

In order to determine if 80% of the pupils in the sample had improved their arithmetic computation by at least six months, alternate forms of the mathematics section of the Metropolitan Achievement Test were administered on a pre and post basis. The tests were administered by the teachers in the fall and spring of the 1972-73 school year. Mean scores on the pre and post tests were compared through the use of a correlated t test, using six months growth as the success criterion. Following this, a one way Chi Square analysis was utilized to determine whether 80% of the students in the sample population had met the performance levels that had been set.

The same procedure was used to assess whether students had shown a minimum of three months growth in their verbal problem solving ability. Again, using alternate forms appropriate for the various grade levels, the problem solving portion of the Metropolitan Achievement Test was administered in the fall and spring. The same statistical procedures were used to measure whether the performance criterion had been met.

The third objective called for an assessment of whether 80% of the students had demonstrated increased curiosity and interest in mathematics as a result of independent exploration. In order to determine if the goal had been met, a questionnaire was devised (see Appendix C) and sent to twenty-five teachers in the sample population. In addition, interviews were conducted with the Program Coordinator, the five field supervisors and a randomly selected sample of 5 corrective mathematics teachers and the principals of the buildings in which they taught. The interview format was used to determine what type of methods and materials were used to stimulate curiosity and in what manner pupils were encouraged to explore mathematical ideas and relationships independently. Additional information was obtained as a result of direct observation of teachers in the classroom conducted by the evaluator during the school year.

An analysis of questionnaire items was performed to determine if the sample population of teachers felt that there had been an increase in interest on the part of their students. A content analysis was also done on questionnaire items which asked teachers to specify the manner in which independent exploration was encouraged. A qualitative interpretation of the interview results supported by the evaluative team's observation of corrective mathematics classes was also used as one measure of the achievement of the third objective.

The Program in Operation:

Due to problems resulting from the new guidelines for eligibility that were laid down this year, the program of corrective mathematics was slow in getting started in many buildings. It was unclear precisely how many children would ultimately be ruled eligible in a given school. The result was that there was difficulty in both assigning staff and determining the number of days a building would be serviced. The reasons for this will be fully explored in another section of the report but it is important to note that the eligibility requirements had an important effect upon this year's program and need to be given serious attention in the development of future proposals.

A. Eligibility

While the criteria followed in determining what geographic areas were to be defined as disadvantaged conform to federal regulations, the specific guidelines for program eligibility were established by the New York City Board of Education. For the 1972-73 school year dual criteria of eligibility were used. First, the child had to be a resident in a designated Title I public school attendance area. This meant that in a previous survey of the income of families living in the attendance area, the school had been defined as a target area. Such a school would be declared eligible for Title I services. Any child residing in such an area would normally have attended the Title I public school (had he not decided to attend a private school) met one part of the eligibility requirement that could eventually lead to acceptance in the Corrective Mathematics Program.

The second requirement for acceptance was that the child was not achieving at a normal rate of growth in reading. In order to be designated as Title I eligible the child must have demonstrated a performance level below the 24th percentile on the New York State PEP Test in reading. Such a score would be below the level set by the state for minimum reading competency.

In the event that a recent PEP score was not available for the child, test scores on other standardized reading tests were to be used. A table of projected grade equivalent test scores was provided to determine whether the score the child made on the standardized test at the end of the 1971-72 school year placed him at a performance level below minimum reading competency for his grade level. What was considered to be below minimum competency varied at different grade levels. The rationale for the minimum levels that were set was not specifically stated and appeared to differ according to the standardized test used (i.e. the MAT or the SRA).

These then were the criteria that were used to determine if a child was eligible to receive Title I services. Additional requirements were then established to determine which of those students declared eligible were to be allowed to participate in the mathematics component of the program. The performance levels set for acceptance at each grade level were as follows:

Second Grade - Children whose arithmetic achievement is five months or more below grade level.

Third Grade - Children whose arithmetic achievement is six months or more below grade level.

Fourth Grade - Children whose arithmetic achievement is eight months or more below grade level.

Fifth and Sixth Grade - Children whose arithmetic achievement is ore year or more below grade level.

Secondary (Grades 7-10) - Children whose arithmetic achievement is one and a half to two years or more below their appropriate grade level.

The preliminary data required for making the necessary decisions about eligible pupils was to be provided to the Director of the ESEA Title I Programs by the Nonpublic schools. Based on this information, the Project Coordinator of the Mathematics Program and her staff compiled the list of students who would participate in the program in each of the schools. At both the elementary and secondary grade levels, the final selection of program participants was to be made in consultation with the non-public school principals or their representatives. Those children determined to be in greatest need of remedial help were given first priority and those whose difficulty might be corrected most rapidly were given second priority.

Due to limited resources and problems created by school scheduling, a number of eligible children could not be provided with instruction. These children were placed on waiting lists. When the deficiencies of pupils participating in the program were corrected and they were able to perform at grade level, they were to be released from the program and replaced by children selected from the waiting lists.

B. In-Service Training

The vast majority of corrective mathematics teachers do not have special training in this area, though attempts are made when recruiting personnel to select individuals with strong backgrounds. A program of in-service training is therefore planned and conducted for these teachers by the Project Coordinator. Orientation sessions are held for new personnel which include pre-service training. The on-going in-service program consists of activities designed to increase the overall effectiveness of the program. These activities include large and small group conferences held on days when the nonpublic schools are closed for religious observance. The field supervisors also conduct demonstrations of teaching technique or the proper use of a variety of mathematic materials. The demonstrations may be requested in advance by a teacher or may be an out-growth of the natural supervision process in which advantage is taken of an available opportunity.

Additional agenda items for training sessions included discussion of the special problems of the disadvantaged learner, exchange of ideas and successful practices and workshops in the use of instructional materials. One such workshop was conducted in February of this year in which a number of consultants and specialists in mathematics education demonstrated the use of materials. An intervisitation program was also to be organized in which teachers would be scheduled to visit each other in order to exchange ideas and share teaching approaches. It is not clear that such a program was formally organized and conducted though some intervisitation did take place.

It should be mentioned that the staff of the Corrective Mathematics Program appeared to be rather stable in regard to its tenure of service. One must consider that the program has had to be evaluated each year with the refunding being relatively uncertain. This is bound to have an adverse effect upon the number of teachers who will choose to remain part of the program. In addition, the instructional staff includes a number of per diem teachers and regularly assigned substitutes who could, presumably, obtain regular licenses and leave the program. In spite of this, over half of the staff has been with the program three years or more and some 10% have been involved since its inception seven years ago. Considering that new positions have been added yearly, thus reducing the number of teachers that could have had a longer tenure of service, the employment record speaks well for the level of interest in the program.

C. Supervision

As has been indicated, the Project Coordinator and five field supervisors are responsible for assisting the corrective mathematics teachers and evaluating their overall effectiveness. Each supervisor is responsible for some thirty or more teachers.* Visits are made to the nonpublic schools where observations

*One supervisor has a part-time teaching responsibility and thus carries a reduced supervision load.

and follow-up conferences are conducted. It appeared that the program of supervision was well organized and effectively implemented. Teachers in the sample population visited by the Evaluation Team indicated they were observed regularly and expressed satisfaction with the quality of supervision that was being offered. Conversations with the field supervisors tended to verify the fact that a regularly scheduled series of observations were made. The supervisory personnel were obviously knowledgeable about the teachers assigned to them and conversant with the nature of the environments in which these teachers worked. It was also apparent from that interview that the field supervisors and the Project Coordinator shared information about their staff and exchange ideas about various aspects of the program.

D. School Facilities

Since the Corrective Mathematics Program was conducted entirely in the nonpublic schools, adequate facilities had to be found by these schools. A room that could accomodate the need for small group instruction and the display and storage of appropriate material was required. This condition presented some unavoidable difficulty in particular schools. The ideal situation would be to have a large, well-equipped classroom available that would allow increased movement on the part of the children and encourage teachers to move in the direction of a laboratory approach. Such an approach could utilize some of the excellent mathematics materials available as well as promote a program of increased self-instruction on the part of students.

Facilities of this type were simply not available in a great many of the nonpublic schools. The schools themselves were frequently over-crowded and adequate space was at a premium. One does not wish to overstate the case for the importance of the physical facility. An imaginative and dedicated teacher can often conduct an outstanding program of education in the most demanding and prohibitive of physical circumstances. Not all teachers are equally gifted in this direction however, and an inadequate facility often places unfortunate constraints upon the potential quality of a program. Simple matters such as easily accessible storage areas or adequate furniture can assume unexpected importance. Something as seemingly unimportant as the central location of a classroom in a building can facilitate the type of interaction between the corrective mathematics teacher and the nonpublic school staff that could lead to increased cooperation and improved guidance for students.

To the extent that space is not available, this is an unavoidable limitation that must be accepted and worked around. It is certain that this is the case in most instances. It is hoped, however, that supervisors of the mathematics program and non-public school administrators have mutually examined all the available options. The allotment of space is one indication of the priority or value given the program. In situations where it is possible, the non-public school personnel should be encouraged to expand upon the facility and perhaps incorporate its use more fully in their own programs of instruction. Where the choice of room is nonexistant, decisions about the manner in which it will be used may and should be examined.

E. Equipment and Materials

Since one of the three goals of the Corrective Mathematics Program was to stimulate curiosity through independent exploration, the choice of appropriate materials and equipment was important. As illustrations of the type of instructional materials suggested for use in the program, the following list taken from the text of the test of the proposal is included: Diagnostic and achievement tests, computational skills kits, games, workbooks, duplicating mater sheets, flash cards, number line, numberical charts, cuisenaire rods, concrete materials for teaching measurement and mathematics laboratory materials. Additional demonstration materials such as charts, thermometers, magnetic counters, fractional parts, abaci and unifex counting cubes were also included.

There is bound to be some disagreement over the choice and the amount of a particular material purchased. But even beyond this choice there is the additional difficulty of making decisions regarding their allocation. The entire issue of the locus of ordering supplies is a complex and difficult one. Some teachers claim, with certain justification, that since they are the individuals ultimately responsible for the use of such materials, the decisions should be made in the schools. The practical effect of a limited budget, however, may dictate otherwise. Such a situation creates a need for some centralized decision making not only in regard to what materials will be purchased but to whom they will be distributed. Decentralized decision-making in this regard can lead to the selection of expensive but outmoded materials whose practical use is limited.

This issue did not appear to present insurmountable obstacles for the program but it does create a disturbing and lingering problem for which there is no easy solution. The entire field of education is moving in the direction of creating environments for learning that encourage self-instruction and independent exploration. This requires an intelligent selection of materials whose accumulation will eventually contribute to that kind of environment. Changing eligibility requirements resulting in shifting pupil populations make it difficult to accumulate and establish a permanent set of such supplies in many of the schools. The classroom itself, in regard to storage and its possible use by other personnel on different days, presents another limitation. It should be made clear that the limitations referred to are not in the area of general classroom material (which appears in good supply) but in the development of the more extensive mathematics laboratory equipment which would encourage more independent exploration. While the difficulty is obviously more pronounced in schools that receive fewer days of service, it is a general problem for which there is no immediate solution.

F. Instructional Program

The mechanics of the Instructional Program have previously been described as have its goals. In brief, the corrective mathematics teacher generally met with small groups of from 6-10 students for a 40 to 50 minute period twice a week. This format was sometimes modified at the suggestion of a teacher or her supervisor when it was deemed educationally useful. In some instances a group of 10 children was divided into two smaller groups each of which met for half of the allotted time. This may have been done to make the group more manageable or to

enable the teacher to work more closely with particular students. In regard to the organization of the classroom and its activities, there appeared to be reasonable latitude for teacher judgement.

The teachers selected to work in the program had generally had public school experience and many have completed or are currently engaged in graduate study. The teachers were encouraged to use a developmental mathematics approach which stressed basic facts, computational skills and problem-solving. Instruction in these skills was used to help children discover mathematical relationships and form generalizations. To accomplish this, an eclectic approach was encouraged which sought to capitalize upon the abilities of individual teachers and some of the more useful innovations resulting from modern programs. Diagnosis of pupil needs was strongly encouraged as was the maintainance of a folder for each child that recorded the progress being made.

Proper planning was also given a high priority. Teachers had one full period a day built into their program for planning and preparation. They were expected to write a lesson plan for each teaching lesson. Such plans were to be dated and kept together cumulatively from the beginning of the year and were to be available at all times for supervisors. General forms were provided for lesson plans though teachers were free to draw up their own format.

G. Supervision

Five field supervisors had the task of overseeing the activities of the 135 teachers. They assumed the major burden of supervising the teaching activities of the teachers. The orientation and training of the field supervisors was the responsibility of the Project coordinator. All five of the supervisors were experienced individuals who possessed good background in supervision and/or mathematics. All had been connected with the program as teachers or supervisors for a number of years. In their visits to the schools, they used a variety of supervisory techniques with the emphasis being placed on observing teachers and giving demonstration lessons.

Evaluation Results:

Objective One:

As had been indicated, one of the goals of the program was to improve pupil performance in the area of computational skills of at least six months. The intention was to have 80% of the participating students reach this goal. A comparison of the pre and post scores on the Metropolitan Achievement Test for the sample population of 30 schools clearly indicates that this particular objective was attained. Well over 80% of the pupils in the target schools achieved the desired gain of six months. This is a particularly impressive achievement when one considers that the normal growth which could be expected between the pre and post test periods was approximately seven months. Thus, even though the program dealt with students who had evidenced specific math disabilities, the overall growth approached that which might be expected of students without such a disability.

Of the 1,392 students in the sample population for whom pre and post test data was available, over 1,173 or 84% showed gains of six months or more. A further breakdown of the data yields results of additional interest. The pre-test mean for the sample population was 4.05.

*Using a historical regression analysis in which an anticipated score is projected that is based on the previous history off the students' work, a post test mean of 4.53 was predicted. The actual mean of the resulting post test was 5.51, a clearly significant level of growth. Comparing the scores through the use of a correlated t test, a t of 29.01 was computed. This is significant beyond the .001 level of confidence. Even a sample comparison of the pre and post test mean shows that an average growth of well over one year was attained by students in the program. This would have to be considered a most encouraging result by any objective observer. When compared to national norms, this level of growth would be more than acceptable for students who had not demonstrated an initial retardation in the area of computational skills. Table 3.1 shows the results of the correlated t test for the sample population in the areas of computation and verbal problem-solving. In Table 3.2, the results of the Chi square analysis is presented showing the percentage of students whose growth exceeded six months.

Table 3.1

Results of the Correlated t Test Comparing the Predicted with the Actual Post Test Means for the Computation

Skills Section of the MAT

N	Pre-Test Mean	Anticipated Post-Test Mean	Actual Post-Test Mean	t
1,163	4.05	4.53	5.51	29.01*
*P $<$ .001				

Table 3.2

Results of the One-Way Chi Square Analysis Testing the Percentage of Students Whose Growth in Computation Exceeded 6 Months Tested Against an 80% Criterion

N	Expected	Observed	X^2
1,392	1121	1173	11.52*
*p $<$ .001			

*It should be remembered that while the program serviced students in grades 2-10, the overwhelming majority of pupils were in grades 2-6.

Lest it be assumed that the sample population differed in any substantial manner from the total population of 7400 pupils, the data presented in Appendices C and D clearly indicates how representative the random sample was. As can be seen, approximately 81% of the total population (as compared to 84% of the sample) achieved gains of six months or more. Indeed over 60% of the students showed gains of more than one year and that must be considered good progress by any standard in a 7 month period.

Objective Two:

A second objective of the program was that 80% of the pupils would demonstrate an improvement of three months or more in verbal problem-solving. Using the problem-solving section of the Metropolitan Achievement Test, pre and post scores for the sample population of 1380 were compared. *The results of the comparison lead to the conclusion that this goal too was clearly attained. Slightly less than 84% of the pupils in the sample achieved gains of three months or more. Table 3.3 shows the over all distribution of scores and records the number of pupils who attained growth levels of three months to one year.

Table 3.3

Results of the One-Way Chi Square Analysis Testing the Percentage of Students Whose Growth in Problem-Solving Exceeded 3 Months Tested Against an 80% Criterion

N	Expected	Observed	X^2
1,380	1104	1158	13.20*
*$p < .001$			

Again it is of interest to analyze the test scores somewhat further. The pre-test mean for the sample population was 3.46. The post-test result for the sample population was 4.73, again indicating an average growth of well over a year for pupils in the program. A comparison of pre and post test scores using a correlated t test clearly indicates that the growth was significant ($t = 23.88$) and cannot be attributed to chance. Based on the pre-test results, the anticipated gain that was projected for students in the program was 3.85. As can be seen, the actual results exceeded this expectation and proved to be significant beyond the .001 level of significance. The comparison of pre and post test means for the sample population on the problem-solving section of the MAT is presented in Table 3.4.

*Due to absences the number of students in the sample population for the computational and problem-solving sections of the MAT were not the same.

Table 3.4

Results of the Correlated t Test Comparing Anticipated and Actual Post-Test Means for the Problem-Solving Section of the MAT

N	Pre-Test Mean	Anticipated Post-Test Mean	Actual Post-Test Mean	t
1,156	3.46	3.85	4.73	23.88*
*P < .001				

It should be recognized that the average gain of almost 1.3 in problem-solving represents a highly commendable level of growth, particularly in this area. Not only is it a gain which is one full year beyond that called for in the proposal, but it was accomplished in a skill area in which such growth is notoriously difficult. The fact that both the pre and post test scores on verbal problem-solving are considerably lower than those on computation is not unusual but reflects a national tendency. This is undoubtedly due to the fact that different, and in the judgement of many experts, more demanding math skills as well as reading ability are reflected in the problem-solving tests. The analysis of a verbal problem generally demands a better understanding of mathematical relationships as well as the ability to compute. Since the skills required to improve in this area are multiple in nature, progress is usually more difficult. Thus, the gains registered by students in the program are most encouraging. Indeed, in only one instance did a particular grade level in the sample population show less than a full year's growth and in most instances it approached a year and a half (see Table 3.5).

Again it should be pointed out that the growth evidenced in the sample population was reflected in the progress of the total population. As appendices C and D show, well over 50% of the total group registered gains of more than one year. Approximately 20% of the 7400 pupils in the program made gains of better than two years in the seven month interval between tests. In brief, the growth figures in both computation and problem-solving skills are most impressive and inspire confidence in the overall effectiveness of the program.

Table 3.5

Results of Pre and Post Tests in Computation and Problem-Solving Presented by Grade Level

	Computation				Problem-Solving			
Grade Level	N	Pre-Test Mean	Post-Test Mean	t	N	Pre-Test Mean	Post-Test Mean	t
3	215	1.98	3.49	15.67*	212	1.95	3.05	9.50*
4	221	2.83	4.31	16.07*	219	2.35	3.47	11.98*
5	229	3.95	5.42	13.18*	229	3.27	4.50	11.75*
6	180	4.61	6.15	11.06*	180	3.76	4.89	8.24*
7	136	4.90	6.33	8.45*	134	4.24	5.64	6.84*
8	68	5.65	7.30	6.70*	68	4.81	6.47	6.71*
9	54	7.53	8.80	3.87*	54	6.55	8.30	5.70*
10	44	7.84	8.95	3.16	44	6.91	8.78	7.31*
11	15	7.47	7.91	-.29	15	6.01	7.92	2.68
12	1	9.60	9.70	NA	1	7.50	9.80	NA

*$p < .001$

Objective Three:

The third objective of the program was to have 80% of the pupils demonstrate increased interest and curiosity in the area of mathematics through exploring ideas independently. This is an ambitions goal and one that proved very difficult to measure in any objective sense. The main measures attempted included use of structured interviews with a randomly selected sample of corrective mathematics teachers and principals from the non-public schools,* observations of these teachers in their classrooms, a questionnaire sent to the remaining teachers in the sample population (Appendix C), and interviews conducted with the five field supervisors and the Project Coordinator. The evidence appears to indicate that the goal as stated, was not attained but it must be noted that this conclusion, unlike the others, is not based on hard data. The results were simply not conclusive nor could that be a reasonable expectation when measuring such an objective.

The results of the questionnaires that were distributed clearly indicate that teachers felt that their pupils were exhibiting increased curiosity and interest in the field of mathematics. It is when one attempts to measure the degree of interest and curiosity, or even more implausibly, state it in mathematical terms (i.e. 80%), that the true weakness of this type of measure becomes evident. Our capacity to measure such fine points have simply not kept pace with our desire to do so. Thus, the analysis of the data available for the third objective must be viewed with a degree of caution and healthy skepticism.

Analysis of Results:

Questionnaires were sent to 25 of the 30 teachers in the sample population.* Eighteen of the questionnaires or 72% were returned. The first five items dealt directly with the increase in interest or curiosity with additional items requesting information about what evidence the teacher has for any presumed increase. Item 5 specifically asks for an estimate of the percentage of students who exhibited increased curiosity. As will be noted in Table VI, the vast majority of teachers responding definitely felt there was an increase in interest and curiosity, but placed that increase in the 60-80% bracket.

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1. *A sample of 5 schools was randomly selected from the total sample population of 30 schools. The teachers and administrators in these schools were interviewed.

2. *Structured interviews were conducted with the remaining five teachers.

Table 3.6

Responses to the Initial 5 Questionnaire Items

Item and Topic	Definitely Yes	Probably Yes	Cannot Tell	Probably No	Definitely No
1. Program promotes increased interest.	14	4	0	0	0
2. Students exhibit increased interest.	14	3	1	0	0
3. Students exhibit increased curiosity.	12	4	2	0	0
4. Students increased ability to explore ideas independently.	12	3	3	0	0
5. Percent of increased interest.	(80-100%) 2	(60-80%) 14	(40-60%) 2	(20-40%) 0	(0-20%) 0

The results of the structured interviews were consistant with those obtained from the questionnaires. Three of the teachers interviewed placed the increase in interest and curiosity in the 60-80% category. Of the additional two teachers, one rated it higher and one lower. Interviews with the non-public school administrators and the five field supervisors yielded equally consistant results.

Thus, there appeared to be a general concensus on the part of the individuals interviewed and those responding to questionnaires that the general increase in interest was somewhere between 60 and 80%. That is an excellent achievement, if accurate, and should in no way be disparaged. The goal of 80% is a completely arbitrary one and it would be perfectly logical to take the view that it was simply too high. Surely 70% could have just as easily been set as the goal and then the objective could presumably been considered attained. In that sense the only "failure" is that of initially selecting the appropriate percentage for success.

Even if the measure could be believed accurate, the achievement of a 60-80% increase is certainly to be considered a very adequate level of growth. But the most essential fact is that when one considers the measures that can be most trusted (i.e. the test results in computation and problem-solving), the program must be rated as highly successful. It is, in effect, a simple question of organizing priorities. In the final analysis the purpose of increasing interest and curiosity is to achieve the results that the program did indeed attain: an increase in the appropriate mathematical skills. If the program had resulted in a 100% gain in interest but no measurable increase in mathematical skills, there would have serious cause for doubt about its overall effectiveness. Given the wide margin of error in measuring such goals as interest or curiosity and the obvious success in the skill areas, little weight can be attached to the inconclusive results associated with the third objective.

In all the interviews and on the questionnaires, respondents were asked to cite any evidence they had of increased interest or curiosity on the part of students as well as improvement in the ability to explore ideas independently. A content analysis of the most frequent responses was made for items 6-10 on the questionnaire and the results are presented in Appendix C.

Evaluative Comments:

There is little question that the Corrective Mathematics Program is important and is serving a useful purpose. The field of mathematics is a demanding and complex area of study that frustrates many students because they have not developed the foundation of basic skills upon which later study is based. A program of remediation which is designed to provide skilled, additional aid to the classroom teacher will undoubtedly result in many benefits if it is properly conducted. Based on the results described in the previous section, there is little doubt that this program has achieved its major objectives this year. The gains recorded are acceptable by any standard let alone in a program composed of students who began with a record of specific disabilities in the important tool areas of reading and mathematics. It is clear that such planned intervention, making similar gains yearly, will do much to provide many students with the basic foundation that will greatly improve the prospect of their further education.

The leadership of the program appeared to be highly capable. The Project Coordinator has assembled a staff of competent and able supervisors. They appear to know their teachers and demonstrated a good understanding of mathematics and the education of children in general. Cooperation between the Project Coordinator and the supervisors appeared to be excellent and seemed to be based on mutual respect and a good professional approach. Problems were discussed with candor and there was every indication that a fine working relationship existed.

The area of greatest concern for those working in the program was the new set of eligibility requirements that went into effect this year. The complaints were registered at every level of the program and the opinions voiced reflected an almost total unanimity of opinion about the inappropriateness of the new requirements. The eligibility guidelines were carefully explained in an earlier section because they seemed to be a source of great concern to so many in the

the program. To summarize, the major change that took place this year was that students could be declared eligible for the Corrective Mathematics Program only if it could first be demonstrated that they had scored below a predetermined level on a reading test. Reading is regarded by the Board of Education as the primary educational problem in New York City and therefore reading retardation was the primary criterion for Title I status. Title I status had to be determined first. Within the eligible population, needs assessment revealed those who needed and would receive mathematics services. There were also changes in the guidelines defining what would be considered a disadvantaged area. Children residing in a public school attendance area defined as disadvantaged were declared eligible. Those not residing in such an area were not eligible to receive the service, irrespective of their actual need or disadvantaged status.

There were major changes in the eligibility lists from the previous year which from all indications resulted in a great deal of discontinuity for both students and teachers. Curricula that had been planned, schedules that were already arranged, particular programs of remediation that had been designed, were all rendered inoperative by shifts in the pupil population. In many instances, a substantially new body of students had to be planned for. Meanwhile the initial inroads made with former students who were now declared ineligible had to be abandoned. The burden of record keeping also appeared to be large and was alluded to by a number of administrators and teachers in the nonpublic schools. Determining eligibility became a task that occupied a considerable amount of time.

The major question is why should eligibility for remedial aid in mathematics be determined by reading disability? There is no reason to believe that a student who does well in reading will also do well in mathematics. That connection has never been proven and the assumption is totally unwarranted. There is no clear and decisive body of research literature in which such a claim is made or supported. Such a rigid and contrived method of determining program participation forced the staff to deny students entrance when their personal and professional judgement strongly advised against it. It burdened the program with an unnecessary set of blinders and denied inputs from the sources who were closest to and most knowledgeable about which students could best profit from help.

The merits of any set of eligibility requirements are always subject to debate. Such requirements are frequently assailed on the grounds of both their fairness and effectiveness and it is impossible to satisfy all the parties involved. It is clear that the requirements imposed for program participation this year were necessitated by changes in both federal and state guidelines. Nonetheless, it must be pointed out that selection procedures appeared unnaturally complex. Part of the effort expended in selection was made at the expense of the teaching program. Means should be sought to build into the program the flexibility that allows the staff involved to make intelligent choices based on the more sensitive data available to them. If some students are selected who are not technically eligible, at least the funds are expended for teaching children rather than screening them out. The criteria employed are far from foolproof anyway and it is likely that children who were not disadvantaged were included in the program.

No criteria assembled by an authority removed from the immediate program is likely to prevent such occurrences and this lesson should be taken into consideration in the construction of future guidelines.

There is a need for increased professional judgement and discretion in the selection of students.

The evaluator was able to observe teachers in five of the thirty schools included in the sample. It must be noted that there are over ninety teachers working in the program and it would be unsafe to assume that the five were necessarily representative. The personnel observed were obviously hard working and there was no reason to doubt their competency. The general methodology employed, however, was a cause of some concern. The teachers almost exclusively used a "chalk and talk" approach that did not always appear suitable, given the small classroom rosters and the likelihood that children with poor math skills often require a more concrete approach. If the teaching observed is reflective of general tendencies, then an opportunity is being lost. The classes constitute a pupil-teacher ratio that educators have long sought and desired. Yet the methodology employed is not essentially different from that used if the class size was much larger. The reduced numbers did not appear to affect the structure of the class, the methods used or the student's role. The situation afforded much more opportunity for individualization than was used.

The amount of large group instruction observed is simply inefficient in this situation. It could be justified in classes of 30-40 where it is frequently the most economic method available but in classes of 7 or 8 students it would appear to be a dangerous and wasteful anachronism. One hopes that this is not viewed as an unjust criticism of the teachers. The nature of their position poses immense difficulties, the physical facilities present serious limitations and the pull of tradition is strong. Still, there is a need to make changes in the instructional psyche and mental habits of teachers that will lead to more imaginative use of available materials and greater variation in pedagogical technique. It would appear for example, that greater use of programmed materials is one fruitful possibility. This would free teachers for more individual help and provide students with follow-up exercises that could be worked on between class meetings. A more extensive use of mathematics laboratory equipment is another possibility. The increased use of such materials has the potential for arousing curiosity and encouraging the type of independent exploration that is one of the goals of the program. It could also result in developing a greater sense of personal competence for students as well as contribute to improved self-discipline and study habits.

The Project Coordinator has made an interesting and valid observation in regard to this critique of teaching practices. It was pointed out that teachers feel a need to "be doing something" when an observer is present. Unaware of the skills, or indeed the prejudices of the observer, there is safety in abandoning more subtle or indirect teaching methods and moving to the model that is most widely recognized and used in the classroom. It was also pointed out in regard to the lack of individualization and use of laboratory equipment, that many teachers fear the potential loss of discipline when an observer is present. There is a tendency to take fewer risks. The points are well made and unquestionably possess an element of truth. Program observations are often short on time and long on consequences and teachers know this. In any event, too much of teaching is group-oriented and abstraction-prone and the possibility that it may be a problem for this program as well, needs to be noted.

An issue that was raised by a number of individuals dealt with the advisability of meeting with students 3-5 days a week rather than two. This would have the effect of increasing the amount of contact with some students at the expense of decreasing the total number of students served by the program. The premise is that focusing the service on fewer children will result in their making greater gains in a shorter period. They would then leave the program more quickly making room for others on the waiting lists. The gain, if it occurred, would appear an illusion since the original reduction of students would simply create larger waiting lists. Thus even if it worked, the plan would amount to nothing more than a decision to teach some children now and some later. There is no clear indication, however, that meeting with students a greater number of days each week will dramatically increase the pace of their progress. There is much evidence that growth does not take place in such a manner. There must be time for children to mature, change their attitudes toward a subject and have the opportunity to reach plateaus and level off before moving on again. Sheer time for emotional and intellectual growth is necessary and additional days could be a waste if such growth has not occurred. An additional danger is that a 4 or 5 day week schedule may have a tendency to become a replacement for the classroom program rather than a supplement to it. More could be lost than gained by such a decision and it must be remembered that it would be made at the expense of students who would no longer be included in the program.

There is a need to give greater attention to the role of the nonpublic school and its personnel in the program. It is understood, but should be stated, that the Corrective Mathematics staff has little control over many of these issues. As must be clear from what has preceded, it is believed that the program has strong potential and has achieved its major goals. Children are obviously being helped. Yet it would seem possible that a careful consideration of the nonpublic school role could multiply the program's effectiveness and extend its impact beyond the current boundaries. The schools do not appear to be capitalizing on an available opportunity. There needs to be a more effective involvement and greater understanding of the program. The integration that is being sought should be between the corrective mathematics teacher and the school staff not between various teachers providing corrective services. The school administrators interviewed were anxious to have the program but did not appear knowledgeable about how it was functioning. They seemed to be uninvolved and unaware and yet there is great potential for building upon the foundation provided and expanding its possibilities. More frequent visits could result in sounder planning of the program on their part and the spread of ideas for materials and different approaches among their own staffs.

Greater efforts could also be made to create a facility that has the potential for daily use or which could have a purpose beyond the Corrective Mathematics Program itself. It would be wise for the schools to take advantage not only of the service provided but the presumed expertise it makes available. By contributing their own funds, even in small amounts, it is possible that appropriate materials could be purchased and math centers organized. The aid of corrective mathematics teachers and supervisors could be sought in this endeavor.

In schools which are serviced five days a week, the facility is almost fully used and the evidence is that they are better equipped anyway. But in places where the service is only one or two days a week, the result would be better equipment for the program. In addition, nonpublic school teachers could use the math center the rest of the week by scheduling their classes for visits. If the intent of funding the program is to affect more pupils and upgrade the quality of teaching, this is one good way to accomplish that goal. One is not unaware of the difficulties the nonpublic schools face - shortage of funds, inadequate facilities, demands upon the time of the administrators - but an opportunity to re-enforce and expand a number of services is not being seized upon.

Only one paraprofessional was seen during the various visits to classrooms. Her services were not well used but then little is known about her background, level of competence, or how often she was actually assigned to the program. The teacher's use of her services may well have reflected a knowledge of her skills that was simply more extensive than that of the observer. Still the whole area merits thought in regard to making better and more intensive use of a potentially valuable resource. It is all too rare to see paraprofessional aides used with sensitivity and skill.

Some differences were noted in the programs in those schools serviced five days as opposed to those serviced fewer days. Teachers in the "5 day" schools had distinct advantages. Since they were there more often, they had the opportunity to know the staff better. It would also appear that their rooms may generally be more fully equipped and the facility itself sometimes superior. Perhaps the most important fact is that their rooms were not shared. They were freer to decorate, use charts, display work and lay out materials. The degree of difference between these and schools serviced fewer days is, relative and depends upon the teacher and other variables. The advantages are there, however, and it is likely that schools having the program as little as one day a week would receive limited benefits. It is probably impossible to eliminate these one-day-a-week schools. The practical result would be to limit the majority of services to one religious denomination. Nevertheless it should be understood that the one-day-a-week practice appears to be of questionable educational value.

In speaking to supervisors, several referred to outstanding classroom teachers whose work they greatly admired. It is suggested that means be found to expand the influence of such teachers. Careful considerations should be given to creating model facilities build around the particular talents of exceptionally able instructors. Such facilities might reflect a variety of teaching approaches and classroom environments whose sole similarity would be the excellence of the endeavor. The rooms should be well equipped and would probably have to be located in a school that is serviced five days a week. If a planned program of intervisitation does become part of the program, such classrooms could be extremely useful. They could serve an excellent in-service purpose in training teachers and might be used to encourage thought or change teaching behavior.

The coordination of services between corrective reading and mathematics teachers suggested in the proposal appeared to produce indifferent results. The structure of the total program seemed to prevent rather than facilitate such

coordination. The goal was not built into the structure but appeared grafted on to it. Specific time for joint planning was not provided with the result that teachers found it difficult to get together. They were often not in school on the same day and when they were, the preparation period was frequently not scheduled at the same time. There seemed little opportunity to collaborate. When teachers did get together it appeared to be more a function of the personalities of the individuals rather than any carefully designed program which encouraged and facilitated joint planning.

Such cooperation would probably prove useful but considering the difficulty, such energy might be better expended elsewhere. As has been mentioned previously, the integration of services that appears most necessary is that between the nonpublic teacher and the teacher of corrective mathematics. Cooperation here too appears limited but its potential usefulness appears much more important. If a distinct plan for integrating services should be devised, the focus should be upon these two groups.

The recommendations for program improvement made by teachers on the questionnaires included at least one item that should be noted. There were a number of suggestions that more training conferences be held. This seemed to reflect a need for continuing contact with new developments, techniques and materials in the field of mathematic education. While the latter two purposes are probably served to some degree by the visits of supervisors and the conduct of demonstration lessons, it seems likely that this is not sufficient. The number of demonstration lessons is limited by heavy supervision loads and it is likely that most teachers, for a variety of reasons, do not make specific requests for such lessons. To the extent possible, training conferences should be expanded in scope and held with greater frequency. Such sessions may be the most effective and economic teacher training devices available.

Summary and Recommendations:

The overall results of the program appear to be excellent and its continuation is strongly recommended. The program is well organized, in spite of the difficulties posed by the new guidelines, and ably administered. There is little question that students in the program are deriving real benefits and that there is a compelling need for the help offered. Denying such aid would be extremely wasteful of human resources considering the progress that has been made.

In light of the preceding evaluative comments, the following recommendations are made:

1. The eligibility guidelines should be revised and entrance to the program based upon demonstrated need in the area of mathematics rather than being contingent upon disability in reading.

2. Teachers should be encouraged to employ a greater variety of pedagogical techniques that could capitalize upon the advantage offered by smaller groups. Increased use of self-instructional materials and specially made mathematics equipment that could promote independent exploration should also be encouraged.

3. Teachers and administrators of the Corrective Mathematics Program, in conjunction with nonpublic school personnel, should be given greater opportunity to exercise individual judgement and discretion in determining which students shall be included in the program.

4. To the extent possible, a planned program of intervisitation should be organized. Such a plan should not envisage a rigidly prescribed set of visits for each teacher but should be centered around the creation of model facilities that offer the best potential for the display of teaching techniques and/or materials. Visits could be the result of teacher choice, supervisor suggestion or planned trips by small groups for the purpose of observation or demonstration.

5. The number of teacher training conferences should be increased if at all possible. Efforts should be made to explore the degree of interest in particular topics to see if such interest is sufficient. To sustain workshops, small or large, on non-school days.

6. The number of schools serviced one day a week should be curtailed when possible. It would appear that such distribution of resources is not economic and the effort is dissipated by the lengthy interval between classes.

7. The attempted integration between corrective mathematics and corrective reading should be continued but priority should be given to establishing a much closer working relationship between nonpublic school teachers and teachers providing corrective services.

8. Attempts should be made to provide greater program continuity from year to year. Such efforts would center around more effective and earlier communication between program administrators and those officials determining guidelines. Less dramatic shifts in guideline requirements and more informed decisions would do much to stabilize the student population, allow the program to initiate its actual teaching schedules earlier, and enhance the prospect of exploiting inroads made in prior years with students who might otherwise be barred from participation.

9. More effective use of diagnostic tools and materials should be sought so that more individualized programs of study could be prescribed. It is possible that the use of programmed materials and other self-instructional devices could not only result in greater flexibility in classroom practices, but provide for the instruction of a number of students not now serviced but in need of marginal help and capable of making progress on their own.

FUNCTION NO. 09-39628

ENGLISH AS A SECOND LANGUAGE

Chapter IV English As A Second Language

Program Description

In the teaching of English As A Second Language (ESL) Program in the Nonpublic Schools of New York City 54 teachers (29 full time and 25 per diem) worked with 3,650 pupils in 80 schools. The teachers were licensed in ESL (26), foreign language (23) and common branch or early childhood education (5). Students in the program were in kindergarten through the 8th grade and had earned C to F ratings on the New York City Scale of Pupils' Ability to Speak English. The field supervisors visited classes to guide teachers and supply materials. The program is directed by a project coordinator with the services of one secretary.

The Board of Education provided a wide range of texts and visual aids besides an extensive bi'liography entitled Sources and Titles of Materials Designed for or Useful in ESL/Bilingual Programs. Scott Forsman's English Around the World was observed in use in elementary schools and Robert Lado's English Series is recommended by the Board for the junior high school level. In addition to the actual texts, workbooks for in and out of class exercises, teachers' guides, skills books, display posters, work cards, practice pads, test booklets, records and tapes were available. Because of the wide range of student proficiency and student age, NPS ESL teachers based their curriculum on the needs of each class. Generally, they followed the ESL Guide: A Course of Study Manual for Pre K Through Grade Two and the Middle Grades Bulletin (English for the C child in the middle grades).

Twenty of the ESL teachers were posted to their schools at the beginning of the school year. Other teachers, primarily those on a per diem basis, were recruited and assigned to schools through November, December, February and March. Before going into the field, new teachers met for two or three days at the Board studying procedures of the ESL program. During these sessions they studied the New York City Scale of Pupils' Ability to Speak English for screening purposes, were familiarized with attendance and eligibility procedures and program requirements: that there be no more than 10 students in any one class and that the 10, in order not to interrupt a number of classes, be from the same grade level.

Before moving into the field, new teachers spent two days visiting established ESL classes in Nonpublic Schools, observed experienced teachers and became familiar with ESL classes in the context of the whole school. ESL teachers and other NPS staff assigned to the same school were to confer with each other three times a month, although the Project Coordinator noted the meetings were difficult when a school received one day service. Besides holding intercomponent discussions, there were three general staff meetings for ESL teachers during the year. The 29 full-time teachers met at Central Offices of the NPS Title I ESEA Services when Nonpublic Schools were closed during the February and Spring vacations. All teachers were encouraged to take courses in ESL and to attend local and national professional meetings in the field of English As A Second Language.

The two field supervisors helped new teachers master the screening of students and administer the New York City Scale of Pupils' Ability to Speak English test. In the course of the academic year the supervisors visited two or three schools a day four days a week. Support of new teachers was emphasized and supervisors visited them every six weeks. Supervisors observed classes and discussed class problems and techniques of teaching with the teachers. In addition, they visited principals and served as active liaisons between the host school and the Central Office. Administratively, they ascertained whether students receiving ESL were eligible, matching class lists with the master list submitted to the Board.

Program Objectives

It was anticipated that approximately 90% of the students would show a one or two level gain on a pre-post administration of the Project Evaluation Test (including the New York City Scale of Pupils' Ability to Speak English) developed by the project coordinator (see Appendix D). Pre-tests were administered in September of 1972 while the post-test was given in June, 1973.

A second objective stated that pupils in the project would improve classroom performance in skill and content areas of reading, mathematics, social studies and science. At least 75% of the participating students were to demonstrate a satisfactory achievement by a passing grade of 65%.

Evaluation Procedures and Findings

A. Interviews

In addition to the analysis of test data (objective 1) and report card pass-fail grades (objective 2), observation of the NPS ESL program was made at a random sampling of schools receiving NPS services to study the ESL program and its inter-relatedness to other components of the umbrella program. The ESL evaluator also interviewed the Project Coordinator for a clarification of the ESL program's objectives and its implementation.

The ESL evaluator observed teaching procedures, student written work and student performance in six classrooms. Lesson plans, materials provided by the Board of Education and teacher created materials were examined. Interviews with teachers included their perceptions of classes, contact with supervisors from the Board of Education, relationship with other NPS personnel and with host school personnel. Each visit (with one exception when the principal was absent because of illness) included an interview with the host school principal. The principals were asked to respond to a structured questionnaire concerning the effectiveness of the overall umbrella concept and participated in an open-ended discussion focusing on their impressions of the program and personnel, their relationship with the Board of Education, their reaction to the umbrella concept and recommendations for improving it.

In the course of field visits and interviews certain recurring factors (noted by teachers and principals or inferred by the ESL evaluator) seemed to be representative of all schools receiving NPS ESL services:

NPS ESL teachers observed in class had personality and manner, tone and articulation conducive to encouraging language learning. Students were at ease with the teacher and with each other. Two principals complained of discipline problems, primarily noise, but classes observed were orderly and it was noted by the evaluator that noise and excitement seemed inherent in a class moving from a homeroom situation to a special activity.

Teachers repeatedly demonstrated interest in their work. Rapport between NPS ESL teachers and their supervisors seemed good and that relationship could lead to willing acceptance of academic support from the Board of Education supervisors. Nonetheless many teachers seemed inexperienced. Lessons appeared at times to lack focus or they were directed at non-relevant language problems i.e., students were communicating among themselves upon entering and leaving class with greater English proficiency than the level of the lesson objective. The goals were inappropriate. Teachers at times did not respond to meaningful content in students' questions and valuation learning material was lost.

Rapport between supervisors and host school administration appeared sound and basic support of the umbrella program was evident in principals' reactions. Every principal visited was satisfied with NPS ESL personnel, indicated they represented the program to Nonpublic School staff and parents groups, and expressed the wish to have Nonpublic School staff visit NPS classes. However, in the six schools visited, conflict of schedules made direct visiting impossible.

Conflict of schedules also affected the inter-relatedness of the umbrella concept. Contact between ESL staff and other NPS staff and between ESL teachers and Nonpublic School teachers seemed to depend upon the number of students eligible for services. Except when NPS staff are posted to a school daily because of the size of the student population, NPS guidance, reading, mathematics, ESL and speech personnel often never see each other; e.g., the guidance counselor comes on Monday, the ESL teacher on Thursday. It is also difficult to have contact with classroom teachers who have their own full daily schedules.

While interviews with principals and other Nonpublic School staff indicated general approval of the E.S.L. Program, ambivalence about the new State Education Department mandated eligibility requirements was also expressed. Some of those interviewed felt that the priority services, including E.S.L., were being used as a route to supportive services rather than an ends in themselves.

Some principals reflected the feeling that students receiving E.S.L. services in addition to corrective reading, corrective mathematics and guidance were absent from their home classrooms too much of the time and were missing the "total school experience." Principals also indicated the wish to determine, along with the class teacher, those students who should be the recipients of Title I services.

While half the ESL classes visited had comfortable quarters, one was in an auditorium, another off a cafeteria and a third was in the cafeteria itself. Surrounding noise impeded instruction to the extent that the evaluator sitting with students had difficulty hearing the teacher.

In summary, the NPS ESL Program, while successful as measured by statistical criteria of performance, showed weaknesses in two areas. 1) Academic weaknesses: These can be reduced, if not eliminated, by increasing the kind and frequency of support given to inexperienced teachers, thereby strengthening their

ability to instruct and enhance the learning of English As A Second Language. 2) Administrative problems: Scheduling and calendar conflicts, the availability of physical facilities for remedial classes and State Education Department eligibility requirements, while out of the hands of the Title I remedial staff, have repercussions on the functioning of the program. Some of these problems would appear to be inherent in any attempt to mesh parallel administrative structures, each with their own priorities, and are not easily overcome.

B. Statistical Analysis

EVALUATION OBJECTIVE 1: To determine if 90% of the pupils have moved up at lease one level on the Project Evaluation Test (including the New York City Scale of Pupils' Ability to Speak English). The Project Evaluation Test was developed by the NPS E.S.L. Central Office. Pre-testing was done in September, 1972 while the post-test was administered and graded in June, 1973.

The evaluation of objective one was treated as a two step process. On the one hand a correlated "t" test was applied to the pre and post test data to determine whether the mean difference was significant (see Table 4.1). The second phase involved testing the prediction that 90% of the students would demonstrate an improvement of at least one level on the Project Evaluation Test.

Table 4.1

Correlated "t" Analysis of Pre and Post Testing of Project Evaluation Test

Group	N	Mean	Standard Deviation	t	Level of Significance (p)
Pre	406	6.084	2.286		
Post	406	8.187	1.896	31.93	.001

The sample included all students attending ESL classes in the 30 sample evaluation schools for whom pre and post test scores were available.

STEP ONE:

The ratings on the scale were assigned the following numerical values:

B = 12	C - = 8	E + = 4
B - = 11	D + = 7	E = 3
C + = 10	D = 6	E - = 2
C - = 9	D - = 5	F + = 1
		F = 0

(A students were ineligible)

The "t" value of 41.93, significant at the .001 level, indicates that when treated as a total group, the ESL sample made significant improvement between the pre and post tests. The mean difference was 2.103 scale units.

STEP TWO:

A frequency count was then made of all students having both a pre and post rating. It was found that 91.4% made gains of at least one scale unit as defined above meeting the criterion set by the proposal.

According to the Project Coordinator, teachers did see students falling in between levels and assigned numerical values to indicate these distinctions. The reliability of teachers' discrimination between half steps, i.e., the difference between C and C - on the rating scale (see Appendix D) is questionable.

EVALUATION OBJECTIVE 2: 75% of the pupils in the project will improve classroom performances in the content areas of reading, mathematics, social studies and science by achieving a passing grade of 65% on teacher made tests.

In order to test the second evaluation objective a 2 x 2 Chi Square analysis was employed using first and final report card grades. Table 4.2 presents those findings.

Table 4.2

Chi-Square Analysis of 1972-73 Passing Teacher Grades

Subject			Chi-Square	Level of Significance (p)
Reading	Pre	49.6	63.586	.001
	Post	85.1		
Mathematics	Pre	60.8	83.385	.001
	Post	84.5		
Science	Pre	67.5	28.753	.001
	Post	85.4		
Social Studies	Pre	64.7	41.358	.001

It will be noted that in each of the four subject areas significantly more than 75% of the students had passing final grades.

Between September and June, students receiving NPS ESL services improved their performances as measured by teacher grades, amply meeting the program objective and evaluation criterion. Student success in subject areas, however, could be due to any number of variables. The nature of the evaluation design, i.e., the lack of a control group, does not permit one to conclude that the ESL program was instrumental in this improvement.

Recommendations

It is recommended that the ESL program be continued with the following modifications:

1. Program Objectives

Specific program objectives should be provided for each grade level. The ESL program is defined in the Central 1972-73 Title I Remedial Services for Eligible Nonpublic School Pupils Report, Function No. 09-39625, as a "program for students with language handicaps." Operational Procedures calls for referring ESL students to Corrective Reading and Corrective Mathematics. The need stated under Corrective Reading and Corrective Mathematics notes:

> With renewed emphasis on reading material in contemporary mathematics, textbooks, supplementary books, and programmed texts, the mathematics teacher must know not only the sources of difficulty his students encounter in reading mathematical material but also ways of overcoming these difficulties. At the elementary level pupils must be taught to read calendars, thermometers, timetables, abbreviations, and the like. In the secondary school, students must learn to read exponents, formulas, subscripts, equations, reference tables. The reading teacher should teach reading as needed in arithmetical situations.

These and "The Need and Operational Procedures of Corrective Reading and Speech Therapy" should also be detailed goals of a sound ESL class. The degree to which ESL goals are not specifically stated affects the actual classroom achievement of goals at each grade level and need to be articulated.

2. In-Service Training

It is recommended that supervisors guide less experienced teachers specifically toward having a clear focus and being responsive to student content to increase the likelihood of comprehension, production and retention of language. In order to implement this recommendation the number of supervisors should be increased by at least two. With two supervisors responsible for 54 teachers in 80 locations, it is difficult to have the frequent and intense guidance recommended.

If expansion of supervisory staff is impossible, pre and in-service training might be extended. Prior to moving into the field, all ESL staff might meet as a group for active workshops dealing with common academic problems and sharing means of handling them. In the course of the year, ESL teachers within reach of each other might meet, using their schools on a rotating basis and again share very specific methodology. These circles might expand. Two or three groups of six teachers meeting three times together might then hold a larger meeting combining the three groups and with a specified agenda address themselves to ESL problems: e.g., the difference between teaching first and second graders and seventh and eighth graders. With teachers concerned with audio-lingual teaching, when does reading and writing come in? At the seventh and eighth grade level when a discrepancy between oral proficiency (usually high) and writing (generally weaker) exists, what priority is met, and when, why and how can it be implemented? At the higher grade levels with intermediate and advanced ESL students, controlled structures orally, with appropriate visual aids, can move from audio-lingual use of the language to the reading and writing needed for success in content courses.

3. Support by Host School

Support of the umbrella program was clearly shown by positive reactions from principals. Because of schedule conflicts, however, interaction between NPS and host staff appeared minimal. It is recommended that the schools arrange formal monthly exchanges between classroom teachers and NPS ESL teachers to facilitate implementation of the principles implied in the umbrella concept. Regular meetings, ranging from a seminar format in which the two groups can focus on class goals to smaller meetings where individual student needs and problems are discussed, would help to bridge the gap inherent in separate administrative problems.

4. Inter-relatedness Between ESL, Other Central Remedial Services and Nonpublis School Teachers

To be successful, the umbrella concept requires communication among all personnel involved with the pupil receiving remedial services. While recognizing the lack of time available to the classroom and remedial teachers it is recommended that this communication be formalized by having Nonpublic School classroom teachers provide ESL teachers with the specific language goals they are pursuing with their classes. ESL teachers can, in turn, structure their own materials and lessons to parallel the content of the basic class providing a reinforcement and integration of the material faced daily by the pupil.

5. School space and facilities could be scheduled to permit Central Services personnel to appear at the same school on the same day. If students are out of class for umbrella services in an intensive day, they are less likely to miss the "total school experience" than if each day is interrupted by special services. The common day would allow NPS personnel to meet each other in the context of the very students they are working with and increase the likelihood of specific references to individual students and their problems.

6. In schools with ESL classes, the ESL teacher might become a pivotal person in communication, first between host school and NPS staff and then among NPS personnel. The ESL teacher could then base his lessons on an analysis of the basic texts classroom teachers are using as well as specific topics being used in classroom instruction. Having noted vocabulary and structure, he can adapt his materials so that ESL lessons are truly an expansion and reinforcement of basic class activities, thereby increasing the probability that students will indeed advance one or more years in reading grade level and achieve passing grades in mathematics and social studies.

If the ESL teacher determines the order and the development of language arts classes, he can then be a resource person for other NPS teachers: e.g., indicate to the mathematics teacher structures familiar to students so that math concepts can be introduced and reinforced in language appropriate to a given class. In turn, the mathematics teacher could share materials with the ESL teacher. The incidence of student difficulty in content areas will be reduced if the new material he is studying is presented within the framework the language teacher knows he can function with.

The Board of Education offers a wide range of materials deliberately flexible enough so that ESL teachers can adapt them. The adaptation should be designed to parallel the activity in the Nonpublic School classrooms. Through examining and isolating basic structures, the year's work can assume a cohesiveness, continuity and integration that is now missing because of scheduling, time pressures and calendar conflicts.

7. Referral Rationale

It is recommended that greater flexibility be given Nonpublic School principals in referring students to receive Title I services. Performance on an instrument used in the English As A Second Language Program should be used to refer students for E.S.L. services.

8. Physical Facilities

In view of the difficulty in providing extra facilities, it is recommended that host schools stipulate that, during hours of instruction, other activities in cafeterias and auditoriums be suspended. Perhaps the ESL class can move to classrooms of students using the cafeteria at a given time. At present, NPS ESL teachers escort pupils to and from homeroom classes. It is suggested that when adequate self-contained facilities are not available, ESL classes be held in the homeroom or in the nearest regular classroom.

SUMMARY

Approximately 90% of the students in the ESL program moved more than one level up the language scale from pre to post administration on the New York City Scale of Pupils' Ability to Speak English component of the Project Evaluation Test. (Pre-test administration September, 1972; Post-test administered in June, 1973.)

More than 75% of the participating students demonstrated satisfactory classroom performance in skill and content areas of reading, mathematics, social studies and science by achieving a passing grade of 65% on teacher-made tests.

It is recommended that the ESL program be continued with the following modifications:

(1) that the Board of Education define a program-wide curriculum;

(2) that specific minimal goals be stated for each grade;

(3) that these goals be pursued by ESL teachers with the guidance of supervisors;

(4) that unless the ESL staff can demonstrate their ability to reliably rate students at half steps, the 6 point scale should be used to grade the Project Evaluation Test.

FUNCTION NO. 09-39629

CLINICAL-GUIDANCE SERVICES

Chapter V Clinical-Guidance Services

The Clinical-Guidance Services component of this project was designed to provide supportive services for the eligible nonpublic school pupils who were receiving remediation from Title I staff in the nonpublic schools. The proposal called for comprehensive clinical-guidance services to be provided by Guidance Counselors, School Psychologists, School Social Workers, and School Psychiatrists.

During the 1972-73 school year, clinical-guidance services were provided in 167 non-public schools in New York City. This evaluation is based on data which was obtained from a sample of 30 schools and from interviews with the project directors. A sub-sample of five schools was selected for a more intensive study of the clinical-guidance services. In these five schools the clinical-guidance workers and the principals were interviewed at length.

I. Program Objectives

The general objective of the clinical-guidance program was to assist the basic remedial services in their efforts to ameliorate the academic retardation of Title I enrolled eligible pupils. The rationale of using clinical-guidance services in these efforts was that the causative factors involved in academic problems often include psycho-social aspects requiring diagnostic procedures and the attention of a team that utilizes clinical-guidance services as well as remedial specialists.

The specific program objectives of the clinical-guidance component were:

1. 80% of the pupils referred to and receiving service in this program, because of need for remediation in reading, mathematics and English as a Second Language or speech, will improve their achievement by at least six months in the remedial programs.

2. 80% of the pupils referred to and receiving service in this program, because of need for remediation in reading, mathematics, English as a Second Language or speech, and who have not been included in these programs because of other problems, will improve by at least one step on a rating scale in their school adjustment.

3. Pupils referred to and receiving service in this program will demonstrate a decrease in the intensity of the prime reason for referral, as reported by classroom teachers, as the result of these clinical-guidance supportive services.

To achieve these objectives, priorities of concern and attention were set. Priorities for the primary grades were:

1. Determining the causes of failure.

2. Assisting remedial teachers in meeting pupils' needs to assure progress.

3. Providing therapeutic experiences to overcome pupils' resistances to remedial efforts.

4. Analyzing pupils' family and social problems to determine causes of failure so that remedial programs might respond to special needs.

5. Counseling pupils individually and in groups as indicated by presenting problems.

6. Involving parents in the study and treatment plans to maximize pupil progress.

7. Involving pupils in small therapeutic groups so that they might learn to function better in group learning settings.

8. Assisting pupils in improving self image, awareness of self, sense of responsibility and attitudes towards school and society.

In addition, the following two priorities were set for pupils in the elementary grades enrolled in basic programs.

9. Developing pupils' understanding of own uniqueness, talents, and interests to motivate achievement.

10. Advising classroom teachers, remedial teachers, school administration and parents for appropriate class placement, curriculum, and learning atmosphere to facilitate learning.

The following priorities were added for high school grades:

11. Assisting enrolled pupils with the choices and planning involved in their educational and vocational development in the context of peer, family, and economic realities.

12. Assisting enrolled students with post high school planning and transition to the world of work.

II. Program Description

A. Staffing

The staff of the Clinical-Guidance Program consisted of counselors, social workers, psychologists, and three part-time psychiatrists. The psychiatrists shared one full-time psychiatrist's line in the program. This professional staff was supervised by two guidance supervisors, a social work supervisor, and the clinical coordinator who spent half of his time in supervising social workers. The psychologists received supervision from supervisors who were attached to the Bureau of Child Guidance.

The program was directed by a Coordinator for Guidance and a Coordinator for Clinical Services.

B. Student Population

The student population eligible to receive clinical-guidance services consisted of those nonpublic school pupils who had been identified as being Title I eligible and who were receiving remedial instruction from Title I teachers. This total group numbered approximately 15,000 in the 167 schools to which clinical-guidance workers were assigned. The 167 schools located in all five boroughs of New York City included in order of the number serviced, Roman Catholic, Jewish, Lutheran, Greek Orthodox, Episcopalian, and Ukranian Orthodox schools.

C. Program Activities

The services provided by the Clinical-Guidance Program are listed below and will be discussed in the results section of this report.

1. Case studies of pupils based on observations, tests, and interviews with students, teachers, and family members.

2. Diagnostic evaluations to determine the factors involved in pupils' academic retardation.

3. Counseling and therapy to increase pupils' ability to benefit from remedial instruction.

4. Consultation with school personnel and Title I teachers to formulate more effective means for helping referred pupils in the classroom and in their remedial services.

5. Referral to outside agencies and clinics when resources of the school and the Title I personnel were not adequate to deal with a pupil's problems.

6. Orientation of nonpublic school teachers and principals to goals of the program and methods of appraising and helping pupils in the target population.

7. In-service training and field supervision for the clinical-guidance staff.

8. Educational and career guidance for the target population.

III. Evaluation Procedures

This section presents the evaluation objectives that were developed and the procedures that were used in the evaluation process. Each evaluation objective that follows corresponds to the like numbered program objectives in section I.

1. Achievement

To determine if the pupils referred to the Clinical-Guidance Program from the Corrective Reading Program and the Corrective Mathematics Program demonstrate positive, statistically significant differences in achievement from students referred for but not receiving service.

A. Sample: The sample consisted of all the students who were referred to the Clinical-Guidance Program in the 30 sample schools. A student was considered as one who was receiving service if he was seen six times or more by any of the clinical-guidance workers during the school year. These students comprised the treatment group. The control group consisted of the students who had been referred for clinical-guidance services but who had been seen fewer than six times during the school year.

B. Instruments: The Metropolitan Achievement Tests in Reading and Mathematics were administered to both groups in the Fall of 1972 and again in the Spring of 1973. The Fall testing constituted the pre test and the Spring testing constituted the post test.

C. Analysis: A 2x2 Analysis of variance design was used comparing the increases in the mean pre and post test of the Reading and Math Scores of the treatment and control groups. .05 was established as the level of significance.

D. Additional Analysis: To aid in the interpretation of the results of the analysis of variance, a comparison of the pre and post test scores of the treatment group, by means of an anticipated versus real design, was added to the evaluation procedure. The anticipated and actual increase in mean scores were compared by "t" tests using the .05 level of significance.

2. Behavior

To determine if 80% of the pupils referred to and serviced by the Clinical-Guidance Program have improved significantly more than students referred but not serviced as measured by pre and post ratings on a school adjustment scale.

A. Sample: The sample was the same that was described in evaluation objective 1 (Achievement).

B. Instrument: The Rating Scale For Students Referred For Clinical-Guidance (see Appendix E) was used to obtain the behavioral ratings. The rating scale was developed by the Clinical-Guidance Coordinators on the basis of their experience in analyzing the significant traits of students who had been referred for service. The first 13 items on the scale are five point Likert-type items and it was these items that were used in the analysis of this objective.

The ratings were made by the teachers who referred the students for clinical-guidance services. The pre test ratings were made at the time of referral and the post test ratings during the last month of the school year.

C. Analysis: The ratings of the 13 items were totaled to yield a school adjustment score. The percent of students in the treatment group whose adjustment scores were exceeded (i.e. whose adjustment was better than) by the mean adjustment score of the control group were compared against the 80% criterion using a Chi-Square at the .05 level.

Additionally the improved adjustment of the treatment and control groups were evaluated by comparing the decrease in mean scores of each group through a "t" test with significance at the .05 level.

3. Reason For Referral

To determine if 80% of the pupils referred to and serviced by the Clinical-Guidance Program have demonstrated greater positive decrease in the intensity of the prime reason for referral than pupils referred but not serviced.

A. Sample: The sample was the same that was described in evaluation objectives 1 and 2.

B. Instrument: The Post Referral Rating Form (see Appendix E) was developed by the evaluation team. At the end of the school year, the referring teacher indicated to what extent there had been amelioration if any, in the major problem that had prompted the teacher to refer the student for clinical-guidance services.

C. Analysis: The degree of improvement of the experimental group was compared to the improvement in the control group. Two categories, "same" and "little or no improvement" were assigned scores of zero. The three remaining categories of "satisfactory," "good" and "excellent improvement" were assigned scores of 1, 2, and 3 respectively. The mean improvement scores of the two groups were then compared using a t test at the .05 level.

The percent of students in the treatment group whose converted improvement scores exceeded the mean improvement score of the control group were then compared against the 80% criterion at the .05 level of confidence.

4. Supplementary Analysis

The rating scale described in 2 also contained five yes or no (check or non-check) items relating to social adjustment and 4 yes or no items relating to intellectual functioning. The pre and post teacher ratings in these nine items indicated whether students had improved, regressed, or showed no change. If difficulty on an item was ascribed to a student on the pre but not the post rating, he was considered as improved. Conversely, if the difficulty was noted on the post but not the pre, the student was considered as regressed on the item. Students who were checked on the pre and post were considered as unchanged. Students who were unchecked on both pre and post were excluded from the analysis. The percent of students in the two groups showing improvement, regression, and remaining unchanged were compared on each item using a Chi-Square at the .05 level of significance.

5. Interviews

An evaluator visited five schools that offered clinical-guidance services. These schools were among the sample of 30 schools in the comprehensive Title I study.

The schools were:

Our Lady of Lourdes	-	District 19, Brooklyn
St. Athanasuis	-	District 8, Bronx
Torath Vodaah	-	District 15, Brooklyn
St. Lukes	-	District 7, Bronx
St. Gregory	-	District 17, Brooklyn

During each visit, all the clinical-guidance workers were interviewed in depth. The principals of all the schools were also interviewed as were teachers in three of the schools.

IV. Results

1. Achievement

Table 5.1

Means of Pre and Post Test Reading Achievement Scores and Increases Between Means for the Treatment and Control Groups

Group	N	Mean of Pre Test	Mean of Post Test	Increase
Treatment	347	3.488	4.384	.896
Control	100	3.861	5.008	1.147

Table 5.2

Means of Pre and Post Test Mathematics Achievement Scores and Increases Between Means for the Treatment and Control Groups

Group	N	Mean of Pre Test	Mean of Post Test	Increase
Treatment	501	3.547	4.935	1.388
Control	113	3.920	5.350	1.430

Tables 5.1 and 5.2 indicate that the treatment group improved its mean reading score by almost 9 months and its mean math score by almost a year and four months. The control group improved its mean reading and math scores by over one year and one month and one year and four months respectively. Both groups, therefore, reached -- or nearly reached in the case of reading for the treatment group -- or exceeded the normally expected improvement of one year in both skill areas. The control group's increases were somewhat greater than the treatment group's.

The analysis of variance that are summarized in tables 5.3 and 5.4 indicate that the increases in reading and mathematics scores for both the treatment and control groups was significant over the one year period between the pre and post tests. In reading, the control group improved significantly more than the treatment group but this difference between the groups did not hold for mathematics. There was no interaction effect between the independent variables in reading nor math.

That both groups significantly improved their reading and mathematics scores, over time, is not surprising since both groups received special remedial help during the school year. The finding that the control group improved their reading scores more than the treatment group may be attributable to the fact that the treatment group was comprised of those students who were considered to have the most severe and extensive problems among the Title I youngsters. It is of interest that these youngsters did as well as the control group in mathematics.

Table 5.3

Summary of the Analysis of Variance of the Pre and Post Test Reading Achievement Scores of the Experimental and Control Groups

Source	Sums of Squares	df	Mean Squares	F
Extent of Clinical-Guidance Services (Treatment vs. Control)	41.368	1	41.368	5.059*
Time of Testing (Pre - Post	218.761	1	218.761	195.475**
Interaction	2.638	1	2.638	2.357 N.S.
Within	538.302	443	1.215	
Total	801.079	446		

*Significant at .05
**Significant at .01

Table 5.4

Summary of the Analysis of Variance of the Pre and Post Test Mathematics Achievement Scores of the Experimental and Control Groups

Source	Sum of Squares	df	Mean Squares	F
Extent of Clinical-Guidance Services (Treatment vs. Control)	29.389	1	29.389	3.45 N.S.
Time of Testing (Pre - Post)	531.741	1	531.741	454.31**
Interaction	.058	1	.058	.05 N.S.
Within	635.541	610	1.042	
Total	1196.729	613		

**Significant at .01

To further examine whether the improvement of the treatment groups in Reading and Math might be attributable to the special services they had received, their previous rate of growth was compared to their growth rate during the past year.

Table 5.5

Mean Anticipated and Actual Reading and Mathematics Achievement Scores for the Treatment Group

Skill Area	N	Pre Test Mean	Anticipated Post Test Mean	Actual Post Test Mean	Difference	t
Reading	347	3.507	4.084	4.404	.32	3.64**
Math	501	3.588	4.174	4.961	.79	9.23**

**Significant at the .01 level.

Table 5.5 presents the anticipated versus actual data. The treatment group's actual mean post reading score exceeded what might have been the anticipated mean by over three months while the actual mean score in math exceeded the anticipated by almost eight months.

2. Behavior

Table 5.6

Chi Square Values of Percent of Treatment Group Whose Post Test School Adjustment Score Exceeded Mean Score of the Control Group

Group	Expected No.	Expected %	Observed No.	Observed %	Chi Square
Treatment	489.6	80	531	87	
Control	122.4	20	81	13	17.76***

***Significant at the .001 level.

87% of the treatment group obtained school adjustment scores that exceeded the mean score of the control group. Although the students in the treatment group could be presumed to have been more severely handicapped than the non-treatment group, 87% appear to have made better progress, behaviorially, as a result of having received clinical-guidance services.

Table 5.7 supports the notion that the treatment group did demonstrate greater progress than the control group in school adjustment.

Table 5.7

Comparison of Mean of Improvement Scores from Pre to Post Tests in School Adjustment for Treatment and Control Groups

Group	N	Mean Improvement	t
Treatment	612	- 6.909	8.628***
Control	201	- 2.134	

***Significant at the .001 level.

Keeping in mind that a decrease in score indicates an improvement in school adjustment, the data indicates that the students who were seen six times or more made a significantly better school adjustment as the year progressed than did the control group. The treatment group, then, demonstrated greater improvement than the control group as well as exceeding the 80% criterion.

3. Reason For Referral

Table 5.8

Chi Square Values of Percent of Treatment Group Whose Improvement in Major Cause of Referral Exceeded Mean Improvement Score of the Control Group

Group	Expected No.	Expected %	Observed No.	Observed %	Chi Square
Treatment	551.2	80	625	90.7	
Control	137.8	20	64	9.3	49.8096***

***Significant at the .001 level.

More than 90% of the treatment group had improvement on the Post Referral Rating Form scores that exceeded the mean improvement score of the control group. This result far exceeded criterion of 80%. Table 5.9 indicates that the difference in mean scores between the groups was significant at the .001 level.

Table 5.9

Comparison of Means of Improvement Scores is Major Reason for Referral in Treatment and Control Groups

Group	N	Mean Improvement	t
Treatment	689	2.306	
Control	216	1.630	7.438***

***Significant at the .001 level.

The treatment group not only exceeded the mean of the control group's improvement score in nine out of ten cases but the superior improvement of the treatment group was due to factors other than chance. Here, it appears as it does for the behavioral changes, that the clinical-guidance services accounted for this difference.

4. Supplementary Analyses

Table 5.10

Number and Percent of Students in Treatment and Control Groups Who Improved, Showed No Change, or Regressed in Social Adjustment

Item	Improved				No Change				Regressed				Chi Square
	Treatment		Control		Treatment		Control		Treatment		Control		
	N	%	N	%	N	%	N	%	N	%	N	%	
1. Relations to Teachers and Adults	126	61	22	35	68	33	33	52	12	6	8	13	13.93**
2. Relations to Peers	154	60	21	34	93	36	35	58	12	4	5	8	12.53**
3. Immature for Age	116	52	27	30	149	41	55	62	19	7	7	8	3.17 N.S.
4. Appears Physically Abused	5	33	1	50	5	33	1	50	5	33	0	0	.94 N.S.
5. Appears Neglected	37	47	4	17	35	45	16	66	6	8	4	17	7.57*

*Significant at .05 level
**Significant at .01 level
N.S. Not Significant

The data in Table 5.10 indicates that at least 60% of the treatment group improved in their relationships to adults, teachers and peers while only about a third of the control group showed such improvement and that the difference in improvement rates between the two groups was significant. The treatment group also seemed to teachers to have improved significantly more in appearing to be less neglected at the end of the school year than at the start compared to the control group. This latter finding is of particular interest because it probably reflects, more than any other item, the impact of staff contacts with parents.

On the immaturity item, the percent of improvement favors the treatment group but the difference is not significant. The final item, relating to physical abuse, is also non-significant and the numbers involved preclude any judgments.

Table 5.11

Number and Percent of Students in Treatment and Control Groups Who Improved, Showed No Change, or Regressed in Intellectual Functioning

Item	Improved				No Change				Regressed				Chi Square
	Treatment		Control		Treatment		Control		Treatment		Control		
	N	%	N	%	N	%	N	%	N	%	N	%	
1. Seems Slow and Retarded	51	43	17	34	61	51	24	48	7	6	9	18	6.22*
2. Does Not Retain Information	109	55	27	36	71	35	38	51	21	10	10	13	7.34*
3.A Progress in Remedial Instruction in Reading	98	53	11	26	64	34	35	64	25	13	9	16	19.17**
3.B Progress in Remedial Instruction in Math	44	47	9	26	27	29	19	57	22	24	6	17	7.95*
4. Appears to be Underachieving	217	47	4	17	208	45	8	35	37	8	11	48	39.82**

*Significant at .05 level
**Significant at .01 level

On four of the give intellectual functioning items, about half of the treatment group showed improvement. On the fifth item, "seems slow and retarded," better than four out of ten showed improvement. In the control group, no more than about a third improved on any item. The differences between the groups on all the items is statistically significant.

It is of interest that item four, relating to underachievement, was checked by teachers substantially more than any other item on the Rating Scale. This underscores the relationship between clinical-guidance services and the perception of teachers that these services are helpful in the remediation process.

The supplementary analysis gives clear support to the contention that clinical-guidance services is an important influence in bringing about change, scholastically, behaviorally, and socially among students who are originally referred for remedial purposes.

Interviews

The Staff

The professional quality of the staff was high. They were appropriately trained. In addition to the in-service training provided, many workers were involved in further university training.

The workers have also made a great deal of progress in functioning as teams. Compared to last year, very little competition or defensiveness among disciplines was evident. There was a great deal of respect for each other's talents regardless of professional labels. Workers tended to use their strengths in a team approach to a far greater degree than previously. A factor that still hampers the team approach is that workers, because of space limitations, are often not in the schools on the same day. When this is the case, they rely on communication by phone or notes but this can not substitute for professional face-to-face interaction.

Assignments and Caseloads

Table 5.12

Caseloads by Grade of Clinical-Guidance Workers in 30 Sample Schools

Grade	N	Percent
1	30	02.6
2	148	12.9
3	179	15.7
4	175	15.4
5	166	14.6
6	140	12.3
7	99	08.7
8	70	06.1
9	64	05.6
10	47	04.1
11	12	01.1
12	10	00.9
TOTAL	1140	100.0

Table 5.12 represents the number of students who were seen by the Clinical-Guidance workers in the 30 sample schools. The number 1140 exceeds the total number reported in the treatment and control groups. The difference is accounted for by students for whom no post rating was available, either because they had transferred from the school, or they had been admitted to the Reading and Math programs too late to have a meaningful pre and post comparison.

The numbers in table 5.12 were obtained from the official reports submitted from the workers to the coordinators. These numbers, however, seem to underestimate the number of students actually seen. In the five schools that were intensively studied, from a low of 25 in one school, workers were seeing many youngsters that did not appear in caseload records. These were students who "walked in" and not rescheduled for a second visit, students involved in crisis situations, and non-eligible students who were seen by workers before or after school, on their own time. In the sample schools, the official caseloads numbers should be increased by about 50% to yield a more accurate number of the students actually seen.

Using the official figures, the clinical-guidance workers saw 37% of the 3,052 students who were served by the Title I remedial teachers in the sample schools. The data also indicates that close to half of the students seen were in grades 3, 4 and 5 while only 15% of the students were in grades 7 and 8. This distribution reflects the emphasis that the program placed on the lower grades.

Program Activities and Priorities

Workers devoted the overwhelming portion of their time to two activities; pupil appraisal and individual counseling. In the sample school, typically about three quarters of staff time was devoted to these functions.

Appraisal

Considering the limited amount of psychologists' time, the counselors and social workers were doing a good job of evaluating learning problems. The major handicap under which they operated was in the areas of differential diagnosis and the analysis of perceptual difficulties. Because psychologists often serviced ten or more schools there were, on a number of occasions, substantial time lags between referral and examination.

This year however, there was a significant improvement in the scheduling and use of psychologists. Time delays have been cut to a minimum and it is only the great demand for service that creates the problem. For some schools, facilities in community clinics and hospitals were used to augment Title I psychological services. Elsewhere, the community facilities were inadequate.

All the workers also indicated that they were satisfied with the availability of psychiatric consultation. Two of the psychiatrists came to the schools upon request. The third preferred to consult with the staff in his office. The staff felt there was greater value in the former method of consultation since it gave the psychiatrist a feel for the school and enabled him, at times, to talk to other school personnel.

One weakness in the appraisal process concerned the evaluation of perceptual problems. One factor is the relative recency of sophistication in the entire area. Relatively few psychologists anywhere, let alone counselors and social workers, are adequately knowledgeable in the diagnosis of perceptual problems. But beyond this, the psychologist do not possess enough of the tools (such as the Illinois Test of Psycholinguistic Abilities) to assist the counselors and social workers in making the kinds of perceptual diagnoses that can be of concrete help to teachers.

Except for diagnosis of perceptual learning problems and the demand for psychologists' time, the appraisal function was well performed. Workers gathered as much information as possible. Although time schedules usually precluded formal case conferences, counselors and social workers used the concept of multiple inputs and collective judgements in arriving at diagnoses and treatment plans. These inputs included, as far as relatively possible, those of classroom teachers, Title I Remedial Specialists, Clinical-Guidance Specialists, the principal, parents, and always, from one to three interviews with the student under study.

Counseling

Under the revised guidelines there was a greater number of students receiving protracted counseling than in former years. The clinical-guidance workers reported that because of the more circumscribed caseloads, they could devote more time to those they saw. The decrease in one or two session cases and the increase in regularly scheduled counseling cases was accompanied by a significant drop in the amount of group counseling that was being performed. In the previous year the clinical-guidance workers were in the process of establishing an impressive group counseling program. This trend was reversed in 1972-73. The revised guidelines have made it difficult to maintain a group counseling program. The smaller number of eligible children makes it difficult to schedule those with similar problems and ages together. Further, there is a felt pressure from the guidelines to concentrate on individuals rather than groups. Workers, however, are still doing some group work but they are disappointed at its fall-off.

Consultation

Providing feedback to Title I and classroom teachers and the principal was seen as a very valuable aspect of the program. The teachers and principals that were interviewed reported that the clinical-guidance workers help in this respect, was very appreciated and sought after. At least a half dozen interviewees said "I don't know what I would do without them" or words to that effect.

Because nonpublic school teachers have very full teaching schedules, it was difficult for workers to find time to consult with teachers. Most workers, as with working with non-eligible children, gave of their own time liberally before school, during lunch, and after school - to consult with teachers.

Consulting with Title I remedial teachers presented the problem of allied disciplines learning to work together. Some Title I teachers worked very closely with clinical-guidance workers in the formulation and implementation of remedial plans but others resented, or at least, were skeptical about the assistance of the workers in what they, the Title I remedial specialists considered their own area of expertise. The clinical-guidance workers are very aware of the problem and are

working on it with a professional approach. Progress has been made from the beginning to the end of the year. It is a credit to the clinical-guidance workers that they responded to the inter-disciplinary problems with so little defensiveness and so much professionalism. It seems likely that their experiences in working out their own inter-disciplinary problems (between counselors, psychologists, and social workers) have held them in good stead in developing a total team approach under the umbrella concept. The entire Title I umbrella is likely to benefit from this.

Parental Involvement

The workers continued to make great efforts to involve parents. Many of the parents of the youngsters who need remedial help because of working, or fearful because of previous experiences were unable to come to school. Nevertheless, in almost every case involving serious family factors, an effort was made by the workers to contact the parents. Their efforts have been successful to a reasonable degree. A random perusal of the workers' logs reflected at least one and usually two or three parent interviews per school per week. Thus, a good proportion of the parents of children in the workers' caseloads were being seen since in many instances schools are served only one or two days a week.

As in the case of student groups, parent groups have also decreased in the schools visited compared to last year. It was difficult enough last year to get enough parents for a group to come in on a regular basis. With the smaller number of eligible students this past year it was virtually impossible to form a continuing group during school hours.

A few one session parent workshops were held but even these had very poor attendance and discouraged further attempts. Guidance counselors engaged in very little direct educational and vocational counseling with the students. The reasons for this were: a) counselors spent most of their time, in line with the guidelines, assisting students receiving remediation and the focus of counseling was on helping the youngsters make productive use of remedial programs, b) the counselors tended to concentrate their efforts on the lower grades where little educational and vocational counseling is done.

Counselors, however, were valuable in providing educational and vocational guidance indirectly. The teachers in the schools often turned to the counselors for advice. In this consulting capacity, counselors provided information about public high schools, advice about particular decisions regarding students and suggested curricular approaches for individual pupils.

What the counselors could do in this respect was limited by time and the fact that they could not see all the students that were involved; nevertheless, the teachers did receive welcome professional help. The teachers, in turn, used this information to directly assist students in their educational planning and to prepare lessons in career development.

Educational and Career Guidance Counselors engaged in very little direct educational and vocational counseling with students. The reasons for this were: a) Counselors spent most of their time, in line with the guidelines, assisting students receiving remediation. The focus of counseling was on helping the youngsters make productive use of remedial programs. b) The counselors tended to concentrate their efforts on the primary grades where little educational and vocational counseling is done.

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Referral

Generally, referral services for treatment of students with social and psychological problems were inadequate. Most out-patient clinics and agencies had long waiting lists. Further, when contact was initiated it was often not sustained because parents could not, for physical or psychological reasons, keep their and their children's appointments at the clinics. An additional complicating factor was that many of the clinics have no or too few Spanish speaking therapists. As a result of all of these factors many youngsters who needed regularly scheduled therapeutic assistance were not receiving it outside of the schools.

Consequently, the workers in the Clinical-Guidance Program were seeing many students who had severe psycho-social problems on a regular weekly basis when they were not receiving help elsewhere. Thus, there was a tendency for the workers to see children with the most severe problems; while youngsters with less severe problems, (and probably better prognosis) received less attention.

Orientation of Nonpublic School Staff

The Clinical-Guidance Program shared an orientation program during the past year. At the beginning of the year a workshop was held for principals which included a section regarding the philosophy, goals, and functions of the Clinical-Guidance component. This initial orientation probably contributed to increased principals' understanding of the service compared to last year.

In addition, in seven schools, teacher workshops were organized. The workshop themes emerged from the articulated needs of the teachers, i.e. understanding children and teacher-class relationships. These workshops were generally well received by the teachers and more workshops are being planned.

Despite the formal and day-to-day informal orientation efforts of the staff, principals and classroom teachers had great difficulty accepting the new guidelines. The single greatest complaint of the nonpublic school staff was that they could not understand why all children who needed clinical-guidance help could not get it. A commonly heard statement was that even if all children were not eligible such help, the guidelines should not restrict clinical-guidance services to

only those Title I eligible children who were receiving primary remediation services. The nonpublic schools' staff felt very strongly about this.

Professional Development

Another area in which the program was strengthened was professional development. The clinical workers continued to benefit from the fine federally funded, in-service training programs offered by the Bureau of Child Guidance. The Guidance coordinator organized seven combined administrative and training meetings. Topics for discussion included resource materials, referrals, evaluation, accountability, diagnosis and treatment of learning disabilities.

Two joint training workshops were held which brought together the guidance and the clinical workers. The purpose of these innovative workshops was to strengthen the inter-disciplinary and team approach. Judging by the results discussed earlier in this report, these joint meetings appear to have been quite useful.

In addition to these structured activities, a majority of the workers interviewed were acquiring advanced training either at universities or through attendance in specialized training programs, e.g.the learning disabilities programs offered by Maimondedes Hospital in Brooklyn and St. Luke's Hospital in Manhattan. Guidance workers in the schools served by these hospitals attended.

Supervision and Administration

The workers were well satisfied with the availability and quality of supervision. All supervisors were easily accessible. Supervisors had visited each of the sample schools at least twice. When visiting a school, they consulted not only with their workers, but with school staff and were perceived as being helpful in both administrative and professional matters.

A feeling expressed by some of the workers was that they were often not consulted in administrative decisions affecting their day-to-day activities. Although recognizing the difficulties inherent in decision making in a dispersed organizational structure, they nonetheless felt that some method could be devised to better accomodate their thinking.

Conclusions

Although the control group slightly exceeded the Math and Reading Achievement test score improvement of the treatment group (only the Math difference was significant), a strong case exists for the positive influence of clinical-guidance services, on achievement for the treated students. First, median scores of the treatment group were lower on pretests than those of the total group enrolled in Reading and Mathematics. Secondly, the control group was not strictly a control group

since their problems were less severe than those of the treatment group. The control group would be expected to do better all things being equal. Thirdly, the achievement of the treatment group exceeded expectation. This could be attributed to remediation alone but the judgements by the teachers of the treatment group's scholastic progress compared to the control group's is telling. Fourth, the influence of clinical-guidance services, ordinarily, take some time before they are felt. In summary, there is strong support for the conclusion that clinical-guidance services had a strong influence on the achievement of the students who were serviced.

The changes in the behavior, the school adjustment, and the social adjustment of the treatment group is even more striking. The data indicates that clinical-guidance services resulted in positive changes in these important adjustment areas.

Recommendations

1. Clinical-guidance services should be included in the continuation of the nonpublic school program.

2. The clinical-guidance staff should receive additional in-service training in the diagnosis and remediation of learning disabilities to increase the effectiveness of their efforts in dealing with such problems.

3. The clinical-guidance staff should provide one day of worker service for every 50 students in the total Title I program. This would bring the ratio up to recommended professional levels which are particularly modest in the context of an economically deprived and an educationally underachieving population.

4. The research design for the clinical-guidance component should accomodate the fact that clinical-guidance services influence scholastic changes slowly and over a period of time. The time frame for scholastic changes should be at least two years.

5. A policy advisement committee composed of clinical-guidance workers should be formed to provide the coordinators with inputs in a more systematic manner.

6. Career development and educational guidance should be provided as a formal part of the program since it can be a powerful motivation for scholastic achievement.

7. The guidelines should be modified to permit clinical-guidance workers to see students who are Title I eligible but who are not receiving remedial help.

8. Greater efforts should be devoted to developing an inter-disciplinary team approach among all the Title I personnel in a school. Each Title I specialist might serve, on a rotating basis, as Title I coordinator (not director) for the school. This would increase cooperation and communication.

9. More group work should be encouraged with students and parents. Many of the groups could be co-led by a clinical-guidance worker and a remedial specialist. Such groups might improve parental effectiveness and coperation in student attitudes towards remediation.

FUNCTION NO. 09-39630

SPEECH THERAPY SERVICES

Chapter VI Speech Therapy Services

Introduction

The New York City Board of Education under Title I (Elementary and Secondary Education Act of 1965) has furnished Speech Therapy services for pupils eligible under the new guidelines developed by the Board of Education and the Non-Public School Representative, May 1972.

A Speech Therapy Program operating under the umbrella concept must draw its population of children with communication disorders from amongst those who are enrolled in one of three academic target areas; corrective reading, corrective math or English as a second language. Given this definition, the Speech Therapy Program must meet two objectives; first, the major objective of any Speech Therapy Program, to correct or ameliorate the speech defect for which the child has been brought into therapy, and thereby increase his oral communicative abilities, and secondly to serve a supportive role to the child's academic target area for which he also receives special corrective service by assisting in the total language functioning.

This report assesses the effectiveness of speech therapy services provided in terms of its traditional role in correcting or ameliorating specifically diagnosed speech defects within a school population and secondly in its role as a supportive service to children with speech defects who are also receiving corrective service from one of the three aforementioned academic target areas.

Evaluation of the 1972-1973 school year Speech Therapy Program began in February and continued through May. Evaluation procedures included on-site visits to 5 schools, interviews with the speech teachers, analysis of responses to a questionnaire submitted to 23 speech therapists serving 30 schools in the stratified sample, analysis of the results of Pre and Post tape recordings of samples of speech of children in therapy analysis of speech teachers' ratings, and analysis of Pre and Post Photo-Articulation Test scores of children enrolled in speech therapy.*

1. The cumulative on-site observations and results of interviews revealed:

   a) Although most host schools are limited in physical space, more or less adequate facilities are provided for speech therapy sessions. Some therapists had a room which is shared by another service on alternate days and provision within that space for records and materials to be kept. Others worked in less formalized settings (i.e. a sectioned off part of backstage of the auditorium or the upstairs lobby section of the auditorium) but an attempt was made to keep these as interference free as possible.

   b) The host schools have been cooperative in supplementing any needs which may arise on a day-to-day basis which do not come from Central Service (i.e. dittoing).

*See Appendix F

c) The children appeared to be competently diagnosed according to traditional clinical speech classifications (specific articulation defects such as lisping or a w/l substitution; stuttering; voice defects such as hoarseness or breathiness) but there seemed to be little understanding of (interference from) underlying language differences the attendant problems of dialectal and bilingual students. In addition, diagnoses were often confounded by non-speech-related subjective judgements, such as comments on personality or intelligence factors.

d) Although the speech therapist is restricted to filling the caseload from children enrolled in one of the three academic target areas, there is no formalized provision for personal communication or discussion regarding the children seen between these services on an on-going basis. Where this personal communication has been effected, it has been on an informal basis, when two services happened to be scheduled within one school on the same day.

e) Some use of form R-11 which requests specific content (words or concepts) from the three academic target areas to include in speech lessons, was noted. The largest portion of such use was by the corrective reading teacher furnishing words or concepts included in the reading lessons and the speech therapist including these within the speech lessons. A list of math words prepared by the Math Coordinator was distributed to the speech teachers.

f) The teachers kept adequate diagnostic records of their pupils; had well-organized lesson plans which were rather strictly adhered to, and provided homework instructions and/or tasks for their pupils.

g) There was a heavy reliance on formalized speaking situations and on reading of written materials, some of which was developed by the individual speech teacher and directed at the specific speech defect.

h) Form GK, which lists speech defects and language-related behaviors, developed to inform other Title I teachers of these problems so they may be cognizant of their incidence among their students, was distributed at component meetings.

i) There was no uniform degree to which the therapist acted as a resource person within the realm of speech and hearing services available from outside agencies, but individual referrals were generally made where deemed necessary. Some therapists acted as a resource person beyond the job expectations, others made only the most routine referrals.

j) Of the 5 therapists observed, two did not appear to make effective use of time. In the instances observed, one or two children were scheduled. The children were otherwise occupied or absent and the therapists were left with unscheduled free half-hours. While this can occur sporadically to any therapist, excessive repetitions should be eliminated.

k) The teachers had good rapport with the children and the pupils were eager to come to speech class.

l) The speech teachers stated that any diagnostic test or therapy tool they required could be available from their Central Service, but required a long advance reservation and a long trip to pick up and return each item, which often discouraged its use. Any materials, however, which can be reproduced have been done and all teachers commented on the exceptionally fine job done by the coordinator in this area.

m) The speech teachers all expressed the most positive attitudes towards the field supervisor and the coordinator, especially of the open line of communication which exists and the immediate attention to any problems they encounter that requires supervisor or coordinator assistance.

n) The principals of the host schools are most positively oriented towards Speech Therapy Programs, but regard the umbrella concept as too limiting since many children in their schools, not enrolled in one of the three academic target areas are in need of such service.

o) Two specific questions emerged from the speech teachers' interviews in terms of their professional role and its compatibility within the umbrella concept. First although all were in complete agreement with the need of the children in the three priority academic areas to be serviced, they felt that the exclusion of some children whose speech defects were more severe but who were not so enrolled, presented a conflict. Secondly, for some children whose reading difficulties may stem from language-behavior related problems, for the speech therapist as oral language teacher to assume a secondary or supportive role appears incompatible.

2. Additional Information Derived from Analysis of Questionnaires Submitted to Speech Therapists Indicated That:

a) Although almost 25% of the children were diagnosed as having articulation errors resulting from foreign language interference, there were no special therapy approaches to this problem.

b) No other service took advantage of the opportunity to utilize the records, lesson plans or content material of the speech therapist, so that the inter-relation between components in these realms was a one-way feed with speech therapy always being the recipient. Speech teachers also fed information on student progress to other component personnel and suggested that they assist in carry-over.

c) Several meetings, workshops and other discussion groups were initiated this year to effect substantiative teacher training.

3. Analysis of the Pre and Post Therapy

PAT sheet teacher ratings indicated that 25.5% of children have been discharged as corrected of their diagnosed speech defect and 96.94 have shown improvement in their communication skills by amelioration or correction of speech defect.

PAT scores indicated 84.66% improved.

Program Description

> The New York City Board under the Elementary and Secondary Education Act of 1965 (Title I) and as outlined in Central 1972-1973 Title I Remedial Services for Eligible Non-Public School Pupils, maintains a Speech Therapy Program. According to the last mentioned report".... the operational procedures of the priority programs must be supported by the services of speech therapy..."

The coordinator of Speech Therapy Programs for the non-public schools assigns trained and licensed speech teachers to eligible non-public schools. Speech therapy services are available to eligible children who are identified as having need of such service.

Children in grades two through twelve who are handicapped by defective speech, which is defined as "speech anomolies which interfere with communication and are severe enough to cause anxiety for these children and render them conspicuous" and who are enrolled in one of three academic target area services (corrective reading, corrective math or ESL) constituted the population from which the caseload is to be drawn. In addition, children from first grade may be included if they are enrolled in E.S.L.

To identify this group, the speech therapist screened all children enrolled in corrective reading, corrective math or English as a second language, who had previously been receiving speech therapy, to identify those pupils with continuing speech problems. The speech teacher also screened children in the three aforementioned priority areas who were suggested by the Title I teachers in these areas or by the classroom teachers as possibly requiring speech therapy services but who had not been previously enrolled.

Also screened were children new to the school enrolled in these priority areas, younger children receiving corrective service who had not previously been screened by a speech therapist and, where feasible, remaining children in the three priority areas. Most therapists have a waiting list of children who have not yet been included in one of the priority areas, although eligible, and were therefore not able to be included in a Speech Therapy Program.

The program, now in its seventh year of operation, served 3,300 children during 1972-1973. Speech Therapy Programs were maintained in 166 elementary schools and 7 high schools, by 53 trained speech teachers. In 152 schools a speech teacher was in attendance one day a week and in 21 schools, the teacher was in attendance two days a week. Of the 21 schools which had the speech therapist twice weekly, 7 were the Special Title I speech centers, to which a more severe speech case may be referred. There is one Field Supervisor and one coordinator in a supervisory capacity with the Speech Therapy Program. The 53 teachers on staff is comprised of 13 regular, 10 permanent substitutes and 38 per diem teachers. Of the 23 full time people, 10 have a BA plus 30 credits (with 36 credits in speech), 12 have a BA with speech major and the teacher-trainer has a BA plus 60 credits (with over 36 credits in speech). Of the 30 per diem teachers, 12 have a BA plus 30 credits (with 36 speech credits) and 18 have a BA with major in speech. Therefore 33 teachers of the 53 have completed full qualifications in their field and 30 are working towards such completion.

The correction or amelioration of specific speech defects to increase the communication skills of children and support in oral language functioning to increase its effectiveness constituted the activities of speech classes which are 1/2 hour long and held once a week in the majority of schools.

The speech therapist, in consultation with the supervisor and coordinator, group children according to similarity of diagnosed speech defect, age and grade level. A group was comprised of 2 to 5 children, but not more than 6 with the teacher servicing at least twenty children per day. The therapist keeps attendance records, progress reports, an official Board of Education speech record card and any other pertinent data for each child.

Speech progress reports are sent home three times yearly being distributed by and returned through the classroom teacher who is thereby kept informed of the students' progress in speech.

Lesson plans are prepared for each group, homework on prepared sheets is assigned and kept in a speech notebook the child brings to class. There are 9 one half hour sessions in a full day with one hour allowed for curriculum preparation and for conferences.

For a group with a specific articulatory defect a class session may consist of practice in auditory discrimination, work on production of the sound in initial, medial or final position in words, and inclusion of words containing the sound in either reading of written material or sentences generated by the children and other language arts activities appropriate to remediation of specific defects.

In addition to providing the group therapy services the speech teacher, for individual cases where deemed necessary, may make referrals for hearing evaluations, otolaryngeal examination, dental examination or others, through the supervisor and coordinator, and is kept informed of the findings of these services for aid in providing a more effective therapeutic program. Severe speech disorders requiring intensive therapy may be referred on an out-patient basis to one of the Title I clinics. The speech teachers also scheduled conferences with individual parents where it was judged to serve the best interests of the child, and every parent is contacted and invited to a conference. In addition, a parent workshop is scheduled at least once a year in each school.

When the supervisor or coordinator visits the individual speech teacher, they observe lessons and discuss their observations, make relevant suggestions and may aid the speech teacher in diagnostic decisions or in referral advisability. These visits are not regularly scheduled but are more frequent to new or probationary teachers and less frequent to older more experienced ones.

Component meetings of all speech teachers are held on days when the non-public schools are closed and are devoted to increasing the professional skills of the teachers in all aspects.

Program Objectives

1. To provide therapy which will render 80% of the children enrolled improved in communication by elimination or amelioration of their speech defect.

2. To have 20% of the pupils in this program discharged as corrected because the diagnosed speech defect which interfered with communication has been eliminated.

3. To provide support in oral language functioning so that other educational areas which are dependent on effective oral skills may be assisted and function more effectively under the umbrella concept. This constitutes a modification of the original objectives.

Specific Evaluation Objectives

1. To assess whether 80% of the children enrolled in speech therapy have improved either as a result of amelioration or elimination of their speech defect. Analysis of Pre-and-Post PAT scores and speech correction teachers' scoring of the communicative abilities in terms of the diagnosed speech defect.

2. To assess whether 20% of the children enrolled in the program have been discharged as corrected. The Pre-and-Post PAT Sheets were marked by the speech therapist to indicate which students constitute the "corrected" group.

   In addition to the teachers' scoring, the principal investigator independently rated children by listening to their tapes to ascertain inter-rater agreement in meeting the criterion.

3. In line with the modified objectives of the program to assist in the oral language functioning of the child, a qualitative assessment of the program in terms of activities, approaches, training workshops, allocation of time, and understanding of language problems by the speech teacher was made. Included was personal communication with the coordinator regarding these areas and results of questionnaires submitted to the speech therapists.

Formal evaluation of the speech component was begun in February 1973 and continued to May 1973. This report includes evaluation of the program in terms of the specific objectives outlined by the program and its effectiveness in implementing the modified objective as stated above.

Evaluation Procedures

Included in evaluation of the Speech Therapy Program are 30 sample schools which are included in Function 09-39625. In order to assess whether the program's objectives have been met, the chief speech investigator obtained from the coordinator the photo-articulation test rating sheets for the population of students in the sample schools, and tape recordings of the pupils' speech. A rating scale by which the speech teachers scored the pupil's speech disability was devised by the chief speech investigator. This was necessary in order to have scoreable results for every child included in therapy. The Photo-Articulation Test is a measurement device for defining the type and severity of defective production of specific speech sounds. As the speech teacher administers the test, a sheet is marked indicating whether the sound has been omitted (-), whether there has been one sound substituted for another (w/l) or whether a sound has been distorted according to a degree of severity (D3) - severe (D2) - moderate (D1) mild. The score is merely a frequency count of the number of errors and does not differentiate between the severity or type which is the key factor in interfering with communication, thereby causing a lack of intelligibility. Accordingly, the following scale was devised:

Omission	-	5	-	most distorting
Substitution	-	4	-	less distorting
Distortion Severe	-	3	-	" "
Distortion Moderate	-	2	-	" "
Distortion Mild	-	1	-	least distorting
Elimination of Defect	-	0	-	no distortion

In addition the PAT score sheet only provides a column for comments and no quantitative method of scoring other speech disorders, such as stuttering. It was therefore recommended that the speech therapists utilize the 0-5 rating scale for rating other speech defects (stuttering, voice defects) according to the degree of severity ranging from none to severe. In this way each child would have a pre-and-post score which could indicate improvement in the area in which therapy was given by moving from one numerical level to a lower numerical level or could be considered "corrected" of the specifically diagnosed speech defect for which therapy was offered by achieving a level of 0 in that area. The subjective judgement of the speech therapists in regard to these ratings were tested by listening to the tapes, as follows:

1. The principal investigator ascertained a degree of severity of the specifically diagnosed speech defect on the pre-therapy tape and noted the change on the post-therapy tape, according to an increase in intelligibility and difference in performance in the specific area for which the child had received therapy.

2. A group of the sample was listened to a second time by the chief investigator, to obtain a percent of inter-rater agreement.

3. The percentage of agreement between the independent evaluation of the chief investigator and the teacher rating constituted the validity of the meeting of the criterion of the program's objectives of 20% of the children to be discharged as corrected by elimination of the speech disorders and 80% to be improved by amelioration or modification of the speech defect.

In order to assess the modified objective of the program, that is, to assist in oral language development, responses to questionnaires sent to the speech therapists were analyzed and a personal meeting was held on June 5th with the coordinator to determine the range of activities, the methods of implementing such programs, and the training of the therapists in language-related areas; that is, to attempt to define the role that the speech therapy program played in assisting in the total communicative effectiveness of the children enrolled.

A copy of the questionnaire is found in the appendix. The questionnaires were delivered by the coordinator to the speech therapists at a component meeting and these were returned anonymously directly to the Principal Investigator by mail.

I. General Evaluation of Program

Only 5 of the sample schools were visited by the speech therapy investigator, the other 25 being visited by other component investigators. During the visit which constituted one whole school day, all the time except 1/2 hour to meet with the principal, was spent in observation of implementation of various aspects of the Speech Therapy Program and in interviewing the speech therapists. An outline of the guideline used for this visit appears in the appendix. The speech teachers had been advised by the coordinator to have diagnostic records, lesson plans and other pertinent information available to be reviewed. Since personal observation was restricted to five schools, the information below is based on the returned questionnaires as well as on the personal observations of 16 therapists - one more therapist returned the questionnaire but had so recently come into the program (4 weeks before) that the information could not be completed.

1. School Facilities

a) working space

While it may be irrelevant to discuss the physical conditions observed, (2 of the schools visited were being phased out) certain comments should be made for future consideration. The speech communication process depends on an aural-oral link between 2 or more persons. In a situation where a speech therapist is attempting to foster monitoring of such process both on the part of a speaker and listener it would seem a minimum requirement to be supplied with an environment that maximized freedom from extraneous noise and interference. Speech therapists by tradition are a most adaptable group of people and have worked in most difficult physical situations. However when children are wedged into seats because of the physical limitations of space so that movement for natural communication is impossible or when the noise level surrounding the area is so high that the signal (speech) is obliterated, it hardly provides a satisfactory environment for aiding in oral communication.

In one school, although the "speech room" turned out to be the upper balcony level over the auditorium and the speech teacher had neither blackboard or storage (this was in the reading room 3 flights down), the space was selected for its quiet and appropriateness of space. In another school, although a classroom was provided it was so noisy that speech was interfered with.

b) available materials

All of the essential items and services needed to carry on the program day-to-day are provided by the Central Service (hand mirrors, dittoing) however if some small item is suddenly needed the host schools have been cooperative in supplementing these.

2. Diagnostic Classifications and Population Distribution

a) diagnosic information

Although the investigator did not test any sample of children against the diagnostic classifications offered by the speech teachers, as each therapy session was observed the records of children involved were reviewed and observation of the on-going speech behavior was checked against these records. While in general those observed appeared to be competently diagnosed according to specific speech defect, it did appear that the diagnostic category defined the defect as more severe than the investigator observed it to be, or else remarkable improvement had been effected. However, the tapes of the children who were slated for discharge tended to confirm the investigator's observation, that, while the speech defect was present, its original degree of severity was overrated. This was noted by the previous investigator; it appears to be a continuing phenomenon. This might very well be an artifact of a diagnostic situation, in which focus on a particular defect tends to amplify it in the ear of the observer, and render more severe its communicative interference. A review of the remainder of diagnostic information, apart from the specific defect for which the child was in therapy, which were supposed to relate to the child's total communicative ability, revealed many instances of subjective evaluations; of intellectual capacities (i.e. limited child) or of personality variables (i.e. lazy); and lack of understanding of bidialectal or bilingual language pattern interference (a child using a bidialectal grammatical form was characterized as unable to use grammar although the category "use of non-standard pattern" was listed).

The use of irrelevent subjective diagnostic euphemisms should be restricted. Such categorizations do not aid in either the speech diagnostic nor therapy procedure and may in fact have a retarding effect on establishing a good communicative environment since these categorical definitions can only serve to alter the social perceptions of the speech teacher about the child. The use of some specific diagnostic tests which the coordinator is planning to introduce should serve to reduce the incidence of subjective descriptions. For instance, a test like the Peabody Picture Vocabulary Test describes levels of functioning according to available vocabulary, based on specific socio-cultural and educational age expectations. Given this type of information the speech teacher is also provided with a direction and a level at which lesson plans may be initiated in order to bring pupils to the expected age levels in this area of language functioning.

The problems of a non-standard language pattern causing interference should not be regarded as a pathological condition but as an educational problem.

Speech Therapists should be given training in understanding the differences between a functional speech defect within a speech dialect and an alternative sound production based on a different "kind" of speech.

b) diagnostic distribution

Before an evaluation of whether a program has been effectively implemented or not occurs, a clear definition of the population it purports to serve is essential. The following diagnostic classification of children were obtained from the returned questionnaires and were in accord with the distribution noted by the observer.

The 16 therapists included served 669 of the 3,300 total this year. This is a little better than 1/5 and therefore suggests it offers a fair sample distribution.

343 children diagnosed as articulation disorders (non-ESL)	over 50%
161 children diagnosed as articulation disorders involving foreign language interference.	over 24%
96 children diagnosed as having other speech defects such as voice, stuttering, tongue thrusting, cleft palate speech, cluttering.	about 14%
69 children diagnosed as completely non-english language users, non-categorized, or those deficient in language related behaviors which often tend to call attention to themselves such as monosyllabic responses, repetitions, or some frequency of inappropriate verbal responses	about 11%

The consensus of those who were able to respond to question #3 suggested that the above caseload included many more children with articulation problems due to interference from another language pattern; included many more minor articulation disorders while eliminating some children with serious speech defects (hard of hearing children, stutterers, cleft palate speakers) and included somewhat more of the children with the noted language-related behavior problems, than previously would be expected to be found in a school population.

Some of this redistribution of types of speech cases is no doubt a direct result of the current priority procedures where a child may not be enrolled in speech therapy unless also enrolled in one of the primary academic target areas. Children who are severe stutterers, cleft palate speakers, hard of hearing children, may not show an academic disability to require corrective classes or have not yet been enrolled in one, but are certainly limited in their communicative skills and functioning. The numbers of these children in each school does not appear to be large and a relaxation of the stringent rules could be made to provide therapy for these children, especially where the alternatives are not open to them. When the therapist has attempted to refer such children to other facilities such as hospital or college operated speech therapy centers, this has generally not been followed through, and only children enrolled in the academic priority areas are eligible to be sent to Title I Speech Centers, which may also be distant from the home therefore rendering them unavailable to the child.

Most times the reason for this is that the mother or caretaking person is working and the clinics are too distant to be accessible to the child. Therefore if this service is not received in school, it is denied to the child. The regulation that children who require therapy from a clinical point of view but are not receiving it because of the restrictive regulations was a source of consternation to the therapists who have been trained to regard effective oral communication as a primary need. Most of the therapists interviewed felt that a recombining of their groups could be made without detriment to the on-going therapy as it now stands, to allow some time for the type of cases mentioned above.

It would be recommended that the speech therapist in consultation with the coordinator be allowed to offer therapy to the few children who require it from a clinical point of view, and who would not otherwise receive such service.

3. Therapy Sessions

a) attendance

In the therapy sessions observed during the visits to the schools, most speech teachers had from 2 to 5 children scheduled. In some instances most of the scheduled children did attend, in other instances one or no children came. It would seem that some systematic way of dealing with the possible or potential "no shows" should be effected in order to make most efficient use of the speech teachers' time. Perhaps an early morning check with the attendance records could provide advance information. Also possibly increasing the size of the groups to a somewhat larger maximum number especially when the group consists of children with minor articulation problems would ensure a core group to work with each time. The reasons that children did not show were partly the usual ones of absence or forgetting but also of other activities relevant to the school, taking precedence. In one case it was testing that interfered, in another it was a speaker who came to address the students. In such instances, teachers should reschedule their time to accomodate to these incidents.

b) use of time

In a situation where a speech therapist is in a school one day a week and sessions are 1/2 hour long and where that particular day of the week may sometimes be obliterated by religious holidays, in addition to the aforementioned periodic interruptions, it is incumbent upon the speech teacher to use the time to the best advantage. Not always was this done. In one instance by the time the children arrived, got seated, attendance was taken and recorded at least 10 minutes of the 1/2 hour was gone. Ten minutes of direct therapy was given for the four children and then the latter 10 minutes given over to explaining homework, handing out instructions and materials, stapling these with speech notebooks and dismissing the children before the next group was scheduled to arrive. It was this instance as well, that two of the single scheduled children did not show. Other of the speech teachers appeared to make more proficient use of the time and appeared to have better attendance.

Perhaps instructions in effective use of time should be offered especially to new or probationary teachers. Often more experienced teachers can share methods of dealing with routine procedures to circumvent time-consuming activities only indirectly related to therapy.

An alternate suggestion in effecting more efficient use of time and in solution of the attendance problem might be to increase therapy sessions to 45 minutes. With the same total case load drawn according to priority procedures and an increase

in the load in each group will reduce the number of sessions per day to six. This would also serve to offer continuity to a lesson plan which includes the expanded activities of language arts within its scope.

c) lesson plans

All of the schools visited except one and all of the respondees to the questionnaire except one (presumeably the same) indicated that they had lesson plans kept either in record folder or book. These are forms which list the planning features of the lesson and which the therapist uses as the outline guide. The specifics for each lesson is filled in. These forms were developed by the coordinator and presented to the teachers. Demonstration lessons were held using the format and stress was placed on interrelating the speech class work to the other priority areas. As with any outline guide, it is only as effective as the person utilizing it can make it. In one case observed it served almost no useful purpose, in two cases it was adhered to in too strictly a fashion so that a formalistic lesson was presented with little opportunity for natural communication, in a fourth case it was used with ingenuity as a basic guideline but allowed for spontaneity as well. Except for the last instance mentioned, the speech lessons were over formalistic, allowed for little peer interaction which often is an effective speech modifier and in general appeared to be an extension of the classroom situation. While much of this may be reflective of particular personal styles, it also obviates what can be the most effective tool of the speech therapist, the therapist as a model. There was in general a too heavy reliance on original written or adapted material and little reliance on the human inter-communication process. The degree of course varied. Also, during the personal visits there was no chance to observe the "oblique approach to therapy" which is a situationally based format that provides integration of speech communication skills with natural language use and can incorporate concepts derived from reading and math. For the therapists, who claim that they spend a large portion of their time (20-50%) (as reported in #4 of the questionnaire), in language development, this oblique approach as an alternative to the conventional "use the word in a whole sentence" formalistic approach appears to offer another substantiative therapy method for natural language use.

It would be recommended that the coordinator and field supervisor extend the use of this approach, by providing further workshops and demonstrations and stressing its particular relevance to the total communicative functioning of the children. The fore-going is especially relevant in view of the speech teachers' own comments in response to question #5 of the questionnaire - that if alloted more time with the same caseload, many of them specified the time would be spent on "speech socialization skills" or "speech confidence" or "conversation practice" or "language arts;" all are inherent in an oblique approach to therapy. In an ideal situation, if more worker time were available, an increase in individualized therapy for severe cases of all types; this is relevant to the previous recommendation of allowing time for severe cases not now serviced.

4. Interrelatedness to Other Components

a) case-finding

The flow-chart incorporated into report entitled Central 1972-1973 Title I Remedial Services for Eligible Non-Public School children (Page 10) shows ESL and corrective math feeding in to speech therapy while speech therapy and guidance and speech therapy and reading show a two way flow. In terms of recommendations from the other professionals of children who might need speech therapy, it was found that while many of the children were recommended by reading and guidance, another large source of recommendations was the classroom teacher and the ESL teacher. The heavy recommendation by the classroom teacher suggests that this is still a good source from which the speech therapist draws a first group for screening. It also suggests that distribution of the form GK which describes speech defects commonly found in a public school population and language related behavior may serve a function in more clearly defining the children for whom the speech therapist is looking. When questioned whether they felt this was valuable to others, most speech therapist agreed that in general it was. Three speech teachers suggested it should be more definitive while one felt it was too technical, most felt it was adequate.

An area where case-finding needs to be a cooperative enterprise should be for children with severe defects who are eligible to receive the special service of one of the three academic target areas. A team approach is recommended so that a child with the severe speech defect and/or language involvement is placed on a "preferred" list to be offered the services which he requires and scheduled to be so included.

b) sharing of content

While it had been ascertained that the speech therapists kept adequate lesson plan records, including their goals, and that these records were generally available to other Title I teachers, other components did not avail themselves of the opportunity to scan these. Only two respondents said that any other Title I teacher (these were reading) ever looked to see what the speech therapists were doing. Form R-11 which requests content material from the other components was used by twelve of the therapists responding, four did not use it. Some requested information weekly, others monthly. Most said that the other component teachers were cooperative in filling these out, but three felt the others were not cooperative. There appeared to be most incorporation of the material from reading but far less from ESL and little relevance with math. Where math was incorporated into speech lessons, it was more by the inventiveness of the speech therapist, than direct contribution from the math component, although the words on the math list were used.

Both of the foregoing behaviors, that the other components do not seek to ascertain what the speech therapist does to foster oral communication and the one way feed of content information from the other components into speech therapy suggest that the focus on oral communication is less important. The designation as "supportive," rather than suggesting equal footing implies secondary status. This is incompatible with the speech teacher's professional view of the field. The designation of speech training as compatible with the corrective measures taken in the three academic areas (instead of as supportive of) and increase in a two-way flow of content and information especially between reading and speech, should be undertaken. This of course occurs when the speech teacher informs other Title I personnel and classroom teachers as well as parents on how to provide carry-over activities.

c) personal meetings

In addition to the "form" type of communication, a concept which suggests an interflow also suggests that there should be a method of communication between the components. Six of the respondent therapists said they had meetings with other component teachers on a formal basis. Thirteen, including 5 of the aforementioned 6 also said that they had communication with the other component teachers on an informal basis "over lunch" and 8 of 13 claimed to have used written notes left in boxes. When a speech therapist is in a school one day a week and the other component personnel may or may not be servicing the school on the same day, the establishment of a formalized meeting is difficult. An alternative might be to have such a meeting on a school closing day when component meetings are held. However almost half of the speech therapy teachers are per diem personnel and therefore are not required to attend if it is not a working day. While the recommendation would be to have some inter-component meetings, probably the direct mail and informal meetings are all that can be expected under the present system.

5. Diagnostic Materials and Therapy Aids

Diagnostics used for speech problems are the ones generally accepted in the field; the Photo-Articulation Test; the Templin-Darley Articulation Test; the Wepman Auditory Discrimination Test and the Goldman-Fristoe Test. For assessment of language levels the Mecham Verbal Development Scale, the Peabody Picture Vocabulary Test, the Illinois Test of Psycho-Linguistic Abilities and the Psycho-Educational Inventory of Basic Learning Abilities were available. While not all of these are in each therapist's possession, they are available from the Board and are considered adequate in scope. In response to whether there would be specific materials that they would wish to be more readily available for speech therapy, all practically unanimously requested ITPA's and the Peabody Language Development Kits as well as each diagnostic tool for each therapist. Also requested were tape recorders, record players and blackboards.

With respect to materials consonant to planning and implementing lessons on language related behaviors all therapists were most grateful to receive the CBRU (computer based resource units) from the New York State Special Education Information Materials Center. Since the activities contained therein are directly related to the behaviors defined by the Illinois Test of Psycho-Linguistic Ability, the requests for the test is compatible. In addition to the SEIMC materials, the Coordinator has provided the therapists with a book, "Aids to Psycho-Linguistic Teaching" and a bibliography of books. Tapes and other materials are available at the Board for use by the therapists. Since the requests for materials seem compatible with the goals of the Speech Therapy Program to implement a more effective program in assisting language behaviors, recommendation is made to increase the budget to cover these materials.

6. Teacher Training Program

Implementing the recommendation of the previous investigator, the following meetings, seminars and demonstrations were held this year:

a) The coordinator, field supervisor, teacher-trainer and a few selected speech teachers attended a seminar on "Oral Communication and the Reading Process" sponsored by the State Education Dept., Division of Speech and Hearing Handicapped. Tapes of this meeting were made and are available to any speech teacher who wishes to borrow them.

b) Component meetings discussing language development, and various aspects of diagnosis, materials and remediation were held.

c) Meetings where coordinator demonstrated the use of a paired stimuli behavior modification approach to articulation therapy.

d) Demonstration of use of ITPA and its relation to the SEIMC materials.

e) Demonstration and discussion of Peabody Picture Vocabulary Test.

f) An expert demonstrated Myo-functional therapy, a new approach to alleviate tongue thrusting (also associated with lisping).

g) Attendance at Vocal Dynamic Laboratory tour at Lenox Hill Hospital where voice cases may be referred for diagnosis.

h) Demonstrations of oblique approach to therapy (previously described) by the field supervisor.

i) Teacher - sharing sessions related to stuttering therapy in which past successful techniques were discussed.

j) Several small meetings devoted to special needs such as presentation and demonstration of new lesson plan format, model lessons of other teachers, discussion of new materials related to language development, discussion of implementation of ways to more effectively serve the population.

The fore-going list comprised several meetings. Most of the speech teachers attended several of these, some attended only a few. However it should be noted that while some of these meetings are held on school closed holy days, some were held outside of working hours. While it is incumbent on any professional to maintain an interest in the field of work, for the per diem teacher this might involve several days and/or evenings of non-paid time.

A partial solution to this might be to include in the budget some allowance for attendance at meetings as extra working time for the per diem people where the coordinator deems it to the best interest of upgrading the caliber of professionalism within the component.

Most of the speech therapists reported that their training had been limited with respect to understanding language. This is in accord with the investigator's knowledge of a great majority of speech therapy training programs. However some felt they had gained new insights into language functioning by previous on the job training, the special seminars, and by the variety of materials offered by the coordinator for loan. While this has been an asset, a problem remains in terms of basic attitude. The speech therapist is trained clinically and is prescriptively oriented. A deviation or difference in behavior from a norm is regarded as substandard, to be cured, rather than the possibility of its being non-standard and thereby amenable to modification.

Some insights into current psycho- and sociolinguistic theory and research could offer the speech therapist a broadened view of the population with whom they are increasingly coming into contact. This will also help to make clearer patterns which may be the result of interference from bidialectal or bilingual situations rather than a clinical speech or language defect. The suggestion for mini-courses, workshops or seminars on this topic has already been made but is relevant to the point made above. The recommendation is that the teacher training programs so far implemented be continued, and that the scope of them should be extended to provide the therapists not only with new skills and techniques but with alternatives to a preconceived view and awareness of current theoretical viewpoints on language.

7. Supervision

In addition to the component meetings, teacher training sessions and other group activities mentioned above, the coordinator and field supervisor provide individual supervision and guidance to the speech therapy teachers. After consultation with the coordinator or field supervisor, referrals to outside agencies for concomitant speech services are made by teacher or guidance counselor. From the 16 therapists who completed the questionnaire, 48 referrals were made for hearing examinations, vocal examinations, dental service, psychological service and to clinics for severe speech cases. Most have received feedback on the results of these examinations.

The speech teachers were visited by the field supervisor or teacher-trainer between 1 and 4 times. Included in the visit were observation of lessons, discussions about the lesson, constructive criticism and delivery of new materials.

Most therapists were positively affected by these visits; one negative response was made that it was nerve-wracking and unproductive and one suggestion was offered that when there is more than one visit per year to new or probationary people, both an advance notice visit and a surprise visit would be in order. The request seems logical especially for a new teacher who might feel threatened. In fact the evaluations based on personal observations were tempered by the fact that the investigator was a stranger in the midst. The coordinator might wish to take the request for an advance notice visit advisement and therefore this is not a specific recommendation.

It should be once again emphasized that the central control offered by the coordinator, the exceptionally fine open line of communication between speech teachers and coordinators and the full range of therapy aids, books, tapes and other materials offered by the central supervisors' office does much to enhance the program.

8. The Speech Therapist's Self View

Content analysis of the role definition offered by the speech teachers themselves produced the following results:

a) There remains a need within the school situation to provide speech therapy for the traditional speech case whose primary disability is in oral communication functioning. This would include stutterers, cleft palate speakers, hard of hearing children, all types of severe articulation disorders including omission, substitution and distortions of the more severe type, lispers, children who oral musculature causes cluttering of speech. Many of these children may or may not have secondary language involvement or be academically low-scoring.

b) There is an additional need to provide another type of service directed toward children whose primary disability appears to be reduced efficiency in the listening and speaking behaviors associated with language and communication skills. It is this population with whom the speech teachers saw the need to work on "totality of language functioning," "communication skills," "social communication skills," "social educational communication" and like phrases. These children may or may not also exhibit the serious speech defects outlined above.

Either of the above constitutes a disability detrimental to the development of behaviors and attitudes of self concomitant with personal growth.

It is particularly notable that of the 16 therapists responding there appeared to be an even division in the personal focus of the importance of each of the fore-going diagnostic classifications. By a clearer definition of these roles, the primacy of effective speech to the total self-concept of the child is maintained; and the necessity for language related behaviors to be enhanced not only as supportive, but as a necessary precursor, to effective academic functioning is clarified. To the end of implementing the clarification of such a division, the following recommendation is offered. That a pilot project be initiated as follows: through appropriate tests and diagnostic procedures, a group of children in first and second grade be identified who exhibit the reduced level of appropriate language-related behaviors and/or who are exhibiting reduced efficiency in English Language Functioning because of interference from an alternative "home language." Further, that in small group sessions in a few schools, these children be given intensive work in language related skills through all varied methods by a therapist who is trained and more oriented and aware of language skills. It should then be ascertained after an appropriate length of experimental time whether such training is an asset in supporting the academic areas dependent on language skills by comparison with a control group not receiving such training.

Within group differences might also offer insight into alternative bases for a lack of success in academic skills, particularly in reading. The specifics of a pilot program as suggested can be worked out by the coordinator in consultation with experts in the field of language and based on research evidence.

Throughout the course of personal interviews and mentioned several times in various ways within the questionnaire was that the speech teachers' feeling of being over-burdened with paper work. Periodic review by the coordinator of the paper work and possible elimination of duplication of much of this, could aid in allowing the therapist to more efficiently use the time in a direct way, that is in productive contact with their caseload.

The following recommendations included in the foregoing evaluation are summarized below:

1) That the speech therapy component be continued as a program because of the vital needs it serves to a large population of children.

2) That children, who exhibit severe speech disorders which interfere with oral communication and may harm the self-concept and who are not able to secure speech therapy services elsewhere, be included in the program even though they are not presently enrolled in one of the three academic target areas. Also that a team approach be employed to give preference to eligible children with severe speech defects.

3) That diagnostic speech records do not contain subjective evaluative judgments for non-speech behaviors and that speech-related behaviors be more clearly defined descriptively.

4) That the oblique approach to therapy and other appropriate methods be fostered and used with children to enhance language skills and total communication.

5) That a review be made by the coordinator of the paper work expected from the speech teachers, with an objective of eliminating irrelevant or duplication of work.

6) That there be an increase in the budget allotted for materials to cover ITPA and Peabody Kits or alternative materials the coordinator deems necessary to the effectiveness of the program.

7) That there be some monetary allowance for per diem people to attend an occasional meeting deemed necessary by the coordinator to upgrade the professionalism of the speech teacher.

8) That special mini-courses, workshops or seminars be given to foster understanding of current psycho-linguistic and socio-linguistic research and theory, so that the speech teachers may more effectively deal with the bi-dialectal and bi-lingual speech patterns when encountered in their populations. These should be in addition to the scope of demonstrations, diagnostics, of therapy approaches, of materials, and discussion already established.

9) That a pilot project be initiated with select groups of first and second grade children geared to assist in enhancing language related skills in listening and speaking.

II. Evaluation of the Specific Goals of the Program

In order to evaluate whether the specific goals of the program have been met, that is:

1) that 80% of the children enrolled in speech therapy during the current year show improvement in oral communication through elimination or amelioration of their speech defect, analysis of the scores found on the PAT Score sheets were analyzed.

2) that 20% of the children enrolled in speech therapy during this year can be discharged as corrected of the specifically diagnosed speech defect for which therapy had been given.

Of 313 children for whom Photo-Articulation Test scores were available and applicable, and for whom complete data was available, 265 showed improvement. This constitutes an 84.66% improvement; Chi Square equals 4.436 which is significant at less than .05. Therefore according to this measure not only was the criterion of 80% improved met and exceeded but the number improved over the 80% was significant as well. The scores for this sub-sample are given in Table 6.1 below.

Table 6.1

Pre and Post PAT Scores

	N	Mean	SD	t	p
Pre-PAT	313	14.115	10.084	10.26	.001
Post-PAT	313	9.492	10.614		

The above gives the means and standard deviation for the sample group and the "t" score which is significant at the $< .001$ level.

To ascertain whether 20% of the children enrolled in therapy were discharged as corrected an analysis of the PAT forms was made, on which the teacher indicated whether the child was due to be discharged. This was checked by the principal investigator against the teacher's rating of the child's speech, assuming that those children who had improved at the 0 or 1 level and where discharge was not specifically stated, could be considered as corrected.

Of the 600 children included in this sample covering all diagnostic classifications, 153 or 25.5% were due to be discharged as corrected. The Chi Square = 1.89 which is non-significant. This indicates that while the percentage of children discharged exceeded the criterion of 20% expected, the difference over the expected was non-significant.

It should be noted that even where children were marked as corrected and due for discharge, the speech teacher often made a notation to recheck the child in the beginning of the coming school year. This is in accord with proper clinical practice; it has frequently been found that the child corrects a specific defect and while in therapy, effects correct production of the sound. However where therapy ceases, a child occasionally may revert to former production of the sound and if such faulty production sustains, the speech defect may seem to reappear, although not usually to the same degree of severity that it was originally seen. Often after a few months, when this does occur, if a short term of therapy is reinstated, the correct production is re-established and becomes the reinforced pattern. The 4-6 months later re-screening is therefore most appropriate.

In order to evaluate whether the speech teacher's assessment of pupils speech defect was appropriate to the actual speech behavior of the child, an independent assessment was made by the principal investigator. This was done by listening to pre and post tape recordings of a select group of children and comparing the investigator's rating to that of the speech teacher's. An inter-rater check on the principal investigator herself was made by listening to some of the children a second time at another date and between these two listening times, the principal investigator found a 94% reliability.

It was the original intent for the principal investigator to listen to a sample of the pupils from each of the 30 sample schools. A sample of 5 from each of these would equal 150 children total or 25% of the population included in the sample (600 children) and cover all speech teachers' ratings. However several circumstances precluded this plan being executed: some schools had no pre-tape because the program was initiated late in the year (one as late as January) or because the tape had been stolen during the year; some had taping of such a poor quality or the ambient noise was of such a level as to render the speech being listened to too difficult to assess (in one such case even the speech teacher could not be understood); in other schools parts of recordings had been inadvertantly erased; children were not identified on the tape nor was there an indication on the teacher's list where the child appeared on the tape.

Accordingly the selection was made by listening to the first 10 children in those schools where the tapes were able to be evaluated. These were:

16 schools had 10 children	-	160
1 school had 6 children	-	6
3 schools had 9 children	-	18
1 school had 7 children	-	7
2 schools had 1 child each	-	2
		193

This means that a comparison of agreement between the therapist and the principal investigator could be reached in 193 cases being seen in 22 schools, or over 32% of the total.

The teachers' ratings indicated that for 196 children whose ratings were analyzed, 190 were listed as improved and 6 listed as remained the same; this constitutes 96.94% and 3.06% respectively.

In 193 of these 196 cases, the principal investigator found 164 improved and 29 remaining the same; 84.97% and 15.33% respectively. In the 193 cases mentioned above there were 163 cases of agreement between the teachers' rating and that of the principal investigator or 84.46% agreement and 30 cases or 15.54% disagreement.

Several factors account for some of the differences between speech teacher's assessment and that of the investigator.

In a majority of the cases tested, where the diagnosed speech defect was a defect in articulation, the speech teacher invariably rated the child as more severe than the investigator. Actually the rating scale was meant, if properly applied, to make for greater agreement between raters. If a child had articulatory defects that would be considered moderate distortions, he should have been rated as 2, in many of these instances although the descriptive designation was "moderate distortion," the teacher rated the student at 4. One area of question might be in the case of a lisp where someone might rate this as a 4 (substitution of /s) rather than as a 1, 2 or 3 distortion of the (s) sound. In many cases this accounted for a difference, with the investigator favoring the latter definition.

Another source of deviation between the speech teacher's and the investigator's assessment might have been in the case of stutterers. Although few in number, the degree of severity of a stutterer can be judged by the number and length of time of blockages and in addition by secondary behavior characteristics (for instance, grimaces). While the first measure may be able to be assessed on tape, the secondary stuttering phenomena certainly could not be. Even the first measure of frequency and length of blockage may be distorted by the kind of material provided for the speech sample. A stutterer often may have frequent blockages in normal conversation or when called upon to respond in a two-person dialogue, but may lose many of the instances of the defect when reading a simple passage. Since the sample of speech was a prescribed passage, many of the children who were characterized as disfluent, hesitating or other terms associated with stuttering, appeared not to stutter at all.

Also the choice of material precluded any assessment where the diagnosis and the focus of therapy was on language-related behaviors. By having the child read a passage is again an assessment of an oral reading skill and does not allow an assessment of language-related behaviors.

All of the foregoing suggested possible sources of deviation between the speech teachers' ratings and that of the principal investigator. However in both ratings, the percentage of improved students exceeded the 80% criterion.

Some suggestions for improvement of the evaluation design may be derived from the above.

While it would be preferable for an evaluator to make a personal pre- and post- therapy evaluation, if this is not feasible certain special considerations should be employed for the taping:

1) a good quality tape should be used with a good quality machine.

2) Care must be exercised so that the ambient noise is minimized.

3) No more than 6 children (3 on each side) to a tape should be allowed.

4) Teacher should clearly identify the child on the tape by name and order in which child is listed on sheet.

5) A length of warm-up tape should be employed so that initial speech is not cut out and a trailer length to avoid over-lap.

6) Tapes should be securely kept - possibly at the Central Office, in the coordinator's possession.

7) Appropriate material should be employed which will give exemplars of the particular area for which the child is being given therapy. This is especially relevant to other than articulation disorders.

8) Enough time and material should be allowed for these exemplars to be recorded.

In the overall summary of the evaluation of the tapes:

1. That the first goal of having 20% of the children discharged as corrected has been met, and exceeded. The actual percent of discharge is 25.5%.

2. That the second goal of having 80% of the pupils enrolled in therapy show improvement in their communicative skills has been met, and has been exceeded by the evaluations of both the speech teacher and the principal investigator, and the results of the PAT scores.

3. That there was 84.46% of agreement on the latter goal between the ratings of the speech teacher and the principal investigator.

III. Evaluator's Comments on the Program

As indicated in the previous section, the criterion for correction and improvement of specifically diagnosed speech defects have been met for the children who received therapy. One cannot infer from this that an optimum level of language functioning by any or all children automatically results. The goal of any oral language program is to implement increased effectiveness in the communication skills of the pupils it serves.

A speech therapy program which services children once a week is offering minimum allotments of therapy time, below the twice-weekly therapy session schedule accepted nationally in education and clinically as preferable. Certainly no claims can be made as to specific increases in language functioning and communication skills expected by allotting more therapy time, however a program which derives its existence to effect remediation within a group of children characterized as disadvantaged should attempt to provide maximum service for these children.

Several remarks have pointed to the need to make a diagnostic differentiation between a speech defect and a language rule omission, and the need to direct therapy towards the appropriate goal. Recommendations were made that the speech teachers needed and should be provided with understanding in this area, in order to provide lessons directed to language patterns rather than towards speech defects. Also previously noted was the need to define the needs of its particular group of pupils.

Any program which continues to reassess itself in terms of the needs of the population it is serving remains viable and effective. The Speech Therapy Program has met that demand and indications are that it is willing to modify itself to continue to do so. This is exemplified by the new training sessions given to the therapists, by the focus on language related activities, by the incorporation of total language concepts into speech lessons and like approaches.

In view of this, continuance of this speech therapy program becomes more than an adjunct service, but rather an educational necessity.

Summary of Findings and Recommendations

The New York City Board of Education under the Elementary and Secondary Education Act of 1965 (Title I) administers a Speech Therapy Program for children in nonpublic schools who exhibit a need for such service. During the 1972-73 school year only those children who were eligible and who also were enrolled in one of three academic target areas (remedial reading, remedial math or English as a second language) could be offered speech therapy.

Evaluation of the 1972-73 school year began in February and continued through May. The evaluation focused on whether the program objectives of discharging 20% of the children enrolled as corrected and increasing the communication skills of 80% of the children enrolled had been met; and upon the implementation of methods designed to meet the new modified objectives for the program, in which it purports to serve increasing the language functioning of the children.

Evaluation procedures included on-site visits to 5 schools, analysis of pre and post PAT score sheets according to the PAT frequency error scoring count and according to a rating scale devised by the investigator; analysis of tapes of a sub-sample of the children by the investigator to find inter-rater agreement with the speech teachers; analysis of responses to questionnaire by the speech therapist and a personal meeting with the coordinator. The following findings were derived:

1. Analysis of Pre and Post teacher ratings showed that 25.5% of the children were discharged as corrected of their diagnosed speech defect and that 96.94% were shown to improve in communication skills by amelioration or correction of the diagnosed speech defect. Analysis of Pre and Post PAT scores indicated 84.66% improved.

2. Analysis of the speech therapists' questionnaire, discussion with the coordinator and personal observation revealed:

   a) Speech therapy is sometimes given in too noisy locations.

   b) While specific clinical speech defects were adequately diagnosed, although mostly characterized as being more severe than they were as rated by the evaluator, little sensitivity or awareness of language interference patterns.

c) Diagnostics were often confounded with non-speech related subjective judgements.

d) The largest proportion of pupils enrolled are diagnosed as having "articulation errors" with about 25% of all therapy cases considered as foreign language interference.

e) In some instances the 1/2 hour therapy time was not used to full advantage.

f) All therapists generally had well-ordered lesson plans and therapy goals kept available, but no other inter-related service utilized this information.

g) The therapy sessions were most often formalized teacher-to-pupil role relationships rather than an interactive speech situation.

h) The speech teacher used the content information obtained from the other services (mainly reading) by incorporating these into speech lessons.

i) The speech teachers attempt to inter-relate their information on specific case by personal informal meetings, telephone calls and written notes.

j) Diagnostic materials, therapy aids and teacher training sessions were all in evidence of being amply provided.

k) Supervision was adequate and the communication between teachers and coordinator was exceptional.

l) There was both confusion and some dissatisfaction on the part of the therapists in terms of their role within the current guidelines that their caseload need be drawn exclusively from from children enrolled in one of the three academic target areas.

Summarizing the recommendations made previously:

1. That the Speech Therapy Program be continued.

2. That the program rules be expanded to include severe speech defect cases and a team approach use in eligible case selection.

3. That diagnostic records and analysis be more clinically and descriptively defined.

4. That expanded approaches to therapy be more frequently utilized.

5. That a review of and suggestions for better use of allotted therapy time be made.

6. That there be a budget increase to allow for purchase of some new materials.

7. That there be a possible budget allowance for per diem people to attend constructive workshops.

8. That the scope of teacher-training sessions be extended to foster awareness and sensitivity to bi-lingual and bi-dialectal language patterns and interferences.

9. That a pilot project be initiated to research implementation of language-skills assistance methods.

10. Based on the review of the analysis of tapes a further recommendation derives in that therapists should be made aware of appropriate choice of materials through which certain disorders would be more effectively revealed. This would aid in effective diagnostics.

11. Further recommendations were made with regards to the evaluation design; that more care should be taken in preparation and execution of the tapes.

FUNCTION NO. 09-39631

PROGRAM FOR HANDICAPPED CHILDREN

Chapter VII Program for Handicapped Children

Project Description

Goals

The goals of the Program for Handicapped Children in nonpublic schools were to provide remedial reading, speech therapy and other supportive clinical services for approximately 389 eligible nonpublic school pupils (by approximately 14 teachers) who have been designated as "educable retardates," deaf, or visually limited, in order to improve their educational functioning and enhance their educational potential.

The pupils in this program were ungraded, and were in special education classes of the New York Archdiocese, the Brooklyn Diocese, the Hebrew Day Schools and some nondenominational schools. These pupils were serviced individually or in a small group setting by specialized reading, language, and speech instructors. Methodology, media, and equipment appropriate to the nature of their handicap was used. In addition, selected pupils received art education, social work and psychological services.

Objectives

In behavioral terms, the objectives of the program were stated as followed:

1. 80% of the handicapped pupils (within the range of their mental abilities) will improve at least two months in fundamentals of concept, vocabulary development, word-attack skills and comprehension skills.

2. 80% of the handicapped pupils will improve at least two months in their psycho-linguistic functioning in the reading and language program.

3. 80% of the handicapped pupils will improve by at least one scale point in their oral, receptive, and expressive language and speech facility in overcoming communication disabilities.

4. 80% of the handicapped pupils will improve by at least one scale point in their efforts to overcome any sense of defeat and rejection brought about by the impact of their handicap, such as retardation, deafness, or blindness as measured by a teacher rating scale.

5. 80% of the handicapped pupils who receive art instruction will improve by at least one scale point in their ability to recognize and appreciate color and form; and improve in their muscular coordination, gain emotional release, and feel the satisfaction of success in handling manipulative and creative materials as measured by an appropriate rating scale.

Method and Purposes of Evaluation

In order to determine the effectiveness of the services, the Evaluation team observed Title I personnel as they worked; interviewed classroom teachers and school administrators about the value of the program; obtained the reactions of the Title I specialists about their activities and problems; checked pupil progress in reading and speech by studying pre and post test differences and observed growth in emotional and art appreciation areas as measured by rating scales.

The scope of the objectives of the program with the anticipated percentage of improvement has been indicated. The specific purposes of the evaluation based on the objectives are as follows:

1. To describe the program in terms of its objectives.

2. To measure the growth of the students in reading and language skills.

3. To ascertain students' growth in art skills and appreciation.

4. To determine emotional and social growth of the students as judged by the staff.

Program in Action

The staff of the program worked with individual or small groups of students referred to them by the institutional administration and teachers. These handicapped students came from areas designated as eligible for Title I services and were enrolled in the special school or class. Instruction was given in reading, speech and art. Some children received service from more than one specialist.

The teachers observed were using specialized materials and techniques to meet the educational needs of the pupils. Work was organized and planned specifically for each youngster. In the observed situations, rapport was excellent between student and child, with instruction carried on with an apparent high level of competency.

The supportive clinical services (psychologist, social worker) were given to selected eligible students and their parents in need of assistance. Testing, counseling of parents and referral to other agencies for further action were all part of the service.

The Basic data on the handicapped populations served are given in Table 7.1 - Actual number as of April 1, 1973.

Table 7.1

Basic Population Data

School	Handicap	Title 1 Service	No. of Students Served
Sacred Heart 456 W. 52nd St. Manhattan	Mental Retardation	Reading Speech	15
St. Bernard 327 W. 13th St. Manhattan	Mental Retardation	Reading Speech Art	10
St. Rose of Lima 517 W. 164th St. Manhattan	Mental Retardation	Reading Speech Art	12
St. Stephens 141 E. 28th St. Manhattan	Mental Retardation	Reading Speech Art	24
Immaculate Conception 378 E. 151st St. Bronx	Mental Retardation	Reading Speech	23
St. John Chrysostom 1144 Hoe Ave. Bronx	Mental Retardation	Reading Speech Art	10
St. Raymond 2380 E. Tremont Ave. Bronx	Mental Retardation	Reading Speech	12
St. Margaret 452 W. 260th St. Bronx	Mental Retardation	Reading	5
Shield Institute 1800 Andrews Ave. Bronx	Mental Retardation	Reading	14

Brooklyn Hebrew School for Special Children 1800 Utica Ave. Brooklyn	Mental Retardation	Reading Speech Social Work	30
Hebrew Academy for Special Children 1311 55th St. Brooklyn	Mental Retardation	Reading Speech	46
St. Frances de Sales School for the Deaf 701 Carroll St. Brooklyn	Deaf	Reading Speech Psychologist	63
Hebrew Institute for the Deaf 2025 67th St. Brooklyn	Deaf	Reading Speech	20
Itinerent Blind 345 Adams St. Brooklyn	Blind	Psychologist	30
Itinerent CRMD 345 Adams St. Brooklyn	Retarded	Psychologist	26

Table 7.2 presents the area of services, the number of Title I specialists employed, the time allotted for each program and the number of schools receiving each service.

Table 7.2

Distribution of Title I Services

Area of Services	No. of Specialists	Days Per Week	No. of Schools
Reading	11	30	13
Speech	6	26	10
Art	2	4	4
Social Work	2	7	9
Psychology	2	7	3

It can be seen that 23 Title I specialists served for a total of 74 days each week in fifteen separate facilities where handicapped children were educated.

(Included is service for the itinerent handicapped).

The major areas of concentration were reading (13 locations) and speech (10 locations). Art, social work and psychological services were provided to fewer schools for a shorter period of time. Study of previous reports indicate that a similar distribution of services were requested in the previous years by the participating educational agencies and reflected the types of services seen as most needed.

Staffing of the Program

The Title I Project specialists were a well educated, experienced group. Twenty-two of 23 of the specialists were educated beyond the B.A. The specialists generally had advanced training in their special field. They were not only well prepared professionally but they also received orientation by the training staff of the program. Furthermore, they were continuously supervised and had a number of in-service meetings throughout the year.

The member of the evaluation team who observed the specialists on the job, found excellent morale, great interest in the work and in general a high degree of competence. Administrators and classroom teachers were almost unanimously highly favorable in judging the service given and were often enthusiastic about the work of the specialists.

The nonpublic school personnel indicated that the specialists related well to not only the professionals but also to the other children. A frequent comment was a request for more service from people of such a high caliber of professionalism.

Table 7.3 describes the educational background of the 23 Title I specialists.

Table 7.3

Education of the Title I Specialists

Degree	No. of Specialists
B.A.	1
B.A. plus graduate credits	9
M.A.	13

The special service personnel (social workers, psychologists and speech therapists) had degrees in their areas and met professional standards and certification in their fields. The reading teachers had professional competency in early childhood or elementary education with courses in the teaching of reading. Many had advanced training in the teaching of reading.

The years of professional experience of the Title I specialists are reported in Table 7.4. From the point of view of the observer, there seemed to be a generalized high degree of competency, however, the people with greater years experience did appear somewhat more familiar with techniques of instruction and materials and the workings of the program than those with fewer years in the program.

Table 7.4

Professional Experience of Title I Specialists

No. of Years	No. of Specialists
1	1
2	2
3	4
4	1
5	3
5+	12

It can be seen from the previous two tables that the professional staff is a highly trained, experienced group. More than half have graduate degrees, while 2/3's have 5 or more years of experience.

Attitudes Toward Program

Questionnaires were distributed to administrators, specialists and classroom teachers who worked with the children in the program. A specially prepared questionnaire was developed for each group. Copies of the questionnaires are included in the appendix.

Administrators

Responses were received from seven of nine administrators. Four rated the overall service as excellent, while three gave it a good rating. In both questionnaires and interviews the administrators indicated great satisfaction with the work of the specialists in general. Some concern was raised about record keeping and transmission of the past data on children to new specialists and the classroom teacher. The major reason given for the program not obtaining uniform excellent ratings was that some handicapped children were not included in the program in order to receive the necessary service because of a lack of available funds.

Responses of the Specialists

Title I Specialists were observed and interviewed in their places of service. In addition a questionnaire was given to them to be completed. Nineteen questionnaires were returned from the twenty-three specialists.

The personnel indicated that there had been observations by the coordinator of the program and in most instances, a teacher-trainer as well. The 19 specialists also reported that they were able to meet frequently, both formally and informally, with the classroom teachers of their students to share information and discuss coordinated planning.

Table 7.5 shows the strong components of the program as reported by the specialists.

Table 7.5

Specialists' Report of Strong Components of Program

N = 19

Component	Number Indicating Strong Part of Program
Assistance and Supervision from field supervisor	14
Cooperation from School Personnel	15
Diagnostic Teaching	10
Exchange of Information with Classroom Teachers	18
Flexible Grouping Procedures	15
Freedom to Develop Own Program	16
Individualization of Instruction	16
Preparation of Instructional Lessons and Materials	14
Rapport with Children	18
Record Keeping and Reporting	12
Relationship with Parents	12
Teacher Training Program: Large group sessions	6
Teacher Training Program: Small group sessions	11

It can be seen that the Title I specialists reported that the many aspects of the program were strong. The most frequently cited included rapport with children, exchange of information with the classroom teacher, freedom to develop own program, individualization of instruction, flexible grouping instruction and cooperation from school personnel.

Several areas were reported as weak components of the program by a few of the specialists. The results are shown in Table 7.6

Table 7.6

Specialists' Report of Weak Components of Program

N = 19

Component	Number Indicating Weak Part of Program
Cooperation from School Personnel	2
Diagnostic Teaching	1
Exchange of Information with Classroom Teachers	1
Record Keeping and Reporting	1
Relationship with Parents	4
Teacher Training Program: Large group sessions	3
Teacher Training Program: Small group sessions	2

In interviews, the Title I group stressed the positive interaction between the various specialists. In both formal and informal meetings and in written communications the personnel obtained a good deal of assistance with their work during the year.

It was noted that the teachers were generously supplied with material which was being used in an appropriate and professional manner. Many additional materials were available for the use of teachers and children; a partial list of materials supplied (to program teachers) for development of perceptual and conceptual skills, and competencies in phonology, structural analysis, verbalization, syntax, and comprehension:

D.L.M. (Developmental Learning Materials)
Phonics Readiness Sets (Intersensory)
T.R.Y. - Tasks I, II, III (Manipulative, visual-motor, language)
Child's World - (Discovery, relationships, etc.)
Chandler Reading Program
Scholastic Pleasure Library (Paper-backs)
Phonics We Use
Instructo materials
Assorted learning lottos, games, flannel board teaching aids, puppets, etc.
linguistic blocks
Creative materials for art component
Borg-Warner A-V unit and kits (Brooklyn Hebrew School for Special Children)

Working space was generally acceptable in most locations, however, in several instances teachers were placed in the rear of an operating classroom. At times, this interfered with maximum functioning. Several teachers did comment upon this shortcoming but also stated that the lack of space in the building made this less than adequate arrangement necessary.

Classroom Teachers of Handicapped Children

Classroom teachers of handicapped children who were obtaining service in the Title I Project were interviewed by the Evaluation Team. In addition, 22 returned of 29 questionnaires reporting their opinions of the service. Table 7.7 describes their responses.

Table 7.7

Classroom Teachers' Opinion of Services

N = 22

	Academic	Social	Emotional
Helping Great Deal	19	12	11
Helping Some	3	6	11
Not at All		4	

When interviewed, the classroom teachers were high in praise of the work of the specialists. In several instances they were disappointed that other students in their classes were not having this "wonderful opportunity." There was also a request for more feedback from the specialists on the academic progress of the students.

Another criticism was directed at the clarification of the role of the school social worker. It appeared obvious that the teachers were not aware of the actual duties of the social worker and seemed confused about her techniques and methods.

In general however, praise was given generously and freely with the teachers understanding the roles of the specialists (including psychologist and social worker) and being most appreciative of their efforts.

Results of Pre and Post Test Data

I. Remedial Reading

Reading specialists were employed in three different types of settings. In one, they served mentally retarded children of elementary age attending special classes for the retarded in a comprehensive parochial school. A second placement was in day schools for retarded individuals of elementary age, while a third was in day schools for deaf children. This was the major thrust of the Title I project with reading specialists in 13 schools.

The reading specialists worked with children in need of service who were eligible because of residence in a district designated as Title I areas. These children were seen individually or in some instances, small groups presenting similar difficulties.

A schedule was established in cooperation with the teacher and supervisor. Efforts were made by the resident staff to familiarize the remedial specialists with the academic and social background of the children. Progress reports were kept on the students with every effort being made to inform not only the classroom teacher of the results but also the parents.

Pre-testing was done in April and May 1972 with the post-test scores obtained in May 1973. Three tests were generally used for comparison: Metropolitan Reading, Peabody or Wide Range Achievement Test. The same test, of course, was used for pre and post evaluation.

Table 7.8 presents the results of the testing in the code I schools for elementary age mentally retarded students.

Table 7.8

Pre and Post Reading Data

(Code 1 Elementary Age Retarded Students)

N = 84

Total Reading Grade

Pre-Test Mean	SD	Post Test Mean	SD	t Test	Mean IQ
Grade 2.08	.91	Grade 2.65	.99	11.11*	63.3

*Significant at the .05 level

Objective 1 stated that 80% of the students would gain at least two months in reading skills during the year of instruction. The mean gain of 5.7 months for the entire group was significant at the .05 level. Seventy-two students showed growth of two months or more, which exceeds the expected frequency. (See Table 7.12.)

Another group of retarded youngsters received reading instruction. These were students attending day schools for the retarded. Many of the children not only were quite retarded but also demonstrated the characteristics of brain damage or emotional disturbance. In general, the measured IQ of this group was lower than those students who were able to attend comprehensive schools. The nature of the difficulty presented by the multi-handicapped made instruction by the specialists a harder task. In general, they worked with the individual child rather than attempting even a small group. Material available was excellent although working space at times, was at a premium. The results of their work is reported in Table 7.9. Twenty-nine students gained two months or more in growth as compared to an expected frequency of 29.6. (See Table 7.12.)

Table 7.9

Pre and Post Test Reading Data

(Retarded Children in Special Schools)

N = 37

Total Reading Grade

Pre-Test Mean	SD	Post Test Mean	SD	t Test	Mean IQ
Grade 1.38	1.10	Grade 1.79	1.27	3.96*	50.6

*Significant at the .05 level

The retarded children in the special schools gained an average of 4.1 months in reading ability as measured by the testing instruments. The two month anticipated gain was exceeded, at the .05 level for this group.

The third group of students receiving special reading help attended day schools, for the deaf. It was noted that a particularly high degree of co-operation existed between the specialists and the regular staff. Morale was high for both group of teachers, with an overriding belief that considerable progress could be made with these handicapped pupils. Results of the testing can be seen in Table 7.10.

Table 7.10

Pre and Post Test Reading Data

(Deaf Children in Special Schools)

N = 44

Total Reading Grade

Pre Test Mean	SD	Post Test Mean	SD	t Test	Mean IQ
Grade 2.29	1.38	Grade 2.57	1.35	6.43*	93.4

*Significant at the .05 level

The deaf children in the special schools gained almost 3 months in reading skills as measured by the testing instrument. The expected frequency was 35.2 however, 29 students met this standard. (See Table 7.12.)

Table 7.11 reports the combined results of the children who obtained the help of reading specialists during the time of the Title I project.

Table 7.11

Pre and Post Reading Data for Total Group

N = 165

Total Reading Grade

Pre Test Mean	SD	Post Test Mean	SD	t Test
Grade 1.98	1.14	Grade 2.43	1.21	12.02*

*Significant at the .05 level

The entire group gained 4½ months in reading level during the year. This is significant at the .05 level and indicates that as a group the students showed the expected growth in reading. There is a somewhat different view when observing the frequency distribution for improvement for each sub-group and the total group.

Table 7.12

Children Gaining Two Months in Reading Skills

Group	Total N	Expected Number	Observed Number	% Showing Improvement	X^2
Elementary Retarded Students	84	67.2	72	85.7	
Retarded Children in Special Schools	37	29.6	29	78.4	
Deaf Children in Special Schools	44	35.2	29	65.9	
Total Group	165	132	130	78.78	0.032 N

X^2 .05 (1) = 3.841

It can be seen that more retarded students made the anticipated growth when compared to the deaf children attending special schools. It appears that the auditory handicap may interfere with growth in reading than the mental retardation. It would be interesting to investigate this matter further as to the type of techniques and materials developed for this specific group.

Table 7.12 indicates that approximately 79% of the total group which obtained reading instruction showed the anticipated gain at two months or more, which statistically meets the 80% objective.

II. Psycho-Linguistic Functioning

The Illinois Test of Psycho-Linguistic Abilities is a lengthy test which purports to measure complex psycho-linguistic functioning. The results of this type of evaluation is quite helpful to specialists working with children with learning disabilities. The profile obtained gives specific scores in the areas of auditory reception, visual reception, visual sequential memory, visual association, visual closure, verbal expression, grammatic closure, manual expression, auditory closure and sound blending. An overall age score is also obtained.

A small group of retarded students were tested by specialists in the Title I Program. These were students who were given assistance by both a reading and speech specialist. The results of the testing are reported in Table 7.13.

Table 7.13

Pre and Post Test ITPA Data

(Elementary Mentally Retarded Students)

N = 29

Pre Test Mean	SD	Post Test Mean	SD	t Test
6.35 years	1.23	7.81 years	1.21	17.33*

*Significant gain in psycho-linguistic functioning at .05 level

Objective 2 anticipated a two month growth in psycho-linguistic functioning. The children in the study showed an average gain of 1 year 5 months.

It is interesting to note, that when examining the profile of the ITPA for the twenty-nine students, they showed significant gain in every skill. The range was from 9.5 months in auditory association to two years 5 months in visual memory. All twenty-nine of the students exceeded the anticipated growth. These exceeds the 80% of objective 2 which would be 23 students. It is evident that objective 2 can be supported.

III. Speech Therapy

Specialists in speech therapy and instruction worked in the similar settings of the reading specialists. The specialists worked well with each other, frequently coordinating programs and techniques. Six speech specialists served ten schools for a total of twenty-six days. The students were selected for instruction because of particular handicaps and residence in a Title I area.

Instruction was on an individual or small group basis. Emphasis was placed on the development of language and communication skills as well as the correction of a specific deficit.

Every attempt was made to involve the classroom teacher with a follow-up of instruction. It was stressed that the growth of communication skills was dependent upon the cooperation of the teacher and the parent. In order to involve the parent, a speech assignment book was sent home weekly with a suggestion enclosed for home activities. Parents were also invited to confer with the specialist about the need and nature of instruction.

The Photo-Articulation Test was used to screen the children as well as a measure of their improvement. This instrument is widely used with children of normal intelligence and has been standardized on that group, however, it has been used previously with retarded and deaf students.

The profile of the results of the PAT allows the specialist to plan for each individual's particular need. Scores are given in consonant sounds, consonant blends, vowels, dipthongs and articulation problems.

Comparisons are based on tests given in October 1972 and May 1973. The test is constructed so that the higher score reflects the greater number of errors. Table 7.14 gives the results for the retarded students of elementary age in the special classes of comprehensive parochial schools.

Table 7.14

Pre and Post Test Scores - Photo-Articulation Test

(Code 1 Elementary Age Retarded Students)

N = 96

Pre Test Mean	SD	Post Test Mean	SD	t Test
15.32	7.99	9.59	6.93	12.60*

*Significant reduction of errors at the .05 level

It was observed that ninety-two of the students posted the anticipated reduction of errors which exceeds the anticipated number. (See Table 7.18.)

In the day schools for retarded, the Title I specialists worked with children not seen by the regularly employed speech therapist. These severely handicapped children were generally instructed on a one-to-one basis because of their distractibility and hyperactivity. Emphasis of teaching was placed on the growth of language and communication skills. The results of their work is seen in Table 7.15. Thirty-two of the 35 students reduced their number of errors which exceeds the anticipated frequency. (See Table 7.18.)

Table 7.15

Pre and Post Test Data - Photo-Articulation Test

(Retarded Children in Special Schools)

N = 35

Pre Test Mean	SD	Post Test Mean	SD	t Test
11.40	10.88	9.60	7.49	4.46*

*Significant reducation of errors at the .05 level

The speech specialists in the day schools for the deaf shared the caseload with the regular speech therapists of the school. Cooperation with the school's speech therapists and classroom teachers was stressed. The Title I specialists were very much part of the school staff.

The instruction centered about auditory training, language development and ease of articulation. The report of their work for the school year is reported in Table 7.16. In this group, all forty-five of the students reduced their number of errors. (See Table 7.18.)

Table 7.16

Pre and Post Test Data - Photo-Articulation Test

(Deaf Children in Special Schools)

N = 45

Pre Test Mean	SD	Post Test Mean	SD	t Test
44.62	20.49	34.13	19.46	10.61*

*Significant reduction of errors at the .05 level

Table 7.17 reports the results of testing for the entire group of students who obtained help from the speech specialists during the Title I project.

Table 7.17

Pre and Post Data - Photo-Articulation Test

(Entire Group)

N = 176

Pre Test Mean	SD	Post Test Mean	SD	t Test
22.03	18.49	15.99	12.86	14.54*

*Reduction of errors significant at the .05 level

The entire group lowered their number of errors 6.16 scale points which is considerable above the objective of 1 scale point. Table 7.18 indicates the number of children for the sub-group and the total group who met the objective of lowering the score 1 scale pointor more.

Table 7.18

Children Reducing Errors 1 Scale Score or More on the Photo Articulation Test

Group	Total N	Expected Number	Observed Number	% Showing Improvement
Elementary Retarded Students	96	76.8	92	95.8
Retarded Students in Special Schools	35	28	32	91.4
Deaf Children in Special Schools	45	36	45	100%
Total Group	176	140.8	169	96.1

Table 7.18 shows that in each sub-group as well as for the total group more than 80% of the students showed a decrease of 1 scale score or more. Specific objective 3 was reached.

IV. Pupil Adjustment

Two psychologists and two social workers were employed by the Title I project. Each discipline worked for a total of seven days although the social workers served nine schools and the psychologists three.

The pupil personnel workers received eligible referrals from the principals and classroom teachers. Direct service was given to some children while others had their needs met through parent conferences or contacts with community agencies. Every effort was made to keep the classroom teacher informed of test results, psychological evaluations or other pertinent findings.

A pupil adjustment rating scale was used in October of 1972 and May, 1973. to determine the efforts of the students to overcome their difficulties. Teachers cooperated with the specialists to complete the form. A lower score indicates better adjustment. A copy of the rating scale is found in Appendix G.

The results of the study is reported in Table 7.19

Table 7.19

Pre and Post Data - Pupil Adjustment Rating Scale

N = 70

Pre Test Mean	Range	SD	Post Test Mean	Range	SD	t Test
121.6	55-168	29.1	104.9	49-165	27.4	8.53*

*Significant reduction in adjustment problems at the .05 level

Objective 4 of the Title I project was to improve the students' adjustment by at least one scale point. The rating scale indicates that the mean improvement was 16.7 scale points.

Table 7.20 indicates the number of children showing improvement on the Pupil Adjustment Rating Scale.

Table 7.20

Children Showing Reduction in Adjustment Problems

Numbers of Children Receiving Service	Expected Number	Observed Number	% Showing Improvement
70	56	60	85.7

It can be seen that more than 80% of the students receiving service showed a reduction in adjustment problems. Objective 4 is supported.

It is interesting to note that so much improvement can be found even though the amount of help given the children by pupil personnel workers can be given minimal. It is quite possible that even greater improvement of pupil adjustment can be seen if this service was increased.

V. Art Instruction

Instruction in art techniques was given by two teachers in four schools for a total of four days. The service was used by retarded children of elementary age in the comprehensive parochial schools. The art specialists consulted with the classroom teachers about the needs and interests of the eligible children. A variety of materials were used, with children have experience in several media. Projects constructed by the children were exhibited in the school. The retarded children receiving the service, appeared delighted with their experiences and eager to continue with their instruction.

An art rating scale was administered in October 1972 and in May 1973 (see Appendix G). The scale attempted to measure the pupil's ability to recognize color and form; improve muscular coordination, gain emotional release and gain satisfaction in handling manipulative and creative materials. It was anticipated that 80% of the students would improve one scale or more after instruction.

The results of instruction is reported in Table 7.21

Table 7.21

Pre and Post Data - Art Appreciation Scale

N = 48

Pre Test Mean	Range	SD	Post Test Mean	Range	SD	t Test
56.38	22-75	12.51	76.96	47-91	11.95	23.98*

*Significant growth in art appreciation at the .05 level

All of the students who obtained art instruction gained at least one scale point when retested on the scale. All 48 gained 10 points or more, with 44 gaining 15 points or more. The goal of specific objective 5 was reached with ease. It would appear that this expectation is not great enough. In the future, a gain of 10 points or more might serve as the evaluation baseline.

Summary

In summation, it would appear that the objectives of the Program for Handicapped Children in the Nonpublic Schools have been reached. Pre and post test results confirm positive growth in academic areas and personal functioning for the groups as a whole.

The evaluation team believes that the Program is excellent. Services in general, were performed at a high level of competency by well trained, motivated, sincere professionals. Supervision of the staff by the coordinator and teacher trainers were crucial to the success of the Program and must be emphasized.

Recommendations

1. The Title I Program for Handicapped Children in the nonpublic Schools has received an excellent evaluation and should continue next year.

2. There should be an increase of psychological and social work services to the handicapped children and parents. Additional efforts should be made to clarify the scope and intents of those services to the staff of the nonpublic schools.

3. If possible, the same reading test scores should be used for all students involved in the program.

4. If time and personnel allow, the ITPA might be administered to all eligible students in order to give more diagnostic information to the staff. It should not be used routinely for collection of pre and post instruction data because of its complexity and time consumption.

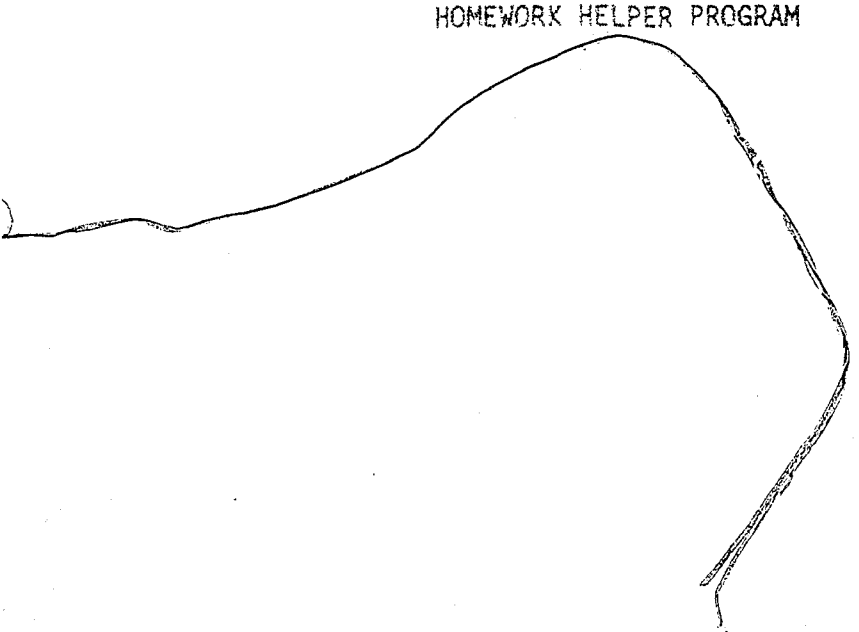
5. Further study should be given to the technique and materials used to teach reading to the deaf children in the special schools.

6. There should be a continuance of scheduling specialists, who serve the same schools, in a way that they may coordinate services.

7. If possible, a meeting should be held at the beginning of the year with NPS classroom teachers whose children obtain service, to describe the emphasis of the program and encourage "feedback" of successes and problems.

FUNCTION NO. 09-39632

HOMEWORK HELPER PROGRAM



Chapter VIII Homework Helper Program

I. Program Description

The Homework Helper Program is presently in its third year of operation in the Nonpublic Schools of the City of New York. This is an E.S.E.A. Title I federally funded program offering remedial help in reading and arithmetic, and works in conjunction with the Corrective Reading and Corrective Mathematics components of the Umbrella Program of Central remedial services available to eligible Nonpublic school pupils. Eligibility of pupil is determined according to strict federal guidelines predicated on 1. the need for remedial services and 2. whether the child resides in an area where the average income falls below a certain minimum. Hence, these children are considered to be educationally and socio-economically deprived.

The Homework Helper Program utilizes older tutors, usually high school students, to tutor the target children in reading and/or arithmetic, on a one-to-one basis. The program is presently operating in ten Nonpublic schools. Of these ten, seven are Hebrew schools and three are Roman Catholic schools, including Bishop McDonnell High School, the only high school in the program. (In this school, both tutors and tutees are high school students). Ten master teachers trained by the Program Coordinator, direct the program in each school. The 75 tutors employed by the program are, according to the program guidelines, Title I eligible students in secondary school grades who have the capacity to engage in tutorial activities with younger pupils, and can benefit from the opportunity to assist younger pupils. Although 85% of the tutors are in fact high school students, the remaining 15% are college students.

Approximately 300 children receive tutoring in reading and mathematics after regular school hours, Monday through Thursday afternoons. Cookies and punch are served to the children at each Homework Helper session attended.

II. Objectives

Objectives of the program were:

A. Statistically significant improvement in test scores in reading and mathematics of referred pupils (Reading Metropolitan Achievement Test scores and Math MAT scores).

B. Improvement of self image and attitudes towards school.

The objectives of the evaluation, based on the program objectives, were:

A. To ascertain degree of improvement of referred students in reading and math over a control group if available, or through pre and post test scores of the experimental group, if a control group was not available, in the three sample schools.

B. To ascertain degree of change, if any, in improved self image and attitudes towards school.

III. Findings

A. The first evaluation objective, degree of improvement in test scores in reading and mathematics, utilized pre-test scores (pre-test administered in September, 1972) and post-test scores (post-tests administered in May, 1973) of the same pupils acting as their own controls, as a control group was not available. All referred pupils were theoretically being serviced. The Reading Metropolitan Achievement Test scores and Mathematics Metropolitan Achievement Test scores were used for this purpose. The data were treated statistically by an Anticipated vs. Real Gain design. Following are the results of this analysis, for Reading and Mathematics:

Table 8.1

M.A.T. Reading Test: (Anticipated Vs. Real Gain Design)
Cumulative Pre-Post Data for 3 Sample Schools

Grade	N	Pre-Test Mean	Predicted Post-Test Mean	Actual Post-Test Mean	Obtained "t" Value	Level of Significance
2	4	1.82	2.22	2.50	1.11	N.S.
3	6	2.28	2.68	3.12	2.17	$<.05$
4	2	2.82	3.25	3.32	0.57	N.S.**
5	3	3.27	3.68	4.40	4.78	$<.01$
6	6	4.02	4.48	4.68	1.16	N.S.
7	4	3.47	3.80	4.02	0.60	N.S.
8	3	3.73	4.04	4.93	4.33	$<.05$
Total Sub Sample	30*	3.04	3.44	3.81	4.07	$<.001$

*Although M.A.T. scores for a greater number of sample students were provided by the program coordinator, the computer recorded data on those students where all variables were submitted, i.e. grade level, number of sessions attended, etc.

**N.S.: Gain shown was not significantly greater than that which was anticipated by this regression analysis.

Viewed as a whole, the students being helped with reading in the Homework Helper Program exhibited an average gain of eight months between pre and post test administration, a 4 month gain over the predicted mean. Statistical treatment via the Anticipated vs. Real Gain design, generated an overall "t" value of 4.07, significant at less than .001.

Data on some of the younger students were not included as they were tested on the Dolch Word List and these scores could not be compared with M.A.T. standardized test scores. However, examination of pre and post Dolch scores from one school in the sample revealed significant gains from the designation of Non-reader to Pre-reader or reader.

Table 8.2

M.A.T. Mathematics Test: (Anticipated Vs. Real Gain Design)
Cumulative Pre-Post Data for 3 Sample Schools

Grade	N	Pre-Test Mean	Predicted Post-Test Mean	Actual Post-Test Mean	Obtained "t" Value	Level of Significance
2	5	1.20	1.29	2.46	5.01	<.01
3	10	1.85	2.11	4.21	7.39	<.001
4	8	3.61	4.22	4.79	0.97	N.S.*
5	8	4.14	4.71	6.36	7.82	<.001
6	3	4.57	5.11	5.13	0.06	N.S.
7	1	6.30	7.44	8.40		
Total Sub Sample	35	3.05	3.48	4.78	6.48	<.001

The total sub-sample of students being tutored in Mathematics showed a gain from pre to post testing of seven months, which represents a three-month gain over the predicted post-test mean. Statistical treatment (Anticipated vs. Real Gain design) generated an overall "t" value of 6.48, with level of significance at less than .001.

*N.S. Gain shown was not significantly greater than that which was anticipated by this regression analysis.

An examination of Reading and Mathematics M.A.T. scores of pupils in the Homework Helper Program confirms that the criterion for Program Objective A has been met, statistically significant improvement in Reading and Mathematics M.A.T. test scores for referred pupils. For both reading and mathematics, significance of the obtained "t" values was at the .001 level.

B. To evaluate objective B, the degree of improvement in self image and attitudes towards school, an instrument was devised in conjunction with the program coordinator to measure positive attitudes in school as the result of participation in a peer tutoring learning exposure. (Pre and post forms can be found in Appendix H.) As the evaluation was undertaken at the end of February and the instrument itself was initially administered at the end of March, an attempt was made to tap pupils' feelings about the school at the beginning of the school year, while the post test form, administered at the end of May, contained equivalent questions worded to tap present attitudes. An additional question (12) was added to the post test form.

Children were being tutored in reading and/or arithmetic. In Questions 1, 2, 3, 9. 10 and 12 (post-test only) space is provided for answers to both components. Student's initials, grade and sex were registered to facilitate matching pre with post-test forms.

Names were withheld in keeping with the Board of Education policy assuring anonymity of the individual student. Tutors were asked to administer the questionnaires, as it was felt that many of the children would have difficulty filling them out themselves.

Results of Student Questionnaire

An instrument was devised to assess improvement in student's self image and attitudes towards school. Due to the nature of schools being tested, and the particular sensitivity of Nonpublic schools, questions dealing specifically with feelings about school had to be attenuated, or otherwise de-emphasized. Hence more emphasis was placed on attitudes toward the program itself, which slightly alters the information asked for in the original proposal objective. Also, questions on the pre-test form had to be revised in an attempt to tap retrospective feelings. As it is often very difficult for children, especially very young children, to remember how they felt some six months previously, the results should be viewed more in terms of the Spring quarter, than reflective of change over the school year.

Each of the 11 questions* on the pre and post test forms were weighted in the following manner:

a) The most favorable response, in terms of self-attitude and attitude towards school, received a numerical value of 1 (with the exception of question 7).

b) The least favorable response, using the above criteria was given a numerical value of 0.

c) For question 7, the following values were attributed:

*Question 12, on the post test form only was not included in this tally.

Very Good = 3
Good = 2
O.K. = 1
Not Too Good = 0

Students being tutored in both reading and arithmetic were given 2 scores; answers to questions 4, 5, 6, 7 and 8 were counted for each tally.

Following is an analysis of the mean point difference between administration of pre and post forms of the Student Attitude Instrument, for the three schools in the sample.

Table 8.3

Student Attitude Questionnaire

Number and Percent of Students Increasing, Decreasing, or Remaining the Same

Component	Total N	Meanscore Pre	Meanscore Post	"t"	P*	Increase N	Increase %	Decrease N	Decrease %	Same N	Same %
Reading	41	4.95	7.46	6.92	<.01	30	73.1	5	12.3	6	14.6
Math	33	5.57	7.79	6.08	<.01	27	81.8	3	9.1	3	9.1

*Level of Significance

Students in the three sample schools showed a 2.5 mean point increase in the reading sample and a 2.2 mean point increase in the mathematics sample.

Reading Sample Results

Approximately 3/4 of the students being tutored in reading increased their positive feelings towards self and school, as indicated by a 2.5 mean point increase in cumulative score from pre to post administration of the evaluation instrument.

Although 12% showed a decrease, in most cases this was by no more than one point. While 1/7th of the students remained the same, many of these scores were already high on the pre-test.

A one-tailed "t" test generated a "t" value for the overall reading sample of 6.92, significant at the .01 level.

Mathematics Sample Results:

Approximately four-fifths of the students being tutored in mathematics increased their positive feelings towards self and school, as indicated by a 2.2 mean point increase in cumulative score from pre to post administration of the evaluation instrument. Less than 10% showed a decrease and only 3 students remained the same. A one-tailed "t" test generated a "t" value of the overall math sample of 6.08 significant at the .01 level.

In sum, program objective B, improvement of self-image and attitudes in a peer-tutoring program, was realized as indicated by mean increase from pre to post score on the evaluation instrument. This was equally true for students being tutored in reading and those receiving help in mathematics.

C. Classroom Observations

In addition to the Questionnaire, the Program Evaluator visited a sample of three Homework Helper Centers, observed the operation of the program, and conferred with the Program Coordinator, and Master Teachers.

Each school visited presents unique problems and will be considered separately. In one school, many of the approximately 25 children in this program are being tutored in both reading and arithmetic. The Corrective Mathematics teacher was interviewed. In this school there is a close working relationship between the corrective components that feed into the program, and the Homework Helper Program itself. This corrective teacher does a lesson plan every week for each individual child and refers it with the child. The tutor and tutee work directly from this lesson plan and feedback to the teacher is extensive. She stated that the children are now doing homework they were unable to do previously. This teacher leaves notes for the tutors on the children's papers and contributes a considerable amount of her time to this intercomponent communication, although she never sees the tutors directly.

The second school has 28 children in the program; 17 are being tutored in reading, and the remainder in arithmetic. A few are being helped with both. The ten tutors in this school came from an NPS high school, and are training to become teachers. Communication between the remedial reading and math components and the Homework Helper Program is largely through written communications. Children are helped in homework from these corrective programs. In this school there is a particularly close relationship between tutors and tutees. School classes are taught in Hebrew or Yiddish for part of the school day, and in English for the remainder of the day. Consequently, school is over later than usual, and the Homework Helper Program finishes very late in the afternoon. The tutors accompany the children to their homes at the end of the Homework Helper sessions.

The third sample school has 31 children in the program. The tutors are picked by the Master Teacher from an NPS high school. Of the 15 tutors, some work one hour, while others work two hours. They miss some of their own class work while they are tutoring. The Master Teacher is able to provide extra facilities for the program such as additional closet space and school resources.

A Certificate of Merit is awarded at the end of the school year to children participating in the Homework Helper Program and a monthly progress report is sent to parents.

Some problems were discussed. As eligibility for the Homework Helper Program this year was predicated on participation in the Corrective Reading and Corrective Mathematics Programs, it was felt that some children in need of tutoring were not being serviced. There is a particular problem in the Yeshivas, in that English is not usually spoken in the home. Hence a bias against English language studies and tutoring has to be taken into account in these schools.

In all of the schools visited, there was a beehive of activity, with tutors working with one, and sometimes two children at a time. When children were being helped in both reading and arithmetic, often the same tutor worked with both areas. Children's folders contained such materials as alphabet recognition cards, Reader's Digest Skill Builders, mathematic problems, and children's work. Some books found in the school's tutoring programs were the Barnell Loft Series; Working With Sounds Getting the Facts and Locating the Answer, the Webster McGraw Hill New Practice Readers, books C, D, and E, Merril Linguistic Readers, Reader's Digest Reading Skill Builders.

There is a tutor-teacher communication form utilized in each school. The remedial subject teacher thereby informs the tutor of the specific areas or skills in the subject that should be pursued. The remedial work done to correct the weakness is listed by the tutor; including a listing of materials used together with comments and observations regarding the student's attitude and motivation for improvement. An inter-component report form for each child is used bi-monthly.

The children appear to enjoy the personal attention as well as the refreshments. Some remarks made by students being tutored in the program follow:

"I like tutoring because it helps me learn math so that I won't have any problems on my tests. It will help me in many ways in later years. My tutor explains the work fully. I also like tutoring because of the refreshments." M.R. Grade 8

"By tutoring they teach me English. The first and second quarters I failed in English but the third quarter I passed on the report card. From now on I will always remember that tutoring could help. The reason why I failed the first two quarters is because I wasn't tutored." M.U. Grade 7

"I like tutoring because it makes you very smart. It makes you pass all your math tests. I like tutoring because when you do your homework it is very easy. It makes your class work easier for you to do." M.M. Grade 4

"We learn reading. When we come in the tutoring room, our tutor says, "Boys pick a story you want to read." When we finish the story we have to do the questions in the back of the book. My tutor helped me a lot with my English marks. I went from a 50 to a passing grade." M.U. Grade 7

IV. Summary and Recommendations

The Homework Helper Program, a tutorial program in reading and mathematics is operating at present in ten Title I Nonpublic schools. Approximately 10 tutors, mainly high school students, tutor from 20 to 30 younger children in each school, under the supervision of a Master Teacher. The Master Teachers are themselves directly supervised by the Program Coordinator.

The program offers a unique opportunity for students to receive personalized help with reading and arithmetic, on a concentrated basis over the school year. The child benefits not only from the specific remedial instruction being offered, but also from the very personalized attention he receives. Tutors also benefit from the program, both financially (they are paid a small hourly wage) and in terms of their own goals and aspirations.

The two objectives of the program as measured by this year's evaluation, were realized:

A. Improvement in reading and mathematics M.A.T. scores of referred pupils.

B. A more positive attitude towards self and school, as the result of participation in the after school tutoring program.

The gains in both these objectives were statistically significant. (See body of report). It is therefore recommended that the program be recycled in the 1973-1974 school year, and expanded to include more schools in the program. Perhaps the program needs to be publicized so that more Nonpublic school principals are aware of the unique features and benefits of the program.

In summary, the program appears to be a well run and highly effective component of the Umbrella services being offered to eligible pupils in Nonpublic schools, and support for the program should be continued and expanded.

Chapter IX Inter-relatedness of Services

This chapter is divided into two major subheadings. The first deals with the responses of the sample school principals to an evaluation questionnaire while the second examines a regression analysis of the nonpublic school project data.

A. PRINCIPAL QUESTIONNAIRE

The 30 sample schools were divided so that each evaluator visited 5 or 6 schools. The evaluators administered a structured interview in the form of a Principal's Questionnaire, to the Principals of the schools they visited. In a few cases, when the Principal was not in the school on the day of the evaluator's visit, the questionnaire was left to be completed and returned to the offices of the evaluating agency. Of the thirty schools in the evaluation sample, 28 Principal Questionnaires were returned. An analysis of the responses on these questionnaires follows:

Question 1 asked:

> "Please rate the effectiveness of the N.P.S. Central Services as an 'Umbrella' in meeting the needs of your pupils."

Table 9.1 indicates the number and percent answering in each of five categories.

Table 9.1

Principal Ratings of Effectiveness of N.P.S. Central Services in Meeting Pupil's Needs

N = 27*

	N	%	
Excellent	3	11.1	
Good	14	51.9	
Satisfactory	--	--	
Less Than Satisfactory	8	29.6	
Poor	2	7.4	
		100.0	(Total)

17 of the principals responding to this question (63%) gave an effectiveness rating from "excellent" through "good." However, 10 ratings (36%) were "less than satisfactory" or "poor." This represents roughly 1/3 of the sample responses.

Question 1 further asked:

If "less than satisfactory" or "poor" were indicated above, why?

Following is a summary of responses of the Principals who found the N.P.S. Central Services wanting in terms of their pupils' needs. The majority of Principals answered Question 1 positively and are therefore not represented here.

Principals answering negatively felt that:**

Service is insufficient due to new State Education Department eligibility requirements. Reading difficulty criterion to determine eligible students is skewed; there is no direct correlation between reading and other needs. The concept is too narrow and many children are losing out; i.e. those with only one problem, such as a speech defect, who are not deficient in reading skills.

*Of 28 questionnaires received, one Principal did not answer this question.
**These are opinions of responding Principals and do not necessarily reflect the views of the evaluating agency.

There should be a variety of eligibility with guidance and speech equal to reading as eligibility criteria, not just supportive.

Children taken out for special classes, are missing the total school experience.

In a school where teachers and services arrived late, the school could not re-adjust its program, already in operation, to make best use of the remedial services.

Errors were found where eligible children were not on the list to receive services.

Concern seemed to be more with the structure of the program, and less with individual instructions.

Children needing services are sometimes not eligible because they don't happen to live in the right district; in several instances as little as a block away.

The program has insufficient impact on the school with not enough children being helped. The impact on a particular classroom, in terms of needy children being serviced, is minimal.

Many children who are receiving help but did not meet this year's guidelines were removed from the program. This lack of continuity was detrimental to the progress of these children.

Children who are good readers but lacking in math concepts should also be eligible for the program.

Children who may have a language or speech difficulty but are above average in reading are eliminated. The same is true for Guidance.

State eligibility requirements restrict necessary services to children, and the freedom of the school to meet those needs. There was a lack of local control over eligibility, particularly for students needing Guidance.

In sum, the new State mandated requirements were viewed as being too narrow, particularly detrimental to children not deficient in reading, but in need of clinical-guidance, speech or other services. Children previously serviced suddenly became ineligible for further service.

Question 2 asked:

> "Are pupil needs in the components of the Umbrella being met by N.P.S. Central Services?"

The first column of the table to be filled in asked for number of pupils serviced, by component. Following in Table 9.2 is a listing of number of pupils serviced, as estimated by school Principals. For schools not returning questionnaires, or not completing this column, N.P.S. Central Office figures have been used. These schools are marked with an asterisk.

Table 9.2

Principal Questionnaire - Question 2, Column I

Principal's Estimation of Number of Pupils Serviced

	Reading	Mathematics	ESL	Clinical-Guidance	Speech	Homework Helper
Our Lady of Lourdes*	61	46	53	51	21	-
St. Francis de Sales*	63	94	-	49	37	-
Holy Name	40	40	68	100	20	-
Commander Shea	45	45	50	50	20	-
Holy Rosary*	81	35	-	-	20	-
Charles Borromeo	45	45	29	85	20	-
St. Catherine of Genoa	38	20	-	10	21	-
St. Rose of Lima	40	40	21	50	-	-
St. Luke	51+	60	-	55	-	-
St. Pius V	77+	52	-	60	-	-
St. Athanasuis	57	52	46	37	40	-
Greek American Institute	30	20	20	28	23	-
St. Joseph*	78	80		50	37	-
St. Martin of Tours	77	68	-	51	41	-
St. Augustine	103	40	36	37	20	-
Annunciation	56	57	-	20	20	-
St. Cecelia*	100	80	-	29	40	-
Yeshiva Torah Vodaath of Flatbush	40	17	-	10	20	-
Visitation of the Blessed Virgin Mary*	83	40	-	52	20	-
St. Francis Xavier	100	80	39	26	20	-
New Catholic High School	25	57	41	30	20	-
Beth Rachel	30	22	42	-	30	19
St. Gregory	80-90	50-60	-	95	20	-
Bishop McDonnell High School*	52	76	25	78	20	46
Yeshiva Solomon Kluger	20	20	-	32	9	31
Transfiguration*	33	20	31	24	25	-
St. Clement Pope	40	41	-	52	20	-
St. Pascal Baylon*	94	41	-	98	20	-
St. Rita	51	43	35	50	25	-
Our Lady of Sorrows	41	42	40	60	26	27

Taken from Central Remedial Services List of 1/31/73.

The next 2 columns asked for principals to indicate whether service was sufficient or insufficient, by component. These 2 columns are presented together in Table 9.3.

Table 9.3

"Are Pupil Needs Being Met By N.P.S. Central Services?"

Principal Questionnaire (Question 2, Columns 3 & 4)

Component	Yes, Service is Sufficient		No, Service is Not Sufficient	
	N	%	N	%
Reading	17	61	11	39
Mathematics	15	54	12	43
ESL	4	27*	11	39
Clinical-Guidance	10	36	18	64
Speech	17	61	8	29
Homework Helper	2	66*	5	18

Examination of Table 9.3 indicates that Corrective Reading service was deemed sufficient by almost 2/3 (61%) of the respondants. Slightly more than half (54%) found the Corrective Mathematics services sufficient. Speech services were found to be sufficient by 61% of the principals responding, with about 1/3 ((29%) finding this service insufficient.

Approximately 1/3 (36%) of the respondants felt that clinical-guidance services were sufficient while 2/3 (64%) found this service insufficient for the needs of their pupils. E.S.L. service was also deemed insufficient by more than a third of total respondants. The Homework Helper Program was indicated as sufficient by 2/3 of the principals whose schools have this component service while 18% of total respondants marked the service insufficient.

*These percentages are predicated on the total number of questionnaires received with component in school. All other percentages are predicated on a total N of 28. (Service could be deemed insufficient because program is not in school at present.)

Some schools presently without E.S.L. and Homework Helper Programs would like these services, and therefore marked service not sufficient. Indication of insufficient service therefore, does not necessarily mean that the service is in the school but not sufficient.

An overview of the responses indicates that Reading, Math and Speech services were generally seen as being sufficient, while Clinical-Guidance, E.S.L. and Homework Helper were not. In addition, some schools in the sample, not presently serviced by Homework Helper and E.S.L. would like to have these services.

The fourth column of Question 3 asked principals to indicate additional days of service needed, for each component. This column was also used by principals to express their desire for days of service for a component not already in school. Table 9.4 indicates Principals' estimation of additional days of service needed, by school and by component.

Table 9.4

Principal Questionnaire (Question 2, Column 4)

Additional Days of Service Needed

hool*	Clinical Guidance	Reading	Mathe-matics	Speech	E.S.L.	Homework Helper
ly Name	2				5	
mmander Shea	3	5	5	1	5	
. Charles Borromeo	4	0	0		2	5
. Rose of Lima	3			1		5
. Athanasuis	3	5	2	2	3	
. Joseph	3					
. Martin of Tours	3	2				
. Augustine	5	5	5	4	5	
nunciation	1½	5				
sitation of the Blessed rgin Mary			2		3	
Francis Xavier					3	
v Catholic High School		3	2			
Clement Pope		2	1			
Pascal Baylon	4	5	5	2		
Rita	1					
Lady of Sorrows	2			3	1	
Totals	34½	29	22	13	27	10

ly sample schools requesting additional days of service are represented in this table.

Total additional days of service requested were in order of frequency, Clinical-Guidance: 34½ additional days; Reading: 29; E.S.L.: 27; Math: 22; Speech: 13 and Homework Helper: 10. Included in these figures are requests for installation of service, notably for E.S.L. and Homework Helper.

Question 3 asked principals to place checks in squares indicating effective service and asterisks indicating program weaknesses, for each remedial service in the school. The following aspects of Central Services were evaluated: Coordination with other Central Services; N.P.S. Teacher Competence; Skills Program; Materials Used; Pupil Progress; and Feedback to Classroom Teachers. Table 9.5 shows numbers and percents of responses, by service and by Umbrella component.

Table 9.5

Principal Questionnaire - Question 3

Estimations of Strengths and Weaknesses of Component Services

	Corrective Reading		Corrective Math		E.S.L. (N = 15)		Clinical Guidance		Speech Therapy		Homework Helper (N = 3)	
	✓	*	✓	*	✓	*	✓	*	✓	*	✓	*
Coordination with other Central Services	N 26		26		14	1	25	1	24	1	3	
	% 93		93		93	7	89	4	86	4	100	
N.P.S. Teacher Competence	N 25		23	2	12	1	25	2	23	2	3	
	% 89		82	7	80	7	89	7	82	7	100	
Skills Program	N 27		25	2	12	2			19		3	
	% 96		89	7	80	13			68		100	
Material Used	N 25		24		13		20		23		2	1
	% 89		86		87		71		82		67	33
Pupil Progress	N 24	2	24	1	12	11	20	3	18	1	3	
	% 86	7	86	3	80	7		11	64	4	100	
Feedback to Classroom Teachers	N 23	2	23	2	12	1	22	2	23		3	
	% 82	7	82	7	80	7	79	7	82		100	

Total N = 28 unless otherwise indicated.

Coordination with other Central Services was almost universally seen as a strong element of the program. Teacher competence was also rated highly with 82% to 100% positive response. The Skills Program generally was viewed positively as were Materials Used, Pupil Progress and Feedback to Classroom Teachers.

Not every principal responded in every category, so percentages are sometimes misleading. However, the teachers are generally viewed as competent and the components of the services are pictured favorably by the respondants.

Question 4 asked principals to indicate whether or not they had visited the classes of N.P.S. Central Teachers. Of the 28 respondants to this question, 26 indicated that they had visited such classes, while 2 indicated they had not. Of these 2, one principal said that he passed by, but did not visit formally.

The question further asked principals to designate which classes were visited. Table 9.6 is a tally of these responses by component.

Table 9.6

Title I Classes Visited by Principals

Total N = 26

	N	%	
Reading	26	100	
Math	25	96	
E.S.L. (N = 15)	11	73	
Clinical-Guidance	18	69	
Speech	17	65	
Homework Helper (N = 2)	2	100*	

*Respondents to this question having component in school.

Question 4b further asks, "if these classes are visited has there been any discussion with teachers and/or field supervisors regarding principal's observations?" Appropriate boxes for teachers and field supervisors were checked, by component, when an affirmative answer was given.

Table 9.7

Principal Questionnaire - Question 4b

Discussion Between Principals and Teachers and/or Field Supervisors, by Component, When N.P.S. Central Services Classes Had Been Visited

Component	Teachers		Field Supervisors	
	N	%	N	%
Reading	19	68	14	50
Mathematics	20	71	12	43
E.S.L. (N = 3)	8	62	5	38
Clinical Guidance	16	57	11	39
Speech	15	54	5	18
Homework Helper (N = 2)	2	100	2	100

Examination of the 3 parts of question 4 reveals that:

Almost all the principals in the sample schools have visited classes of N.P.S. Central Services teachers, and most have visited as many of the Umbrella components as were operating in the school. Notes indicated that classes not visited would be visited after the Easter vacation, or before the end of the school year. (Questionnaires were generally returned in March or the beginning of April.) Principals visiting classes tried to speak with teachers, and more were planning to do so. Field supervisors are not often in the schools, so less amount of discussion with them could be expected.

In summary, principals appear to have made a concerted effort to visit Title I remedial classes, talk with teachers and generally involve themselves in the program. This might have been a function of the increased public relations work vis a vis the principals on the part of the Nonpublic School Title I Central Office.

Question 5 asked responding principals what steps they think should be taken to make remedial services more effective for students, in those areas where they indicated that pupil services were not effective. (The answers overlap somewhat with responses to the last part of Question 1.)

Responses to Question 5 follow:

The program should be better coordinated with the needs of the school.

Service is sufficient but worker time could be used more effectively.

Insertion of the program in a school after the beginning of the school year is disruptive to the school schedule. Schools should know the schedules of Title I remedial teachers and workers prior to September.

More mathematics materials should be made available for the Homework Helper Program.

A structured training program for paraprofessionals would be helpful.

All students who need help should be included in remediation programs regardless of where they live.

Services were effective but not sufficient. More days of service are needed in Speech, English As A Second Language, Clinical-Guidance and Homework Helper.

Programming on a special day to allow for interaction with classroom teachers would have to take place after school due to teachers' time commitments.

Services were effective, but teachers should be the one to say whether materials are needed or not.

Guidance personnel should have a greater awareness of outside services at his disposal. There is not enough follow-through in terms of specific need.

More psychologists' time is needed in the schools to test academic potential, and learning disabilities.

The pupil load is too heavy, i.e. ten pupils to a teacher for a class period.

Principal and staff of school would like to determine need for N.P.S. Guidance service; not necessarily fixed to present eligibility requirements.

Personnel on hand are excellent; but insufficient time in terms of personnel is available.

Eligibility to qualify for all other services dependent on reading is most unsatisfactory.

Younger E.S.L. teachers should be better trained and fluent in Spanish when servicing Spanish speaking pupils.

Question 6 asked principals to indicate on a chart which components had been represented at school staff conferences and/or parent meetings.

Table 9.8 is a breakdown of these responses.

Table 9.8

Principal Questionnaire - Question 6

"Which Programs, If Any Have Been Represented At Staff Conferences and/or Parent Meetings?"

Component	Staff Conferences		Parent Meetings	
	N	%	N	%
Reading	18	64	11	39
Mathematics	12	43	12	43
E.S.L. (N = 15)	8	53	6	40
Clinical Guidance	18	64	13	46
Homework Helper (N = 3)	2	67	2	67

An examination of Table 9.8 shows that the Central Office workers, Reading and Clinical Guidance personnel were most frequently represented at staff conferences, with remedial speech teachers present almost as frequently. Mathematics, E.S.L. and Homework Helper staff were also asked to staff conferences, which shows a real effort on the part of Nonpublic school staff to include N.P.S. Central Office personnel in school meetings. All "umbrella" components were also represented at parent meetings; that they were less represented at parent meetings than at staff conferences can probably be explained by the fact that most parent meetings are held after school or at night, and Central Services staff have to make a special effort to be present at such meetings. Their presence at these meetings is an indication of their dedication to the program.

Question 6 further asked, if Central Office Title I Remedial Services have not been represented at staff conferences and/or parent meetings, why not?

A summary of these responses follow:

Some principals hadn't "gotten around to it" at the time of filling out the questionnaire, but of these, many hoped to do so subsequently. Another principal included workers at staff conferences but not at parent meetings, as the latter were held at night and the neighborhood was considered to be quite dangerous. Still another principal did not feel the need to hold such meetings with parents. One answer was that the Parent-Teacher Association at a particular school was inactive. A few responses indicated that scheduling of the day of meetings was not compatible with days Central Office workers were in the schools. One answer states frankly that the non-presence of Title I staff was probably due to their not having been asked to attend by the principal, who considered the possibility of encouraging such attendance at future meetings. Another principal was new to the school, and had to have time to get organized. Such staff meetings were planned, however, for later in the year. Parents were felt not to be too interested in attending joint meetings; dangerous neighborhood at night. One school in the sample will not be in existence next year, and the principal has been preoccupied with problems of school administration; another never thought of inviting Title I personnel to meetings.

In sum, when N.P.S. Title I workers were not invited to attend staff conferences and parent meetings, it was usually because the school principal had not encouraged them to do so. Some just didn't think of it, others were planning to do so in the near future, and still others gave conflicting schedules and bad neighborhoods for meetings with parents at night as reasons for non-participation.

Question 7 asked, "Do you feel it would be beneficial for nonpublic school staff members to visit classes of Title I teachers?" Of the 28 responses, 24 answered "Yes" and 4 answered "No."

Part a of question 7 asked, if the above answer was yes, has this already been done? Of the 24 principals responding that it would be beneficial for nonpublic school staff members to visit Title I teachers, 9 said that this had already been done, while a majority of the others were planning to encourage such visits before the end of the spring term.

Part b asked "if not, why not? Responses generally referred to the difficulty of finding time in the schedule, or conflicting schedules. One answer indicated lack of substitute teachers as the reason. One respondant felt that the invitation should come from the Central Office or from the individual teacher. In sum, conflict of schedules and lack of free time were the main reasons given for nonpublic school staff members not having visited classes of Title I teachers. There was also reticence to have such visits take place without direct permission from the Board of Education; a feeling that it might not be appropriate.

Part c of question 7 asked principals to define the purpose of such visits. Following are their answers:

For evaluation and coordination; to learn methods and materials used by Corrective Teachers; to exchange ideas, discuss problems and/or specific students; to coordinate work with children and to pick up methods and techniques of instruction; to keep informed about the program and see what materials and methods are used; to make classroom teachers aware of the exercises and activities their children are having in the remedial classes; educational enrichment, professional growth and development; to discuss pupil progress and work together for the good of the pupils; so school staff could see their pupils responding in a remediation environment, which may help in their own handling of the children.

Following are some additional comments by principals:

Very happy with present staff. Would like more specific information in terms of interaction between school personnel and specialists; what they can and cannot ask them to do. Information about scheduling remedial teachers for the fall term should be made available to the school before the end of the previous school term in June. Need for more educational services, i.e. trips. Guidance should have top priority. Consumer should be consulted before priorities are set. Teacher in the school should be given some leeway in ordering materials; not all materials should be ordered through the Central Office.

SUMMARY OF PRINCIPAL QUESIONNAIRE RESPONSES

Questionnaires were completed by nonpublic school principals in conjunction with an interview by the evaluators on their visits to sample schools or returned by mail if the principal was not available at the time of the evaluator's visit. Of 30 questionnaires distributed, 28 were returned.

Approximately 2/3rds of the respondants answered that NPS Central Remedial Services to eligible pupils were meeting their pupils' needs. Those who answered negatively felt that the new eligibility requirements mandated by the State Education Department were too narrow; i.e. deficiency in reading, mathematics and/or E.S.L. as criteria for services in speech, clinical guidance and homework helper.

Nearly 2/3rds of the responding principals answered that pupil needs were being met by Title I remedial Central services, but 2/3rds found that clinical-guidance services were insufficient for pupil needs while 1/3 felt that E.S.L. service was insufficient and 1/5th found Homework Helper services insufficient in their schools. Some schools not presently serviced by Homework Helper and E.S.L. would like to have these services included.

Additional days of service requested were, in order of frequency:

Clinical Guidance	34½
Reading	29
E.S.L.	27
Mathematics	22
Speech	13
Homework Helper	10

Answers to question 3, relating to strengths and weaknesses of each component, revealed that in the respondants' view, the Umbrella concept of interrelatedness of services was working well. In addition, teacher competence generally received very high ratings.

Most principals had visited classes of Central remedial teachers. Corrective Reading and Corrective Mathematics classes were most often visited, with at least 65% of all remedial classes being visited. Often, when classes had not been visited principals indicated an intention to visit at a later date. Of those visiting, most tried to talk to remedial workers and field supervisors about these visits when schedules permitted.

In order to render more effective service, some principals advocated greater local control; e.g. determination of eligibility, particularly for clinical-guidance and speech. More service was requested, especially for guidance, speech, E.S.L. and Homework Helper. Some principals expressed the view that remedial teachers should have a greater say in the selection of materials for pupils in a given school.

Central Title I staff were frequently present at nonpublic school staff conferences, with Reading and Clinical Guidance workers most often represented. A concerted effort was apparently made to include Central remedial staff at school staff meetings. They were less frequently present at parent meetings, which were often held at night. When workers did not attend staff confer-

Summary of Principal Questionnaire Responses continued

ences and parent meetings, it was often because principals had not encouraged them to do so. Conflicting schedules and the danger of some neighborhoods at night were also proferred as reasons for their non-attendance.

Most principals felt it would be beneficial for nonpublic school staff to visit classes of Title I teachers. About 41% of the respondants who concurred had already implemented such visits and others hoped to do so but cited conflicting schedules and lack of free time as impediments. Most respondants viewed these visits as beneficial in coordinating the efforts between classroom teachers and remedial teachers; an opportunity for the classroom teachers to see what materials were being used and how remedial procedures were being implemented.

In sum, principals seemed to respond favorably to the multiple thrust of the Umbrella program, although many problems were cited; State mandated eligibility requirements being too narrow, program priorities, conflicting schedules and lack of local determination regarding pupil eligibility.

Generally, principals appeared to be more knowledgeable about the Remedial Services than they had been previously, and made a concerted effort to include Title I remedial teachers in school staff meetings. They also promoted interaction between classroom teachers and Title I teachers by encouraging staff visits to remedial classes in addition to visiting classes personally.

B. REGRESSION ANALYSIS

One of the expressed purposes of the institution of the interrelatedness concept of the nonpublic school umbrella program was to determine the extent to which the pupil personnel services, Speech and Clinical-Guidance has had a beneficial effect on achievement in the three major academic areas -- Reading, Mathematics, and English as a Second Language. On the onset it must be stated that no analysis of the data available, even that which follows, can establish a cause and effect relationship. That is, without the use of random assignment of eligible students to a treatment or to a non-treatment group any explanation must be treated simply as hypothesis to be tested through conventional experimental procedures. It is therefore impossible, at this time and with this data, to say, for example, that attending clinical-guidance sessions has caused or has resulted in an increase in reading scores.

Step Wise Multiple Regression

The statistical analysis used -- step wise multiple regression -- is basically a correlational procedure whereby of the many independent or predictor variables being examined the one which is most highly correlated with the dependent or criterion variable is analyzed first with the other variables being added to a multiple correlational analysis in their order of magnitude. The resulting analysis in summary form includes the multiple R, R square, the R square change as each new variable is added, and the simple R of each independent variable and the criterion.

In essence, the step wise multiple regression analysis reports the percent of the criterion variance which is "explained by," the predictor variable ("R square") being explained by each new predictor variable.

Five separate analyses follow -- one for each of the following criterion variables:

Post MAT Reading Scores
Post MAT Mathematic Computation Scores
Post MAT Mathematics Problem Solving Scores
Post MAT Mathematics Total Score
Post ESL Project Evaluation Test Score

In each analysis nine predictor variables were treated:

Clinical-Guidance Attendance
Speech Therapy Attendance
Speech Teachers' Pre Rating Score
Speech Teachers' Post Rating Score
Photo Articulation Test Pre Score
Photo Articulation Test Post Score
Clinical-Guidance Behavior Rating Pre Score
Clinical-Guidance Behavior Rating Post Score
Number of Program -- A Tally

(a) Criterion: MAT Reading Post Test Scores
An examination of the summary table reveals that of all the predictor variable the number of sessions seen by the Clinical and Guidance counselor was most highly correlated with the criterion (r = .88). Be that as it may, neither it nor any subsequent variables explained a significant portion of the criterion variance i.e. no F ratio was significant. In fact, the total R square is only equal to .02349, that is, almost 98% of the criterion variance remain unexplained. From a separate analysis, it was found that of the remaining 98% unexplained variance, 40.4% was explained by the MAT Reading Pre Score and 22.1% by the Dolch Pre Test, a predictable outcome. (Table 9.9)

(b) Criterion: MAT Mathematic Computation Post Scores
An examination of the Summary Table reveals once again that more of the predictor variables were significantly correlated with the criterion variable. Approximately 98% of the criterion variance was left unexplained. Of that amount a second analysis revealed that the Computational Skills Pre Test Score accounted for 84.2% of the criterion (post test) variance. (Table 9.10)

(c)Criterion: MAT Mathematics Problem Solving Post Scores

An examination of the Summary Table suggests a continuation of the findings reported in A&B above. None of the predictor variables were significantly correlated with the criterion variable. The unexplained or unaccounted variance was again approximately 98%. A second analysis revealed that 74.8% was accounted for by Math Computation Pre Test Score, 4.86% by MAT Reading Pre Test Score and 0.266% by the Problem Solving Pre Test. (this data probably tells us more about the nature of the Mathematics test itself than it does of the relationship between the predictor and criterion variables) (Table 9.11)

(d) Criterion: Total MAT Mathematics Test Score

Once again one finds that none of the predictor variables correlate significantly with the criterion variables. About 97% of the criterion variance remains unexplained. Of this amount our second analysis revealed that 61% was explained by the combination of Problem Solving, Mathematics Computation and Total Mathematic Test Pre Scores; a predictable outcome. (Table 9.12)

(e) Criterion: ESL Post Test Score

An examination of the Summary Table reveals a situation unlike those reported in A - D above. In the case of the ESL Post Test the attendance record for Speech is significantly (1.05) related to the criterion (r = .29). Similarily, the PAT post test score, the Clinical-Guidance Pre rating, the speech teacher rating, the number of program enrolled in, and the Clinical-guidance attendance each resulted in significant F ratios. (Table 9.13)

Be that as it may, the total proportion of the criterion variance explained by all the predictor variables was 21.2%. Of the unaccounted for variance, the second analysis revealed that 66.9% was explained by the ESL Pre Test. Once again a highly predictable outcome.

Conclusion

With the exception of the ESL Post test criterion, the attempt to relate such predictors as Speech or Clinical-guidance attendance and rating to Math, Reading and ESL Post Test scores did not reveal any additional useful information. In every case the analysis revealed that pre test data accounted for more of the criterion variance than did the predictor variables - an expected outcome.

The significant findings in the case of the ESL test as the criterion should not be dismissed too lightly simply because it is in the minority. From a pupil personnel service point of view it might well be appropriate to conjective that Speech and Guidance services would be more related to ESL change beforea similar relationship is noted in the traditional academic area of Reading and Mathematics.

It is this evaluator's opinion that follow-up regression analysis are indicated using this years predictor and criterion variables as predictors for next years and the year after's criterion scores.

Table 9.9

Summary of Stepwise Multiple Regression Using MAT Reading Post Test Scores as the Criterion

PREDICTOR VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R
Clinical Guidance Attendance	.08872	.0C787	.00787	.08872
Photo Articulation Pre-Test	.12188	.01486	.00699	.06881
Clinical Guidance Behavior Rating - Post	.13702	.01878	.00392	.06920
Speech Teacher Rating - Pre	.14513	.02106	.00229	.03336
Number of NPS Programs	.14878	.02214	.00107	.06144
Speech Attendance	.15214	.02315	.00101	.02706
Speech Teacher Rating - Post	.15295	.02339	.00025	.02588
Photo Articulation Post-Test	.15328	.02349	.00010	.04536

Table 9.10

Using MAT Math Computations Post-Test Scores as the Criterion

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R
Speech Attendance	.08678	.00753	.00753	.08678
Number of Programs	.10757	.01157	.00404	.07066
Speech Teacher Post-Test	.11750	.01381	.00224	.03711
Speech Teacher Pre-Test	.13758	.01893	.00512	.02245
Photo Articulation Pre-Test	.14230	.02025	.00132	.00873
Clinical Guidance Behavior Rating - Pre	.14365	.02064	.00039	.01424
Clinical Guidance Behavior Rating - post	.14807	.02913	.00129	.002283
Clinical Guidance Attendance	.14898	.02220	.00027	.00530
Photo Articulation Post-Test	.14964	.02239	.00020	.00368

Table 9.11

Summary Table Criterion: MAT Math Problem Solving Post-Test Scores

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R
Speech Attendance	.09670	.00935	.00935	.09670
Behavior Rating Post	.12104	.01465	.00530	.08428
Number of Programs	.13301	.01769	.00304	.07023
Behavior Rating - Pre	.13977	.01954	.00185	.01815
Speech Teacher Rating - Pre	.14758	.02178	.00224	.03412
Speech Teacher Rating - Post	.14917	.02225	.00047	.02429
Photo Articulation Test - Post	.15011	.02253	.00028	.02350
Photo Articulation Test - Pre	.15234	.02321	.00067	.01869
Clinical Guidance Attendance	.15302	.02342	.00021	.02567

Table 9.12

Summary Table - Criterion: MAT Total Math - Post Test

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R
Number of Programs	.10799	.01166	.01166	.01799
Speech Attendance	.13762	.01894	.00728	.09411
Clinical Guidance Attendance	.15647	.02448	.00554	.07570
Photo Articulation Pre Test	.17114	.02929	.00481	.07486
Speech Teacher Rating - Pre	.17760	.03154	.00225	.06218
Photo Articulation Post Test	.17882	.03198	.00043	.04773
Behavior Rating - Post	.17930	.03215	.00017	.04013
Behavior Rating - Pre	.17964	.03227	.00012	.00924

Table 9.13

Summary Table - Criterion: ESL Post Test

VARIABLE	MULTIPLE R	R SQUARE	RSQ CHANGE	SIMPLE R
Speech Attendance	.29110	.08474	.08474	.29110
Photo Articulation Post Test	.36968	.13666	.05192	.27180
Behavior Rating - Pre	.40378	.16304	.02638	.14487
Speech Teacher Rating - Post	.42295	.17889	.01585	.03068
Number of Programs	.43971	.19335	.01446	.11753
Clinical Guidance Attendance	.45207	.20436	.01102	.10954
Photo Articulation Pre Test	.45801	.20977	.00541	.08210
Speech Teacher Rating - Pre	.45936	.21101	.00124	.10513
Behavior Rating - Post	.45956	.21120	.00019	.14070

Chapter X Summary

The Central ESEA Remedial Services to Eligible Nonpublic School Pupils is a direct outgrowth of the ESEA Title I Act of 1965, and has been operating in New York City Public Schools since 1966. Eligibility for remedial services is determined by 1.) residence in low income target areas and 2.) educational deprivation.

During the 1972-73 school year approximately 16,300 pupils were enrolled in the NPS Program and were serviced by the following components: Corrective Reading, Corrective Mathematics, English As A Second Language, Clinical-Guidance, Speech Therapy, Homework Helper and Services to Handicapped Children. Formerly the programs functioned as independent entities. This year, Federal and State guidelines required that children suffering from multiple handicaps be provided with concerted remedial services, Reading, Mathematics and English As A Second Language were recognized as priority programs, to be supported by Clinical-Guidance, Speech and the Homework Helper Program. The "Umbrella" project, encompassing both instructional and supportive components, was conceived of in order to offer this spectrum of Remedial Services to Eligible Nonpublic School Pupils. Pupils receiving these supportive services had to be referred through the priority remedial instructional services.

In order to facilitate the inter-relatedness of the "Umbrella" components, large and small group meetings were held with the program coordinators, field supervisors, Title I teachers and the Director and Assistant to the Director of the NPS ESEA Title I program. Principals were invited to participate in workshops to learn about the new "Umbrella" thrust. Small meetings were held for Title I personnel within schools, both with the nonpublic school staff and among the components, to discuss problems specific to the school and the individual students receiving services. Intercomponent staff meetings were designed to enhance morale, facilitate intercommunication, foster greater acceptance of the new guidelines and improve implementation of the program.

Evaluation Sample

An overall sample of 30 schools was chosen in conjunction with the Central Offices of the NPS ESEA Title I Program. Of the total population of schools receiving services, the stratified sample proportionally represents participation of schools by religious code and geographic area. In addition, the sample of 30 schools was chosen to proportionally represent combinations of services as well as individual "Umbrella" component services.

Corrective Reading

The Corrective Reading Program has been in operation in the New York City Public Schools since 1966 and is the most extensive remedial program in the NPS ESEA Title I Umbrella of services. Evaluation objectives were to determine: 1) if 80% of the pupils in the program have improved in the areas of beginning reading, word attack skills and oral reading by 6 months; 2) if 80% of pupils enrolled in the program in the areas of comprehension skills of word meaning and paragraph comprehension have improved by at least 6 months; 3) if pupils enrolled in the program have shown evidence of good classroom performance in the areas of mathematics, social studies and science by achieving a passing grade in these subjects. The Dolch Word List or Gray's standard Oral Reading Test, the Iowa Test of Basic Skills or the Metropolitan Achievement Test were used to measure the first two objectives. The third objective was measured by the comparison of pass/fail grades in subject areas from September, 1972 to June, 1973.

As a whole, the sample population made significant gains in word attack skills and oral reading. Analysis by grade level indicates that significant gains were achieved at all grade levels except 11 and 12. The Corrective Reading Program made a significant contribution to the reading growth of pupils enrolled in the program during the 1972-73 school year. In almost all cases 75% or more of the population received passing classroom grades. Recycling of the program for the 1973-74 school year is strongly recommended

Corrective Mathematics

The Corrective Mathematics Program, in operation since 1966, currently includes about 120 teachers servicing approximately 160 nonpublic schools in grades 2 through 10. The evaluation objectives were: 1) the assessment of improvement by 80% of pupils in computational skills; 2) assessment of improvement by 80% of pupils in verbal problem solving and 3) whether 80% of the pupils being serviced manifested interest and curiosity. Pre and post administration of the Metropolitan Achievement Test was used in the measurement of the first two objectives and on-site observations, as well as responses by staff members to structured interviews were used to assess the third objective.

This program appears to be well organized and ably administered, and should be continued. Students deriving real benefits from the program are evidence of the need for these services. This program has achieved the major objectives set for it for the 1972-73 school year. Such planned intervention, resulting in similar yearly gains, will do much to provide many students with the basic foundation that will greatly improve the prospect of their future education.

English As A Second Language

E.S.L. is one of the three priority instructional programs and has been in operation in the nonpublic schools since 1967. The evaluation objectives were: 1) to determine whether 90% of participating pupils increased by at least one grade level

in ability to speak English; 2) to ascertain whether 75% of pupils in the program received passing grades of 65% or above in the subject areas of reading, mathematics, social studies and science. To measure the first objective, the New York City Scale of Pupils' Ability to Speak English and a Project Evaluation Test were used. To measure the second objective, pass/fail grades were collected by subject area and analyzed on a pre-post test basis. The two objectives wer realized and recycling of the program has been recommended. Adding more supervisors to the program, intensifying teacher training and providing specific minimal goals for each grade level have also been suggested.

Clinical-Guidance

Students referred from primary remedial services for Clinical-Guidance were seen by guidance counselors, school psychologists, social workers, and in some instances, by school psychiatrists. Evaluation objectives were to ascertain: 1) whether 80% of referred pupils demonstrated positive, statistically significant achievement gains in remedial programs; 2) if at least one scale point of improvement in school adjustment was shown by 80% of the pupils serviced. Metropolitan Achievement Test scores in reading and mathematics were used to measure the first objective. A School Adjustment Scale, developed by the program coordinators, and a post referral rating scale, prepared by the evaluating agency, were used to measure the second objective.

There is strong support for the conclusion that clinical-guidance services had a strong influence on the achievement, in subject areas, of the students being serviced. The changes in the behavior, school adjustment and social adjustment of the treatment group was even more striking. The data indicates that Clinical-Guidance Services resulted in positive changes in the important adjustment areas. it is recommended that the program be continued next year.

Speech Therapy

Speech Therapy has been operating as a Title I remedial service in nonpublic schools since 1966. During the 1972-73 school year eligibility for supportive speech services predicated on referral from one of the academic target areas; reading, mathematics and/or E.S.L.. Evaluation objectives were to ascertain: 1) whether 80% of students referred for speech services improved in communication abilities, and 2) the percent of referred students discharged from the program as "corrected" (minimum criterion level of 20%). Pre and post analysis of the Photo Articulation Test scores was used to measure degree of improvement in communication abilities and pre and post recordings of samples of speech were rated by speech therapists as well as by two independent judges to establish a validity rating for teacher ratings.

Analysis of pre and post teacher ratings on the P.A.T. indicated that 25.5% of the children being serviced were discharged as corrected of their diagnosed speech defect. 84.7% of pupils improved their scores on the P.A.T. from pre and post administration. The evaluator found adequate speech defect diagnosis, but

inadequate awareness of language interference patterns and non-speech related subjective judgements being occasionally confounded with diagnostics. 25% of all theory cases were considered as foreign lauguage interference. Content information obtained from other services, mainly reading, was incorporated into speech lessons. Diagnostic materials, therapy aids, and teacher training sessions were all in evidence of being amply provided, supervision was adequate with very good communication between teachers and the Central Office. Drawing caseloads from children enrolled in one of the target academic areas resulted in some confusion and dissatisfaction on the part of speech therapists. Recycling of the program was recommended.

Services to Handicapped Children

The major thrust of the program was to provide remedial reading and speech therapy services to intellectually and physically handicapped children in the nonpublic schools. In addition, limited social and psychological services in addition to art education, had been offered. Methodology, media and equipment appropriate to the nature of their handicap were used. Evaluation objectives were to assess: 1) improvement in reading development by at least two months; 2) improvement in psycholinguistic functioning in reading and language by at least two months; 3) improvement in oral, receptive and expressive language and speech facility (2 month criterion); 4) improvement in self-concept and 5) the effects of art instruction on the pupils in the program. INstruments used in the evaluation were: a) Peabody or M.A.T. b) Illinois Test of Psycholinguistic Abilities c) Photo Articulation Test d) Project Rating Scale and e) Rating scale for Art Instruction. Qualitative assessment was based on site observations, case studies and rating scales.

The program received an excellent rating. Services were generally performed at a high level of competency by well trained, motivated professionals receiving high quality training and support from field supervisors and the Central Office. The objectives of the program for the 1972-73 school year appear to have been reached. Pre and post test results confirm positive growth in academic areas and personal functioning. Recycling of the program in the comong school year is strongly recommended.

Homework Helper Program

The Homework Helper Program, a tutorial program in reading and mathematics, is presently operating in ten nonpublic schools. Approximately ten tutors, mainly high school students, tutor from 20 to 30 younger children in each school under the supervision of a Master Teacher. The program offers a unique opportunity for students to receive personalized help with reading and arithmetic on a concentrated basis over the school year. The child benefits not only from the specific remedial instruction being offered, but also from the personal attention he receives from his tutor.

The two evaluation objectives were to ascertain: 1) degree of improvement on reading and mathematics scores in areas in which children were being tutored; 2) degree of improvement in attitudes towards self and school. To measure the first objective, pre and post scores on reading and mathematics parts of the Metropolitan Achievement Test were used. As a control group was not available students acted as their own controls. The second objective was evaluated by means of a student attitude questionnaire developed by the evaluating agency and

the program coordinator. Qualitative assessment of the program was based on site visits to the three sample schools. Both of this year's objectives appear to have been realized. It has been recommended that this program be recycled and expanded to service more schools.

Principal Questionnaire

Of 28 questionnaires returned, 17 principals felt that Title I remedial services were meeting their pupils' needs. Others felt that the new State Education Department mandated eligibility requirements were too narrow. More service in all components was requested, while some schools not presently being serviced by speech, E.S.L. and Homework Helper would like to have these services included. Inter-relatedness of services and teacher competence were highly rated. Principals generally responded favorably to the multiple thrust of the Umbrella Program although some felt that many problems need to be worked out; e.g. eligibility requirements, program priorities, scheduling problems. In those components where this evaluating agency was responsible for 1971-72 evaluations, principals appeared to be better informed about the program than last year. Many of them made a concerted effort to include Title I remedial workers in school staff meetings. In addition, they fostered interaction between classroom teachers and Title I workers by encouraging staff visits to remedial classes as well as by making these visits themselves.

Regression Analysis

With the exception of the E.S.L. post test criterion, the attempt to relate such predictors as speech or clinical-guidance attendance and ratings did not reveal any additional useful information. In every case the analysis revealed that the pre test data accounted for more of the criterion variables than did the predictor variables - an expected outcome.

The significant findings in the case of the E.S.L. test as the criterion should not be dismissed too lightly simply because it is in the minority. From a pupil personnel service point of view it might well be appropriate to hypothesize that speech and guidance services would be more related to E.S.L. change before a similar relationship is noted in the traditional academic area of reading and mathematics.

It is this evaluator's opinion that follow-up regression analyses are indicated using this year's predictor and criterion variables as predictors for next year's and the following years' criterion scores.

RECOMMENDATIONS

The team of Teaching & Learning Evaluators strongly recommends the recycling of the total ESEA Title I Program for Eligible Nonpublic School Pupils.

Corrective Reading

On the basis of the Evaluator's observations, the following recommendations were made:

1. The Corrective Reading Program should be recycled for the coming school year.

2. In-service training for the corrective teachers should be continued and expanded. Special conferences, on-site small group meetings and intervisitations appear to be beneficial in the further development and refinement of the teacher's professional competencies.

3. The Dolch Word list should be discarded as a formal evaluation instrument. Its use should be limited to that of an informal diagnostic procedure by the corrective teachers.

4. Future evaluation objectives should be based primarily on the results of silent reading measures. Oral reading instruments are primarily diagnostic in nature and should be used to formulate individual instructional programs.

5. Additional funding should be allocated for instructional materials. One of the strengths of the program is the individualized and flexible instruction made possible by the great variety of materials made available to the corrective teachers. This aspect of the program should continue to receive strong support.

Corrective Mathematics

The following recommendations are based on the evaluation of this component:

1. State Education Department eligibility guidelines should be revised so that entrance to the program is based upon demonstrated need in the area of mathematics rather than being contingent upon disability in reading.

2. Teachers should be encouraged to employ a greater diversity of pedagogical techniques in order to capitalize on the advantages offered by smaller groups. Increased use of self-instructional materials and specially made mathematics equipment to promote independent exploration should also be encouraged.

Math cont'd

3. Teachers and administrators of the program, in conjunction with nonpublic school personnel, should be given greater latitude in exercising individual judgement and discretion in determining which students shall be included in the program.

4. The Corrective Mathematics program should be better integrated into the nonpublic school program while the role of the Nonpublic School and its potential for increasing the impact of the Corrective Mathematics Program on the school community should be more closely examined.

5. To the extent possible, a planned program of intervisitation should be developed, centered around the creation of model facilities offering the greatest potential for the display of effective teaching techniques and/or materials, rather than a rigidly prescribed set of visits planned for each teacher. Visits could be initiated by teachers, or suggested by supervisors; small groups could make visits for the purpose of observation and/or demonstration.

6. The number of teacher training conferences should be increased if possible. Efforts should be made to explore the degree of interest in particular topics to ascertain whether interest is sufficient to sustain large or small workshops on non-school days.

7. When possible, the number of schools serviced one day a week should be curtailed. Such a distribution of resources does not appear to be economical and the effort is dissipated by the lengthy interval between classes.

8. The attempted integration between corrective mathematics and reading should be continued but priority should be given to establishing a closer working relationship between nonpublic school teachers and teachers providing corrective services.

9. Attempts should be made to provide greater program continuity from year to year. Such efforts would center around earlier and more effective communication between program administrators and those officials determining guidelines. Less dramatic shifts in guideline requirements and more informed decisions would do much to stabilize the student population, allow the program to initiate its teaching schedules earlier and enhance the prospect of building on the success of previous years with students who might otherwise be barred from participation.

10. More effective use of diagnostic tools and materials should be sought so that greater use could be made of individualized study programs. The use of programmed materials and other self-instructional devices could not only result in greater flexibility in classroom practices but provide for the instruction of a number of students not now serviced but in need of marginal help and capable of making progress on their own.

11. Recycling of the Corrective Mathematics Program is recommended for the 1973-74 school year.

English as a Second Language

On the basis of the Evaluator's assessment of the E.S.L. program, the following recommendations were made:

1. The English as a Second Language program should be continued in the Nonpublic Schools for the coming school year.

2. It is recommended that field supervisors offer less experienced teachers a specific focus and guide their responsiveness to student content to increase the likelihood of comprehension and retention of language. In order to implement this recommendation it is further recommended that the number of supervisors be increased by at least two. With two supervisors responsible for 54 teachers in 80 locations, it is difficult to obtain the frequency and intensity of supervision necessary to optimal functioning of the program.

3. While realizing the difficulty of providing extra facilities, it is recommended that host schools stipulate that during hours of remedial instruction, other activities in cafeterias and auditoriums be suspended. If this is unrealistic, perhaps the ESL class can move to classrooms of those students using the cafeteria at a given time. At present, ESL teachers escort pupils to and from homeroom classes. It is suggested that when adequate self contained facilities are not available, ESL classes be held in the homeroom or in the nearest regular classroom.

4. If expansion of supervisory staff is not feasible pre and inservice training might be extended. Prior to moving into the field, all ESL staff might meet as a group for workshops dealing with common problems and share means of handling them. In the course of the year, ESL teachers within a limited area might meet, using their schools on a rotating basis to share specific methodology. These circles might expand. Two or three groups of six teachers meeting three times together might then hold a larger combined meeting and, with a specific agenda, address themselves to ESL problems; e.g. the differences between teaching first and second graders and seventh and eighth graders. For teachers concerned with audio-lingual teaching, when does reading and writing come in? At the seventh and eighth grade level when a discrepancy between oral proficiency (usually high) and writing (generally weaker) exists what priority should be met? when? how can it be implemented?

5. Despite support of the Umbrella program by principals due to schedule conflict contact between Title I teachers and host staff appeared minimal. The host school should arrange formal monthly exchanges between classroom teachers and Title I teachers. Regular meetings, ranging from a seminar format in which the two groups can focus on class goals to smaller meetings where individual student needs and problems are discussed would help to bridge the gap inherent in separate administrative priorities.

6. The Umbrella concept, to be successful, requires communication among all personnel involved with the pupil receiving services. While recognizing the lack of time available to classroom teachers and remedial teachers, it is recommended that this communication be formalized by having classroom teachers provide remedial teachers with the specific language goals being pursued in

ESL cont'd

their classes. ESL teachers can in turn structure their own materials and lessons to parallel the content of the basic class, providing a reinforcement and integration of the material the pupil faces daily.

7. If space limitations could be overcome, ideally Central service personnel should be assigned to appear at the same school on the same day. If students are out of class for Umbrella services in an intensive day they are less likely to miss the "total school experience" than if each day is interrupted by special services. This "common day" would allow NPS personnel to meet each other in the setting of the very students they are working with and increases the likelihood of references to individual students and their problems.

8. If the above two recommendations were implemented, the ESL teachers, in schools with ESL classes, could become a pivotal person, first between the host school and Title I personnel and then among Title I teachers. ESL teachers could then develop their lessons on an analysis of the basic texts used by classroom teachers as well as specific topics used in classroom instruction. Having noted vocabulary and structure, they can adapt their materials to make ESL lessons an expansion and reinforcement of basic class activities, thereby increasing the probability that students will indeed advance one or more years in reading grade level and achieve passing grades in subject areas. If ESL teachers determine the order and development of language art classes they can then act as a resource for other teachers; e.g., indicate to the mathematics teacher structures familiar to students so that math concept can be introduced and reinforced in language appropriate to a given class. In turn, the Math teacher could share materials with the ESL teacher. The incidence of student difficulty in content areas will be reduced if the new material is presented within a framework the language teacher knows he can effectively function in.

9. The Board of Education offers a wide range of materials deliberately flexible enough so that ESL teachers can adapt them. The adaptation should be designed to parallel the activity in the nonpublic school classrooms. Through examining and isolating basic structures, the year's work can assume a cohesiveness, continuity and integration now missing because of scheduling, time pressures and calendar conflicts.

10. Greater flexibility should be given to nonpublic school principals in identifying and referring students for Title I remedial services. ESL proficiency should be a criterion of eligibility solely for ESL services.

11. The overall goals of the ESL program should be stated more explicitly and specific goals should be stated for each grade level. Granted the virtue of flexibility - a teacher adapting to the needs of a given class - minimal objectives should be clearly stated.

Clinical-Guidance

The following recommendations are based on the evaluator's observations:

1. Clinical-Guidance services should be included in the continuation of the Nonpublic School program for 1973-74.

2. The Clinical-Guidance staff should receive additional in-service training in the diagnosis and remediation of learning disabilities to increase the effectiveness of their efforts in dealing with such problems.

3. The Clinical-Guidance staff should provide one day of worker service for every 50 students in the total Title I program. This would bring the ratio of pupils served up to recommended professional levels which are particularly modest in the context of an economically deprived and educationally underachieving population.

4. The research design for the Clinical-Guidance component should accommodate to the fact that Clinical-Guidance services influence scholastic changes slowly and over a period of time. The time frame for academic changes should be, for future evaluations, at least two years.

5. A policy advisement committee drawn from Title I Clinical-Guidance workers should be formed for the purpose of making their reactions and feelings known to the Coordinators of the program in a systematic manner.

6. Career development and educational guidance should be incorporated formally into the program as they can be powerful motivations for scholastic achievement.

7. The State Education Department guidelines should be modified to permit Clinical-Guidance workers to see students who are Title I eligible but not receiving remedial help in reading, mathematics and/or ESL.

8. Greater efforts should be devoted to developing an interdisciplinary team approach among all the Title I personnel in a single school. Each Title I specialist might serve as Title I coordinator for a given school on a rotating basis, thereby fostering increased cooperation and communication among Title I staff.

9. More group work should be encouraged both with students and with parents; e.g. parent groups could be co-led by a Clinical-Guidance worker and a remedial specialist, thereby tapping the resources of both components, and reinforcing the benefits of the remedial programs in the students' homes.

Speech Therapy

Following are recommendations based on the evaluation of the Speech Therapy Program:

1. The speech therapy component should be continued because it serves the vital needs of a large population of children.

Speech cont'd

2. Children exhibiting severe speech disorders which interfere with oral communication, and who are not able to secure speech therapy services elsewhere, should be included in the program even though they are not presently enrolled in one of the three academic target areas.

3. A team approach should be employed to choose children eligible for the program with preference given to eligible children with severe speech defects.

4. Diagnostic records and analysis should be more clinically and descriptively defined and should not contain subjective evaluative judgments for non-speech behaviors.

5. Expanded approaches to therapy; e.g. the "oblique" approach and other appropriate methods should be more frequently utilized with children to enhance language skills and total communication.

6. A review of therapists' expected workload (including paper work) should be made so that time can be more judiciously alotted for the work of therapy.

7. The budget should be increased to allow for purchase of ITPA and Peabody Kits or alternative materials deemed necessary to the effectiveness of the program by the program coordinator.

8. There should be a monetary allowance for per diem workers to attend meetings and instructional workshops for the purpose of upgrading their professional skills.

9. Special teacher training sessions should be given to foster understanding of current psycho-linguistic and socio-linguistic research and theory, so that speech teachers may more effectively deal with the bi-dialectical and bi-lingual speech patterns encountered among their students.

10. A pilot project should be initiated to research implementation of language skills assistance methods; e.g. language related skills of listening and speaking, with first and second grade children.

11. Therapists should be more knowledgeable about appropriate reading materials for the diagnosis of specific speech disorders.

12. More care should be taken in the preparation and execution of the tape recordings of samples of pupils' speech which then become the basis for diagnosis and evaluation.

Program for Handicapped Children

On the basis of the evaluation the following recommendations were made:

Handicapped cont'd

1. The Title I program for Handicapped Children has received an excellent evaluation and should be continued next year.

2. Psychological and social work services to handicapped children and their parents should be increased. Greater effort should be made to clarify the scope and intent of these services to the staff of the nonpublic schools.

3. It is recommended that, if possible, reading test scores from a uniform test should be used for all students involved in the program.

4. If time and personnel allow, the ITPA might be administered to all eligible students in order to give more diagnostic information to the staff. However, it should not be used routinely for collection of pre and post instruction data because of its complexity and the time required for administration and scoring.

5. In order to better coordinate services and provide longitudinal consistency of service, specialists should, when possible, be assigned to the same schools next year.

6. If possible, a meeting should be held at the beginning of the school year with NPS classroom teachers whose children will receive service, to describe the emphasis of the program and encourage open discussion of common problems.

Homework Helper Program

The following recommendations were based on the evaluator's observations:

1. It is recommended that the Homework Helper Program be recycled for the 1973-74 school year.

2. The program should be expanded to include a greater number of schools. Nonpublic school principals should become more aware of the unique features and benefits of this program.

Data Analysis Procedures

Data analysis was hindered due to: 1) discrepancies between MIR form requirements and evaluation analysis requirements and 2) the early deadline for completion of MIR forms. It is therefore recommended that all evaluation objectives be made totally congruent with MIR requirements, and further, that the MIR deadline be extended to allow a more appropriate time span for proper data analysis.

Umbrella Program; Concept of Inter-relatedness

This was the first year of the implementation of the new inter-relatedness thrust of remedial services to nonpublic schools. Heretofore, each program component was autonomous, with its own priorities and eligibility criteria. The Central Offices of NPS ESEA Title I have made great strides towards the implementation of this concept. As with any far reaching innovation, time is necessary to allow the enthusiasms and discontents inherent in exposure to this new program a chance to follow the natural laws of evolution and progress from its gestation period to maturity.

It is therefore recommended that the "Umbrella" Program be continued, and given additional support in the form of more intercomponent meetings both on higher administrative levels and in the schools themselves. Meetings between Title I remedial staff and nonpublic school staff should be continued, with the schools scheduling them as a matter of course over the school year. Further educational efforts, vis-a-vis the Title I staff, as well as the nonpublic school staff are strongly recommended to enhance the inter-relatedness concept of services.

Appendix A

Listing of Nonpublic Schools Selected
As Sample for Evaluation
Of Central Title I Remedial Services

Dist.	Code	School
1	1	Our Lady of Sorrows
2	1	St. Francis de Sales
3	1	Holy Name
4	1	Commander Shea
4	1	Holy Rosary
5	1	St. Charles Borromeo
6	1	St. Catherine of Genoa
6	1	St. Rose of Lima
7	1	St. Luke
7	1	St. Pius V
8	1	St. Athanasuis
8	4	Greek American Institute
9	1	St. Joseph
10	1	St. Martin of Tours
13	2	St. Augustine
14	2	Annunciation
14	2	St. Cecelia
15	3	Yeshiva Torah Vodaath of Flatbush
15	2	Visitation of the Blessed Virgin Mary
15	2	St. Francis Xavier
16	2	New Catholic High School
16	3	Beth Rachel
17	2	St. Gregory
17	2	Bishop McDonnell High School
19	2	Our Lady of Lourdes
20	3	Yeshiva Solomon Kluger
24	4	Transfiguration
27	2	St. Clement Pope
29	2	St. Pascal Baylon
30	2	St. Rita

Appendix B

Central ESEA Title I
REMEDIAL SERVICES FOR ELIGIBLE NON PUBLIC SCHOOL PUPILS

Questionnaire for Non Public School Principals

School_____ _____Dist._____No. of Eligible Pupils_____

The Central ESEA Title I Non Public School project includes interrelated remedial services offered to eligible pupils. We are interested in your assessment of the project, and the effectiveness of the new "Umbrella" concept.

1. Please rate the effectiveness of the NPS Central Services as an "Umbrella" in meeting the needs of your pupils.

Excellent_____ Good_____ Poor_____
Less than satisfactory_____ Satisfactory_____

If less than satisfactory or poor were indicated above, why?

2. Are pupil needs in the components listed below met by NPS Central Services? (If service is deemed insufficient, please indicate additional days needed.)

Component	No. of Pupils serviced	Yes Service is sufficient	No Service is not sufficient	Additional days of service needed
Clinical Guidance				
Reading				
Mathematics				
Speech				
English As A Sec. Lang.				
Homework Helper				

3. For each remedial service offered in your school, please place a check (✓) in squares indicating effective service and an asterisk (*) in squares where you feel the program is ineffective.

	Corrective Reading	Corrective Math	ESL	Clinical Guidance	Speech Therapy	Homework Helper
Coordination with other central services						
NPS teacher competence						
Skills program						
Materials used						
Pupil progress						
Feedback to classroom teachers						

4. Have your visited the classes of NPS Central Services teachers? Yes___ No___

   (a) Please designate which classes, if any, have been visited.

   (b) If you do visit these classes, has there been any discussion with teachers and/or field supervisors regarding your observations? Check appropriate boxes when answer is Yes.

Component	Teachers	Field Supervisors
Clinical Guidance		
Reading		
Mathematics		
Speech		
English As A Second Language		
Homework Helper		

5. In those areas where you indicated that pupil services were not effective, what steps would you take to make the remedial services more effective for students?

6. Indicate in the chart below which programs, if any, have been represented at staff conferences and/or parent meetings.

Component	Staff Conferences	Parent Meetings
Handicapped		
Reading		
Art		
Speech		
Clinical Guidance		

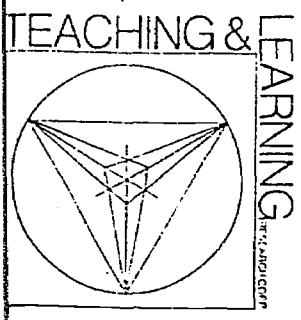
a) If none, why not?

7. Do you feel it would be beneficial for nonpublic school staff members to visit Title I classes? Yes_____ No_____

a) If yes, has this already been done?

b) If not, why not?

c) Please define purpose of these visits:



Appendix C

REMEDIAL SERVICES FOR THE NONPUBLIC SCHOOLS

CORRECTIVE MATHEMATICS PROGRAM

TEACHER AND SUPERVISOR QUESTIONNAIRE

One of the stated objectives of the Corrective Mathematics Program is to increase the interest and curiosity of students enrolled in the program through the use of independent exploration. We are interested in your assessment of this aspect of the program.

1. Do you feel the program is promoting greater interest in the area of mathematics on the part of students?

   a. definitely yes b. probably yes c. cannot tell d. probably not e. definitely not

2. Do you see direct evidence of this increased interest in either the behavior of the students or their choice of activities?

   a. definitely yes b. probably yes c. cannot tell d. probably not e. definitely not

3. Do you see evidence of increased curiosity about the field of mathematics?

   a. definitely yes b. probably yes c. cannot tell d. probably not e. definitely not

4. Do you feel your students are showing growth in their ability to explore mathematical ideas and relationships independently?

   a. definitely yes b. probably yes c. cannot tell d. probably not e. definitely not

5. What proportion of students in the program exhibit this increased curiosity?

   a. 80-100% b. 60-80% c. 50% d. 20-40% e. 0-20%

6. What evidence do you see of this growth in independent exploration?_____

   _____

7. What type of activities or behavior do you see that cause you to believe that student interest in the area of mathematics has increased?

   _____

   _____

8. Do you feel there is evidence of student growth in computational and problem solving skills? What kind of evidence?

_____

_____

9. Do you feel the students are making more skillful use of laboratory materials to increase their understanding of mathematics?

_____

_____

10. What recommendations would you make for improvement or modification of the existing program?

_____

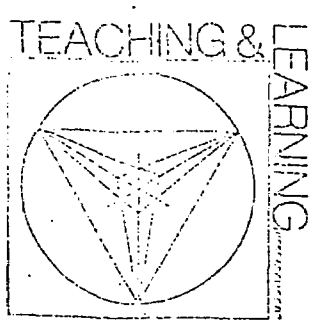
_____

Appendix C

NUMBER AND PERCENT OF PUPILS REACHING GRADE LEVEL

SEPT. 1972-JUNE 1973

GRADE	NUMBER PUPILS TESTED	NUMBER PUPILS REACHING GRADE LEVEL	PERCENT PUPILS REACHING GRADE LEVEL
2	525	162	30.9
3	1292	474	36.7
4	1362	358	26.3
5	1334	433	32.5
6	996	219	22.0
7	796	184	23.1
8	500	75	15.0
9	62	10	16.1
10	48	1	2.1
TOTALS:	6915	1916	27.7

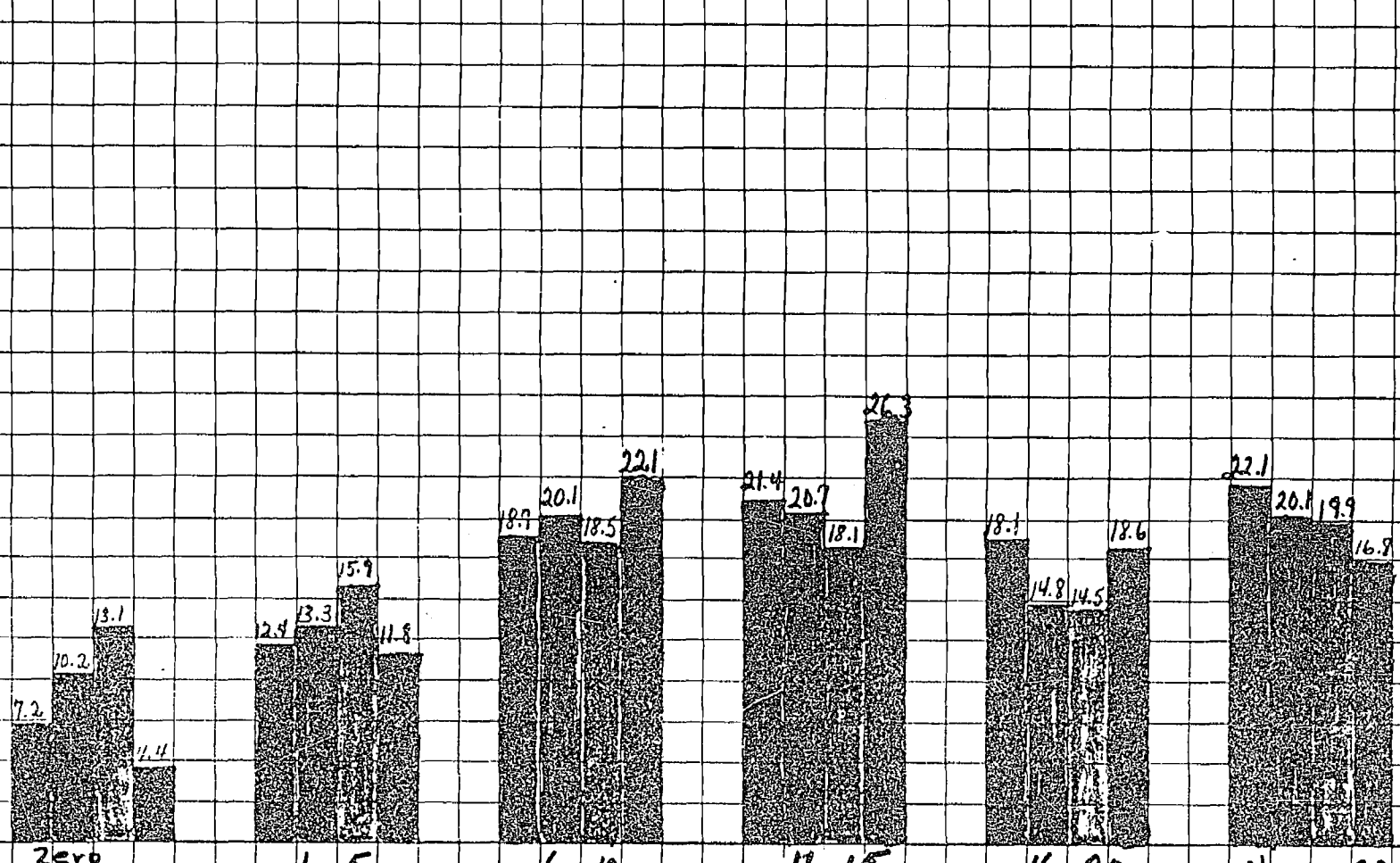


Appendix C

NUMBER AND PERCENT OF PUPILS SHOWING MORE THAN 1 YEAR PROGRESS: SEPT. 1972-JUNE 1973

	NO. PUPILS TESTED				COMPUTATION		CONCEPTS		PROB. SOLV.		TOTAL TEST	
GRADE	Comp	Conc	P.S.	Total	No.	%	No.	%	No.	%	No.	%
2				525							257	49.0
3	1292	1290	1280	1290	902	69.8	769	59.6	672	52.5	861	66.7
4	1362	1378	1374	1344	852	62.6	695	50.4	680	49.5	808	60.1
5	1334	1320	1305	1303	804	60.3	699	53.0	705	53.9	802	61.6
6	996	1024	1017	1027	530	53.2	549	53.6	502	49.4	548	53.4
7	796	800	800	805	496	62.3	512	64.0	457	57.1	547	68.0
8	500	496	492	493	291	58.2	299	60.3	255	51.8	292	59.2
9	62	62	62	62	34	54.8	33	53.2	46	74.2	43	69.4
10	48	48	48	48	24	50.0	16	33.3	37	77.1	26	54.2
TOTALS:	6390	6418	6381	6372	3933	61.6	3572	55.7	3354	52.6	4184	65.7

Per Cent of Pupils Showing Progress by 5-Month Intervals 1972-73



Appendix C

RESPONSES TO QUESTIONNAIRE ITEMS 6-10*

TOPIC	CONTENT OF RESPONSE	NUMBER RESPONDING
6. Evidence of growth in independent exploration.	1. Student use more math materials or engaged in making math projects.	9
	2. Students ask more questions in class.	4
	3. Students are eager to explore math relationships and solve problems.	3
	4. Not much growth as yet.	2
7. Behavior which shows increased interest.	1. Willingness to engage in math activities and use materials in class.	8
	2. Increased participation in class, greater enthusiasm for work.	5
	3. Students eager to come to class or come in free time.	4
	4. Remarks from classroom teacher.	2
8. Evidence of growth in comprehension and problem solving.	1. Results of commercial and teacher made tests.	14
	2. Greater flexibility in mental arithmetic or sorting out data in a problem.	2
	3. Students indicate they are now able to keep pace in their own classroom.	2
9. Greater skill in the use of laboratory materials.	1. Materials available are too limited.	7
	2. Students show improved ability and desire to use them on their own.	4
	3. Children show increased ability to transfer ideas from laboratory materials to every day problems.	3

TOPIC	CONTENT OF RESPONSE	NUMBER RESPONDING
10. Recommendations for program improvement.	1. Change of eligibility requirements that used reading as a criteria for program entrance.	13
	2. More teacher training conferences and greater exchange of ideas between teachers.	7
	3. More mathematics materials should be purchased and made available.	5
	4. Reduce group size and allow teacher greater flexibility in determining its size.	5
	5. Meet students daily rather than 2 times a week.	4
	6. Eliminate "umbrella" concept.	2
	7. No improvement needed	2

*The responses will not be even in number. The analysis includes only those responses that appeared with some frequency either on the questionnaire or in structured interviews. In some cases, particularly item 10, respondents made more than one suggestion.

REMEDIAL SERVICES FOR ELIGIBLE NON-PUBLIC SCHOOL PUPILS

English As A Second Language

New York City Scale of Pupils' Ability to Speak English Test

I. COMPREHENSION

A. Question-Answer Exercise

Directions: Ask each pupil the following questions during the initial testing session. Their use for May re-test session is optional.

1. What's your name?
2. How old are you?
3. Where do you live?
4. What's this (optional item)?
5. Do you have a pencil?
6. What color is (optional item)?

B. Situational Interpretation

Directions: Permit each pupil to study the classroom picture scene included wi this test for TWO (2) MINUTES. Then use the following questions to test pupil's comprehension. Select the level which you consider BEST suited to the pupil's ability.

Level I (Beginner)

1. How many people are there in the picture?
2. Who is the lady?
3. Are the children teachers or students?
4. Where is the book?
5. What is on the wall?

Level II (Intermediate)

1. What is the lady doing?
2. Is the door open or closed?
3. Where is the electric light in the classroom?
4. What do you see through the window?
5. Who is standing near the chalkboard?

Level III (Advanced)

1. The children are looking at their teacher and they have their hands raised. Why do you think they have their hands raised?
2. What season of the year do you think it is? (If pupil's response is correct continue by asking: Why do you think it is.....?
3. What subjects (things) are the children studying? Expand by asking: Why do you say (think) they are studying.....?
4. There is a basket on the floor. Is it empty or full? Continue by asking: Why is it empty?
5. There is a book on the desk. There is also a globe on the desk. How did th book and the globe get there?

II. STRUCTURE AND SYNTAX

Directions: Evaluate pupils in terms of responses given for A and B under I above.

III. VOCABULARY

Directions: Evaluate pupils in terms of responses given for A and B under I above.

IV. PRONUNCIATION (Intonation, Rhythm, Stress and Juncture)

A. Directions: Evaluate pupils in terms of A and B under I above.

B. Directions: Show pictures to elicit correct identification of each item in the following pairs of words:

1. chair/chicken
2. shoes/shirt
3. vine/vase
4. ball/baloon
5. ship/sheep
6. yellow/yard
7. skate/star
8. thumb/sun

C. Directions: Proceeding ONE AT A TIME, read each of the following utterances aloud TWICE. Instruct the pupil to repeat the utterance after the second reading.

1. Thank you, very much.
2. Yes, I am. Aren't you?
3. She's a friend of theirs.
4. It's a dog barking, isn't it?
5. I don't like this ice cream.

Appendix D

BOARD OF EDUCATION OF THE CITY OF NEW YORK
ESEA TITLE I PROGRAMS
FOR THE NON-PUBLIC SCHOOLS
141 Livingston Street, Brooklyn, New York 11201

PROJECT EVALUATION TEST
RATING SHEET FOR ORAL LANGUAGE PROFICIENCY

NAME OF CHILD	AGE	GRADE	COUNTRY OF ORIGIN	DATE OF TEST
SCHOOL	BORO	PRINCIPAL	ESL TEACHER	RATING

DIRECTIONS: Each letter rating is followed by a numerical point value. After you administer the entire test, total the point value, average the total, and enter the pupil's ability rating according to the scale below on the line for RATING.

I. Comprehension

_____ A (6). Pupil's comprehension comparable to that of a native speaker of like age and intelligence.
_____ B (5). Pupil understands nearly everything, though on occasion additional explanations are necessary.
_____ C (4). Pupil understands, but frequently questions the meaning of some words and/or expressions.
_____ D (3). Pupil understands if speaker carefully chooses vocabulary and restates ideas.
_____ E (2). Pupil's comprehension is limited to very general conversation on stereotyped topics.
_____ F (1). Understands no English.

II. Structure and Syntax

_____ A (6). Pupil uses English with few errors except for those which are commonly made by native speakers of like age level.
_____ B (5). Pupil makes occasional errors which do not interfere with communication.
_____ C (4). Pupil uses English well enough for most situations met by typical native speakers of like age, but still must make a conscious effort to avoid the language forms of his native tongue; depends, in part, upon translation and therefore speaks hesitantly upon occasion.
_____ D (3). Pupil uses English in more than a few stereotyped situations, but it is marked by errors which interfere with communication and is haltingly rendered at all times.
_____ E (2). Pupil makes errors which render communication difficult.
_____ F (1). Speaks no English.

Appendix D

ESEA TITLE I PROGRAMS ENGLISH AS A SECOND LANGUAGE

PROJECT EVALUATION TEST - RATING SHEET FOR ORAL LANGUAGE PROFICIENCY

III. Vocabulary

_____ A (6). Comparable in range to that of a native speaker of like age.
_____ B (5). Occasionally gropes for some words and/or expressions.
_____ C (4). Occasionally gropes for some high-frequency words.
_____ D (3). Frequent rephrasing by pupil necessary to compensate for limitations in vocabulary.
_____ E (2). Pupil's vocabulary limited to a few useful words and/or expressions which he has learned for use in stereotyped situations.
_____ F (1). Speaks no English.

IV. Pronunciation

_____ A (6). Speaks English for his age level like a native, with little or no foreign accent.
_____ B (5). Speaks with some foreign accent, but it does not interfere with communication; otherwise approximates the fluency of a native speaker of like age level.
_____ C (4). Speaks with a foreign accent which makes repetition of some lexical items necessary.
_____ D (3). Speaks with a very noticeable foreign accent, but in general can make himself understood.
_____ E (2). Speaks with an extremely heavy foreign accent which is very difficult to understand.
_____ F (1). Speaks no English.

Total points, I-IV. _____

Average (divide by 4) _____

Scale

1-2 pts., F-E Ability
3-4 pts., D-C Ability
5-6 pts., B-A Ability
(not eligible)

EXAMINER'S REMARKS (IF ANY)

Further information on the Project Evaluation Test can be obtained by writing to the Coordinator, English As A Second Language, N.P.S., E.S.E.A., Title I Program, Board of Education, 141 Livingston Street, Brooklyn, New York 11201

Appendix E

BOARD OF EDUCATION OF THE CITY OF NEW YORK
ESEA TITLE I PROGRAMS
FOR THE NON-PUBLIC SCHOOLS
141 LIVINGSTON STREET
BROOKLYN, N. Y. 11201

RATING SCALE FOR STUDENTS REFERRED FOR CLINICAL-GUIDANCE

DATE

SCHOOL _____ DISTRICT ____

NAME _____ GRADE ____

REFERRED BY _____
(PLEASE IDENTIFY-I.E. CLASSROOM TEACHER-TITLE I - RDG.-MATH.-ESL-SPEECH)

DIRECTIONS: FOR EACH CHILD WHO HAS BEEN REFERRED FOR HELP AND FOR THOSE WHO CONTINUE TO BE REFERRED, WE MUST HAVE A RATING SCALE. PLEASE RATE SECTIONS I ON A SCALE OF 1 TO 5. 1 INDICATES NEVER - 5 ALWAYS OR CONSTANTLY WITH PROVISION FOR INTERMEDIATE DEGREES.

SECTIONS II - III & IV SHOULD BE CHECKED WHEN RELEVANT.

I BEHAVIOR

NEVER 1 2 3 4 5 ALWAYS

1. CHILD IS HYPERACTIVE AND RESTLESS.
2. SHOWS INORDINATE AMOUNT OF ACTING OUT BEHAVIOR.
3. IS SHY AND WITHDRAWN.
4. SEEKS ATTENTION.
5. DEMONSTRATES BIZARRE BEHAVIOR. PLEASE EXPLAIN.
6. APPEARS TO BE UNHAPPY.
7. HAS LIMITED ATTENTION SPAN.
8. IS POORLY MOTIVATED.
9. UNABLE TO FOLLOW THROUGH ON HOMEWORK ASSIGNMENTS.
10. APPEARS TO BE DEPRESSED.
11. FAILS IN COMPLETING TASKS.
12. RESISTS INSTRUCTION
13. APPEARS TO BE FATIGUED.

II SOCIAL

1. IS UNABLE TO RELATE TO TEACHER - OTHER ADULTS ____
2. IS UNABLE TO RELATE TO HIS PEERS. ____
3. IS IMMATURE FOR HIS AGE. ____
4. APPEARS TO BE ABUSED PHYSICALLY. ____
5. APPEARS TO BE NEGLECTED. ____

III INTELLECTUAL

1. CHILD SEEMS PARTICULARLY SLOW AND RETARDED. ____
2. DOES NOT RETAIN INFORMATION. ____
3. SHOWED LIMITED PROGRESS FROM PAST REMEDIAL INSTRUCTION IN ____* (RDG.) OR ____* (MATH.).
4. APPEARS TO BE UNDERACHIEVING. ____

IV PHYSICAL: AUDITORY AND VISUAL

1. SHOWS SYMPTOM OF HEARING LOSS. ____
2. HAS NOT DEVELOPED LISTENING SKILLS. ____
3. CANNOT DISTINGUISH BETWEEN SOUNDS. ____
4. HAS DIFFICULTY IN ATTACHING MEANING TO WORDS. ____
5. SEEMS UNABLE TO BUILD ON PREVIOUSLY LEARNED MATERIAL. ____
6. LACKS AUDITORY MEMORY. ____
7. IS UNABLE TO REPEAT WHAT HE HAS HEARD. ____
8. HAS A POOR SOUND MEMORY. ____
9. IS UNABLE TO ATTACH MEANING TO VISUAL SYMBOLS. ____
10. SQUINTS, GLASSES, OTHER SYMPTOMS OF VISUAL PROBLEMS. ____
11. CHILD IS OVERWEIGHT. ____
12. SEEMS TO BE UNDERNOURISHED. ____
13. HAS A PHYSICAL HANDICAP WHICH MAY BE INTERFERING WITH HIS PROGRESS. (DESCRIBE) ____
14. POOR COORDINATION. ____

* READING SCORES 9/72 ____ 6/72 ____
9/71 ____ 6/71 ____
9/70 ____

MATH. SCORES 9/72 ____ 6/72 ____
9/71 ____ 6/71 ____
9/70 ____

REMEDIAL SERVICES FOR ELIGIBLE NON-PUBLIC SCHOOL PUPILS

Clinical and Guidance Services Program

Post Referral Rating Form

Student's initials_____ male female (circle one)

School_____Class_____

The above student was referred earlier in the school year for clinical-guidance services. The major reason for referral was:

_____

_____

_____

Would you please place a check in front of the statement which most reflects your opinion of the student's progress in respect to the referring reason.

_____ excellent improvement

_____ good improvement

_____ satisfactory improvement

_____ some improvement

_____ little or no improvement

Do you recommend any further steps to effect improvement?

yes _____ no_____

Recommendation:_____

_____

_____

Respondent (check one):

_____ Classroom Teacher

_____ Remedial Teacher of_____

Appendix F

Speech Therapy Services

Photo Articulation Test

PAT RECORDING SHEET

		Year	Month	Day
Name	Date			
School	Birth			
Grade	Age			

Key: Omission (–); substitution (write phonetic symbol of sound substituted); severity of distortion (D1), (D2), (D3); ability to imitate (circle symbol of error).

Sound	Photograph	1	2	3	Vowels, Diph.		Comments
	I				III		
s	saw, pencil, house				aʊ house		
s bl	spoon, skates, stars						
z	zipper, scissors, keys						
ʃ	shoe, station, fish				u shoe		
tʃ	chair, matches, sandwich						
dʒ	jars, angels, orange						
t	table, potatoes, hat				æ hat		
d	dog, ladder, bed				ɔ dog		
n	nails, bananas, can				ə bananas		
l	lamp, balloons, bell				ɛ bell		
l bl	blocks, clock, flag				ɑ blocks		
θ	thumb, toothbrush, teeth		+		i teeth		
r	radio, carrots, car						
r bl	brush, crayons, train				e train		
k	cat, crackers, cake				ɚ crackers		
g	gun, wagon, egg				ʌ gun		
	II						
f	fork, elephant, knife						
v	vacuum, TV, stove				ju vacuum		
p	pipe, apples, cup				aɪ pipe		
b	book, baby, bathtub		+		ʊ book		
m	monkey, hammer, comb				o comb		
w-hw	witch, flowers, whistle				ɪ witch		
	I						
ð	this, that, feathers rather						
h-ŋ	hanger, hanger, swing						
j	yes, thank you						
ʒ	measure, beige				ɔɪ boy		
	(story)				ɝ bird		

SCORE

Sounds

I Tongue

II Up

III Vowels

Total

PRE | Post

CONNECTED SPEECH AND LANGUAGE

(Elicit story and conversation by using items 70 through 72. Note language, intelligibility, voice, fluency.)

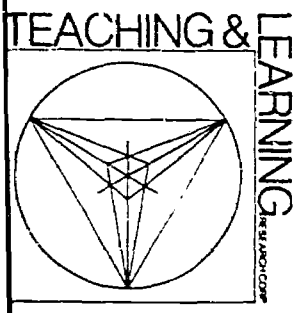
ADDITIONAL DIAGNOSTIC INFORMATION

(Hearing loss, motor coordination, perceptual deficiencies, emotional factors, attitude toward disorder and treatment.)

THERAPY GOALS AND PROGRESS

Additional copies of this sheet available in packs of 100 each from
The Interstate Printers & Publishers, Inc., Danville, Illinois 61832
Reorder No. 1069

Appendix F



TITLE I REMEDIAL SERVICES FOR ELIGIBLE NON-PUBLIC SCHOOL PUPILS

QUESTIONNAIRE FOR SPEECH THERAPISTS

Under the new eligibility requirements for Title I pupils in the non-public schools, the speech therapist must draw cases from students in three academic target areas: Remedial Reading, Corrective Math, and ESL.

We are interested in assessing the multifactor effect of the "umbrella" concept on a speech therapy program.

Please answer all questions completely. This questionnaire will be used only for our evaluation and no school or clinician will be identified.

1. a. Total number of children in your case load. _____

2. Of your total number of cases, how many fall into each of the following diagnostic categories? (Where multiple speech disability exists, list under primary diagnostic classification or disorder for which therapy is offered).

   a. articulation (omission, substitution, etc.) Non-ESL _____

   b. articulation - ESL pupils _____

   c. voice disorders _____

   d. stuttering _____

   e. other speech disorder (cluttering, tongue thrust, oral laziness, etc.) _____

   f. language difficulties

      1. habitual single word or short responses _____

      2. limited or incorrect use of grammatical constructions _____

      3. inappropriate verbal responses _____

      4. overfrequent use of repetitive phrases _____

      5. other (specify) _____

3. a. Since the introduction of the umbrella concept, do you find the above distribution different than you had previously encountered under former Title I eligibility requirements? In what way?

   b. If you have not previously been employed in a Title I program, how does this distribution compare with other educational settings in which you have been employed?

4. In terms of the previous classifications, what percent of your time do you estimate is spent in each area in therapy?

   a. articulation (Non-ESL) _____

   b. articulation (FSL) _____

   c. voice problems _____

   d. stuttering _____

   e. other speech deviations _____

   f. development of receptive language skills _____

      1. following directions _____

      2. auditory memory span _____

      3. increasing receptive vocabulary _____

      4. increasing conceptual understanding _____

   g. development of expressive language skills _____

      1. increasing expressive vocabulary _____

      2. increasing appropriateness of response _____

      3. increasing use of varied grammatical constructions _____

      4. increasing length of verbalization _____

      5. increasing inclusion of conceptual ideas _____

5. If you were allotted more therapy time, with the same case load, would you focus more in any particular area of therapy? Which one? In what way?

6. How many children currently being carried in your case load were recommended as possibly needing speech therapy by other Title I personnel:

   a. classroom teachers

   b. remedial reading specialist

   c. corrective math specialist

   d. ESL teacher

   e. guidance counselor

   f. psychologist

   g. other

7. Do you feel that form GK (Speech Defects, Classification and Description) is an effective tool for other Title I personnel? In what way?

8. Would you add, alter or modify its form or use in any way? Explain.

9. Do you keep a record of therapy goals for each session?

10. How and where is this information kept?

11. Is it available to other personnel in the Title I program?

12. Do other personnel in the program avail themselves of these records? How often?

13. Have you used form R-11 (Reading-Math-ESL Correlated Vocabulary for Speech Therapist) consistently? How often?

14. Have you found Remedial Reading-Remedial Math-ESL Teachers cooperative in completing form R-11? To what extent?

15. Have you found it viable to include their suggestions in therapy sessions? Explain briefly how this is implemented.

16. Have you used any other form of communication with specialists in Remedial Reading, Math and ESL to share content? Explain.

17. In addition to specific content derived from the previous mentioned sources, have you used other source materials concomitant with extending language related therapy? Describe these.

18. What has been the source of these materials? Is the amount and scope of these materials available to you adequate?

19. Do you feel your professional or previous training included adequate focus on language-related areas?

20. Has this focus been extended in the present position in any on-the-job experience or training? Explain.

21. What diagnostic materials do you use:

    A. For speech problems:

    B. For language related problems:

22. Do you feel that these are adequate in amount and scope?

23. Would you like to request other materials or equipment? If so, what?

24. Do you refer to diagnostic information on children included in your case load from other components in the "umbrella" program? If so, which ones?

25. Is the foregoing information quickly and easily available to you? How?

26. Have you made referrals to other Title I services from your case load?

    a. How many?

    b. To which services?

27. How many referrals have you made to the Title I Speech Centers from amongst the children you have given diagnostic evaluations to?

    What was the specific nature of each of these referrals?

28. How many referrals have you made to outside agencies for speech and language-related services (hearing, dental, etc.)?

    What was the nature of these referrals?

    Have you received feedback on the disposition of these referrals?

29. How many times were you visited by a field supervisor and/or coordinator?

30. Please describe in some detail the nature of the visits by field supervisors and/or coordinators.

31. How many meetings, seminars, conferences, etc. have you attended this year dealing with speech and language diagnostics, therapy techniques, related theory and research.

conferences, meetings, seminars, etc.	location	subject	sponsor or leader

32. Describe briefly how you see your role as a speech therapist in a Title I educational setting, especially within the "umbrella" concept. Does this consitute a change from your previous conception; if so, how? What do you believe is or should be the most important factor in assisting you to fulfill the role as you see it? (Please use reverse side if necessary.)

Appendix G

REMEDIAL SERVICES FOR ELIGIBLE NON PUBLIC SCHOOL PUPILS

Program for Handicapped Children

Specialist Questionnaire

(Please do not identify yourself on this questionnaire)

1. Have you been observed this year? Yes_____ No_____

   If yes, by whom_____. How many times?_____.

Teacher Trainer or Board Field Supervisor	1	2	3	more
Other (please specify)	1	2	3	more

   _____

2. What opportunity is there for you to meet with the classroom teacher to discuss a pupil's progress? (Check all appropriate)

   None_____ Informally_____
   Infrequent_____ Formally_____
   Frequent_____

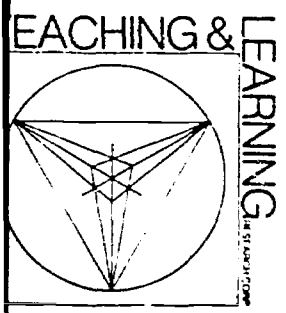
3. Which of the following do you think is a STRONG component of your particular instructional program? (Check all appropriate)

   Assistance and supervision from field supervisor
   Cooperation from other school personnel
   Diagnostic teaching
   Exchange of information with classroom teachers
   Flexible grouping procedures
   Freedom to develop own program
   Individualization of instruction
   Preparation of instructional lessons and materials
   Rapport with children
   Record keeping and reporting
   Relationship with parents
   Teacher training program: Large group sessions
   Teacher training program: Small group sessions

   Which of the above do you think is a WEAK component of your particular program? / Star (*) all appropriate /

4. Briefly, what one thing do you find most satisfactory in your program?

5. If you could affect a change, what one thing would you want changed?



Appendix G

REMEDIAL SERVICES FOR ELIGIBLE NON PUBLIC SCHOOL PUPILS

Program for Handicapped Children

Classroom Teachers Questionnaire

Please do not identify yourself or your school. Answer each question by placing the number of the statement below which comes closest to your thinking and feeling about the special services program in your school.

Code:
1. a great deal
2. some
3. not at all

1. In your opinion are the children in your class being helped by the special services?

   (a) Academically_____
   (b) Socially_____
   (c) Emotionally_____

2. Is there opportunity for you to discuss the children's problems with the specialists?

   _____

3. Are you provided with information concerning the children's progress?

   _____

4. Are parents whose children are now participating in the Title I services more involved in their children's progress than they were prior to their children's participation? _____

5. Have you been provided with information concerning the goals and objectives of the program?_____

6. Do you feel the specialists in any way make a contribution to the total instructional program in your school? _____

7. What is your reaction to the following services? Please check.

Services	Positive	Negative
Guidance		
Reading		
Art		
Speech		

Comments:_____

_____

TEACHING & LEARNING

TITLE I REMEDIAL SERVICES FOR ELIGIBLE HANDICAPPED NONPUBLIC SCHOOL PUPILS

Questionnaire for Non Public School Principals

School_____Dist._____ No. of Eligible Pupils__

The Central ESEA Title I Non Public School project includes interrelated remedial services offered to eligible pupils. We are interested in your assessment of the project, and the effectiveness of the new "Umbrella" concept.

1. Please rate the effectiveness of the NPS Central Services as an "Umbrella" in meeting the needs of your pupils.

   Excellent_____ Good_____ Poor_____
   Less than satisfactory_____ Satisfactory_____

   If less than satisfactory or poor were indicated above, why?

2. Are pupil needs in the components listed below met by NPS Central Services? (If service is deemed insufficient, please indicate additional days needed.)

Component	No. of Pupils serviced	Yes Service is sufficient	No Service is not sufficient	Additional days of service needed
Handicapped				
Reading				
Art				
Speech				
Clinical Guidance				

3. For each remedial service offered in your school, please place a check (✓) in squares indicating effective service and an asterisk (*) in squares where you feel the program is ineffective.

	Handicapped	Speech Therapy	Art	Clinical Guidance	Corrective Reading
Coordination with other central services					
NPS teacher competence					
Skills program					
Materials used					
Pupil progress					
Feedback to classroom teachers					

4. Do you visit the Title I nonpublic school specialists while they are working with participating children? Yes_____ No_____

   a) Please designate which classes, if any, have been visited.

(b) If you do visit these classes, has there been any discussion with teachers and/or field supervisors regarding your observations? Check appropriate boxes when answer is Yes.

Component	Teachers	Field Supervisors
Handicapped		
Reading		
Art		
Speech		
Clinical Guidance		

5. In those areas where you indicated that pupil services were not effective, what steps would you take to make the remedial services more effective for students?

6. Indicate in the chart below which programs, if any, have been represented at staff conferences and/or parent meetings.

Component	Staff Conferences	Parent Meetings
Clinical Guidance		
Reading		
Mathematics		
Speech		
ESL		
Homework Helper		

a) If none, why not?

7. Do you feel it would be beneficial for nonpublic school staff members to visit Title I classes? Yes_____ No_____

a) If yes, has this already been done?

b) If not, why not?

c) Please define purpose of these visits:

[illegible] Project [illegible]
141 Livingston Street, Brooklyn, N. Y. 11201

Appendix G

EVALUATION SCALE

CHILD'S NAME _____ SCHOOL _____ SEX: _____
BIRTHDATE _____ CLASS _____ DATE OF EVALUATION _____
YOUR RELATIONSHIP TO CHILD (CHECK ONE): TEACHER _____ PARENT _____

This is a scale to help measure whether the above child has shown growth over the school year as a result of Special Title I Services.

Listed below are a series of statements. Please read each statement and circle the one word in each item that best or most closely describes this child. Circle only ONE word. Do not leave any items out.

EXAMPLE: Child protests going to bed.	Never	(Rarely)	Sometimes	Often	Very Frequent
1. Child tends to avoid eye contact.	Never	Rarely	Sometimes	Often	Very Frequent
2. Child seems upset by changes (ex: teacher absences, changes in routine, etc.)	Never	Rarely	Sometimes	Often	Very Frequent
3. Child exhibits physical mannerisms, (ex:enuresis, tics, thumb sucking, soiling.)	Never	Rarely	Sometimes	Often	Very Frequent
4. Child acts aggressively to peers, (ex:hits, pushes.)	Never	Rarely	Sometimes	Often	Very Frequent
5. Child whines and cries.	Never	Rarely	Sometimes	Often	Very Frequent
6. Child is verbally abusive, (ex:criticizes peers and adults, curses.)	Never	Rarely	Sometimes	Often	Very Frequent
7. Child acts aggresively to adults.	Never	Rarely	Sometimes	Often	Very Frequent
8. Child plays with children younger than himself.	Never	Rarely	Sometimes	Often	Very Frequent
9. Child bullies younger and weaker children.	Never	Rarely	Sometimes	Often	Very Frequent
10. Child makes negative comments about himself and his abilities.	Never	Rarely	Sometimes	Often	Very Frequent
11. Child performs self-destructive acts, (ex:head banging, falling, etc.)	Never	Rarely	Sometimes	Often	Very Frequent
12. Child complains of physical symptoms, (ex:head-aches, stomach aches, being tired, etc.)	Never	Rarely	Sometimes	Often	Very Frequent
13. Child cries easily.	Never	Rarely	Sometimes	Often	Very Frequent
14. Child sleeps in class or rests with head on desk	Never	Rarely	Sometimes	Often	Very Frequent
15. Child gives up easily when faced with difficult tasks.	Never	Rarely	Sometimes	Often	Very Frequent
[illegible]ld has temper tantrums.	Never	Rarely	Sometimes	Often	Very Frequent

17. Child seeks help on tasks of which he is capable of accomplishing on his own.	Never	Rarely	Sometimes	Often	Very Frequently
18. Child clings or stays in close proximity of adults.	Never	Rarely	Sometimes	Often	Very Frequently
19. Child needs reassurance and praise of correctness of responses and actions.	Never	Rarely	Sometimes	Often	Very Frequently
20. Child cheats in games and tests.	Never	Rarely	Sometimes	Often	Very Frequently
21. Child avoids competitive situations.	Never	Rarely	Sometimes	Often	Very Frequently
22. Child tries to avoid school through excuses such as sickness.	Never	Rarely	Sometimes	Often	Very Frequently
23. Child is afraid to play outside by himself.	Never	Rarely	Sometimes	Often	Very Frequently
24. Child shows fears of dark, dogs, being alone, etc.	Never	Rarely	Sometimes	Often	Very Frequently
25. Child shows extreme fluctuations in mood.	Never	Rarely	Sometimes	Often	Very Frequently
26. Child takes things that do not belong to him.	Never	Rarely	Sometimes	Often	Very Frequently
27. Child tries to be center of attention, (ex: by clowning, provocative behavior, etc.)	Never	Rarely	Sometimes	Often	Very Frequently
28. Child is subject to teasing by peers.	Never	Rarely	Sometimes	Often	Very Frequently
29. Child goes from task to task without completing any.	Never	Rarely	Sometimes	Often	Very Frequently
30. Child is fearful of making mistakes, and overreacts when he does.	Never	Rarely	Sometimes	Often	Very Frequently
31. Child complains others are picking on him.	Never	Rarely	Sometimes	Often	Very Frequently
32. Child worries excessively about little things.	Never	Rarely	Sometimes	Often	Very Frequently
33. Child allows other children to bully and take advantage of him.	Never	Rarely	Sometimes	Often	Very Frequently
34. Child appears tense.	Never	Rarely	Sometimes	Often	Very Frequently
35. Child plays and interacts with other children.	Never	Rarely	Sometimes	Often	Very Frequently
36. Child initiates conversation with peers.	Never	Rarely	Sometimes	Often	Very Frequently
37. Child shows appropriate emotions, (ex:laughs at things that are funny, cries at sad things, etc.)	Never	Rarely	Sometimes	Often	Very Frequently
38. Child works independently.	Never	Rarely	Sometimes	Often	Very Frequently
39. Child shows self-confidence (ex:willing to try new experiences.)	Never	Rarely	Sometimes	Often	Very Frequently

40. Child initiates conversations with adults.	Never	Rarely	Sometimes	Often	Very Frequently
41. Child is responsible for personal hygiene (ex:bathing, washing, feeding, etc.)	Never	Rarely	Sometimes	Often	Very Frequently
42. Child can be relied upon to tell the truth.	Never	Rarely	Sometimes	Often	Very Frequently
43. Child assumes responsibilities (ex:runs errands, washes dishes, etc.)	Never	Rarely	Sometimes	Often	Very Frequently
44. Child makes decisions independently.	Never	Rarely	Sometimes	Often	Very Frequently
45. Child is sought out by peers.	Never	Rarely	Sometimes	Often	Very Frequently
46. Child gives behavioral indication of enjoying what he is doing, (ex:shows enthusiasm and interest, etc.)	Never	Rarely	Sometimes	Often	Very Frequently
47. Child interacts with adults.	Never	Rarely	Sometimes	Often	Very Frequently
48. Child is able to take a leadership role in games	Never	Rarely	Sometimes	Often	Very Frequently
49. Child completes work assignments.	Never	Rarely	Sometimes	Often	Very Frequently
50. Child is responsive to and pleased by recognition and approval.	Never	Rarely	Sometimes	Often	Very Frequently
FOR TEACHERS ONLY					
51. Child spontaneously volunteers in class.	Never	Rarely	Sometimes	Often	Very Frequently

ESEA TITLE I PROGRAM FOR HANDICAPPED CHILDREN IN NONPUBLIC SCHOOLS
141 Livingston Street, Brooklyn, N. Y. 11201

Appendix G

EVALUATION SCALE (ART COMPONENT)

CHILD'S NAME _____ SCHOOL _____
BIRTHDATE _____ CLASS _____
ART TEACHER _____

PRE-TEST SCORE - (Blue pencil) _____
POST-TEST SCORE - (Red pencil) _____

This is a scale to help measure whether the child has shown growth in fundamentals of concept, language development, manipulative ability, and self-image, as a result of the Special Title I Art instruction for retarded children.

Please read each statement below and circle the one word of each item that best describes this child.

	Never 1	Seldom 2	Sometimes 3	Often 4	Always 5
EXAMPLE: Child confuses red with green.			(Sometimes)		
1. Can manipulate scissors so that they cut on (or near) a given line.	Never	Seldom	Sometimes	Often	Always
2. Can trace around a simple given shape.	Never	Seldom	Sometimes	Often	Always
3. Can manipulate a paint brush to cover a 3 dimensional object with paint.	Never	Seldom	Sometimes	Often	Always
4. Can color (crayon or paint) within a given area.	Never	Seldom	Sometimes	Often	Always
5. Can follow 3 consecutive directions.	Never	Seldom	Sometimes	Often	Always
6. Can place and/or paste shapes within a given area.	Never	Seldom	Sometimes	Often	Always
7. Can tie a simple knot.	Never	Seldom	Sometimes	Often	Always
8. Can recognize and name 3 primary, 2 secondary colors, black and white.	Never	Seldom	Sometimes	Often	Always
9. Can identify 4 shapes. (circle, square, rectangle, triangle)	Never	Seldom	Sometimes	Often	Always
10. Can identify largest and smallest object in a series.	Never	Seldom	Sometimes	Often	Always
11. Can find one shape inside another.	Never	Seldom	Sometimes	Often	Always
12. Can find one shape outside another.	Never	Seldom	Sometimes	Often	Always
13. Can find the top of a shape.	Never	Seldom	Sometimes	Often	Always
14. Can find the bottom of a shape.	Never	Seldom	Sometimes	Often	Always
15. Understands simple art vocabulary.	Never	Seldom	Sometimes	Often	Always
16. Verbalizes about own art work.	Never	Seldom	Sometimes	Often	Always
17. Exhibits originality and imagination.	Never	Seldom	Sometimes	Often	Always

18. Shows pleasure and satisfaction in creating work.	Never	Seldom	Sometimes	Often	Always
19. Has developed attention span to complete project (ex: Completes work assignment).	Never	Seldom	Sometimes	Often	Always
20. Shows self confidence in handling materials (ex: Willing to use new media).	Never	Seldom	Sometimes	Often	Always

Appendix H

TEACHING & LEARNING RESEARCH CORP

REMEDIAL SERVICES FOR ELIGIBLE
NONPUBLIC SCHOOL PUPILS

HOMEWORK HELPER PROGRAM

Pre-Test

STUDENT QUESTIONNAIRE

Student's initials_____ male_____ female_____

School_____District_____ Class_____

Student is being helped with reading_____ with arithmetic_____

1. When you first entered the Homework Helper Program, did you feel that you needed help in reading?_____ in arithmetic?_____

2. When you first entered the Homework Helper Program were you able to finish your homework by yourself? in reading_____ in arithmetic_____

3. When you first entered the Homework Helper Program were you doing better in school than the year before? in reading_____ in arithmetic____

4. When you first entered the Homework Helper Program, did you like coming to it? Yes_____ No_____

5. When you first entered the Homework Helper Program did you feel that you couldn't do your homework without the help of a tutor? Yes___ No___

6. When you first entered the Homework Helper Program did your parents like you to come to the Program? Yes_____ No_____

7. When you first entered the Homework Helper Program how were your grades? Very Good____ Good____ O.K.____ Not too good____

8. When you first entered the Homework Helper Program and did your homework by yourself, did you get most of it right? Yes____ No____

9. When you first entered the Homework Helper Program did you feel that you needed somebody to help you with reading? Yes_____ No_____

10. In the first few months that you were in the Homework Helper Program did your classroom teacher think you were doing better in reading than last year? Yes_____ No_____ in arithmetic? Yes_____ No_____

11. When you first entered the Homework Helper Program did you think you would like to become a tutor when you entered High School? Yes____ No____

Appendix H

TEACHING & LEARNING RESEARCH CORP

REMEDIAL SERVICES FOR ELIGIBLE
NONPUBLIC SCHOOL PUPILS

HOMEWORK HELPER PROGRAM

Post-Test

STUDENT QUESTIONNAIRE

Student's initials_____ male_____ female_____

School_____District_____ Class_____

Student is being helped with reading_____ with arithmetic_____

1. At this time, do you feel that you need help in reading?_____
   in arithmetic?_____

2. At this time are you able to finish your homework by yourself?
   in reading_____ in arithmetic_____

3. At this time, do you think you're doing better in school than last year?
   in reading_____ in arithmetic_____

4. Do you like coming to the Homework Helper Program? Yes_____ No_____

5. Do you feel that you couldn't do your homework without the help of a
   tutor? Yes_____ No_____

6. Do your parents like you to come to the Homework Helper Program?
   Yes_____ No_____

7. At this time, how are your school grades?
   Very good_____ Good_____ O.K._____ Not too good_____

8. When you do your homework by yourself, do you get most of it right?
   Yes_____ No_____

9. Do you feel that you need somebody to help you with reading? Yes__ No__

10. Does your classroom teacher think you are doing better in reading
    than last year? Yes_____ No_____ in arithmetic? Yes_____ No_____

11. Do you think you would like to be a tutor when you enter High School?

    Yes_____ No_____

12. Do you enjoy reading more than you did last year? Yes_____ No_____
    arithmetic? Yes_____ No_____