DOCUMENT RESUME

ED 323 487 CG 022 810

TITLE	Chapter 1 Clinical and Guidance Program 1988-89. Evaluation Section Report.
INSTITUTION	New York City Board of Education, Brooklyn, NY. Office of Research, Evaluation, and Assessment.
PUB DATE	May 90
NOTE	70p.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Clinical Diagnosis; Computer Assisted Instruction; *Counseling Services; Elementary Secondary Education; English (Second Language); Federal Aid; *Federal Programs; *Guidance Programs; *Program Evaluation; Program Validation; *Pupil Personnel Services; *Remedial Programs; Staff Development
IDENTIFIERS	*Chapter 1 Clinical and Guidance Program

ABSTRACT

The Chapter 1 Clinical and Guidance Program provided diagnostic and counseling services to students enrolled in Chapter 1 nonpublic school remedial instruction programs--Corrective Reading, the Reading Skills Center, Corrective Mathematics, and English as a Second Language (ESL). Program documents, data retrieval forms, observations of staff development training workshops, interviews of program staff, and analyses of standardized and program-developed tests were the data for the evaluation of the program. The effect of the program on student behavior was determined by evaluating teachers' perceptions of their students' behavior as measured on the Behavior Checklist. Findings are reported with respect to the students served, provision of clinical and guidance services to students, computer assisted instruction (CAI) services, service to ESL students, staff development training workshops, student achievement in instructional programs, and improvements in student behavior. Based on the evaluation findings and other information presented in the report, it is recommended that the staff development training program should continue as currently organized and build on identified staff training needs and interests and that current clinical and guidance intervention into the social and emotional problems that interfere with students' academic achievement should be continued. (TE)

EVALUATION SECTION REPORT

John Schoener, Chief Administrator

May 1990

EVALUATION SECTION REPORT

CHAPTER 1
CLINICAL AND GUIDANCE PROGRAM
1988-89

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NEW YORK CITY BOARD OF EDUCATION

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1988-89

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CHAPTER 1 CLINICAL AND GUIDANCE PROGRAM
1988-89
EVALUATION SUMMARY

THE CHAPTER 1 CLINICAL AND GUIDANCE PROGRAM

The Chapter 1 Clinical and Guidance program provided diagnostic and counseling services to students enrolled in Chapter 1 nonpublic school remedial instructional programs--Corrective Reading, the Reading Skills Center, Corrective Mathematics, and English as a Second Language (E.S.L.). Program staff included two coordinators, two field supervisors, 12 social workers, 58 guidance counselors, 36 psychologists, and one psychiatrist. During 1988-89, the program was funded at approximately $5.7 million and served 5,707 students from 123 nonpublic schools. Its goal was to the alleviate emotional and social problems that interfere with a student's ability to profit from remediation.

PROGRAM OBJECTIVES

The objectives for the 1988-89 Clinical and Guidance program were:

- Students were expected to make statistically significant mean gains on standardized tests administered to evaluate the Chapter 1 instructional programs.
- E.S.L. students were expected to make a statistically significant mean gain on the program-developed Oral Interview Test administered by the Chapter 1 English as a Second Language program.
- All Clinical and Guidance students were expected to show a statistically significant mean difference on the program-developed Behavior Checklist.

EVALUATION METHODOLOGY

Program documents, data retrieval forms, observations of staff development training workshops, interviews of program staff, and analyses of standardized and program-developed tests were the data for the evaluation of the program. The impact of the program on student achievement in instructional programs was determined by evaluating students' performance on the tests. The impact of the program on student behavior was determined by evaluating teachers' perceptions of their students' behavior as measured on the Behavior Checklist.

FINDINGS

Students Served

More than 94 percent of participating students were in grades kindergarten through eight. In addition, the majority were enrolled in the largest instructional programs, Corrective Reading and Corrective Mathematics. However, while only one in three English as a Second Language students received program services, almost three out of four Reading Skills Center students received them. Finally, almost two-thirds of the students received services for the first time in 1988-89; one-quarter received them for a second year; and only 11 percent had received them for three or more years.

Chapter 1 teachers referred the largest number of students to the program (92 percent). Almost one-half of all referrals (43 percent) were for educational handicaps. The next most frequent reasons were behavior problems (ten percent) and family problems (nine percent). Eighty-three percent of the students in their first year in the program were recommended for an additional year of program participation.

Providing Clinical and Guidance Services to Students

The staff provided services to individual students, groups of students, or students and parents. A particular student could receive individual, group, and/or family counseling. Most students (77 percent) received help from an individual staff member, but nearly one in four students had needs that required a team approach. Students met with professional staff for an average of 12.4 sessions.

Serving C.A.I. Students

Since the 1985 Supreme Court decision, program staff have counseled and guided students at Chapter 1 program sites--public schools, leased neutral sites, mobile instructional units, and nondenominational schools. In 1987-88, the instructional programs began computer-assisted instruction (C.A.I.) at some nonpublic school sites. However, because of the Supreme Court decision, C.A.I. sites do not include space for clinical and guidance services. In 1988-89, the Clinical and Guidance program initiated a walk-over service for C.A.I. students at nearby public schools.

Serving E.S.L. Students

One in seven students served by the program was in the English as a Second Language program. When language was a barrier to communication, program staff tried to get a speaker of the student's native language to write notes to or call the

student's parents, or they referred the student to an outside agency that could provide services to the student in her or his own language.

Staff Development Training Workshops

The 22 staff development training workshops held during the year served as forums for sharing ideas, discussing typical and actual problem cases, and addressing the particular concerns of program staff. In the interviews, staff members emphasized the need for more intensive training, stressed the importance of having an opportunity to meet with other professionals, and described the workshops as informative and constructive.

Student Achievement in Instructional Programs

Students' scores on tests administered by instructional programs were indirect measures of the success of the program in identifying and alleviating the emotional and social problems of students. Nevertheless, with three exceptions, students in all instructional programs and in all grades made statistically significant mean gains from pretest to posttest on standardized and program-developed tests, meeting the program's criteria for success.

However, first grade students in the Corrective Reading program did not make a statistically significant mean gain on the Letters and Sounds subtest of the Stanford Early School Achievement Test. In addition, the small numbers of students in grades ten through twelve in the Corrective Reading program and in grades nine through twelve in the Corrective Mathematics program did not permit a valid test for statistical significance.

Improvement in Student Behavior

Student performance as perceived by their Chapter 1 teachers and reported on the Behavior Checklist was a direct measure of the success of the program. On the checklist, mean differences by grade and overall were statistically significant, meeting the program criterion for success. In addition, mean differences for students in kindergarten through grade seven and in grade ten were greater than ten raw-score points. Finally, effect sizes for all grades and overall were large and educationally meaningful.

While one cannot assert with absolute confidence that a cause and effect relationship exists between the program and the improvement in student behavior noted in checklist results, 92 percent of the students were referred to the program by Chapter 1 teachers, and these same teachers completed the checklist at the time of referral and at the end of the program. The uniformity of perceived improvement in the behavior of students suggests

that the program achieved its goals, identifying and alleviating the emotional and social problems of students.

RECOMMENDATIONS

Based on the evaluation findings and other information presented in the report, the following recommendations are made:

- The staff development training program should continue as currently organized and build on identified staff training needs and interests.
- Current clinical and guidance intervention into the social and emotional problems that interfere with student academic achievement should be continued.

ACKNOWLEDGEMENTS

The production of this report is the result of a collaborative effort of full-time staff and consultants. In addition to those whose names appear on the cover, Ilan Talmud analyzed the data upon which this report is based, and Stan Davis helped write the report and word processed and edited the final draft.

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I. INTRODUCTION

PROGRAM PURPOSE

The Chapter 1 Clinical and Guidance program provides diagnostic and counseling services to nonpublic school students who participate in Chapter 1 instructional programs--Corrective Reading, Reading Skills Center, English as a Second Language (E.S.L.), and Corrective Mathematics (see Appendix). Services are available by referral to any student enrolled in an instructional program. The goal of the Clinical and Guidance program is to identify and alleviate the emotional and/or social problems that may interfere with students' academic performance.

ELIGIBILITY

Students are eligible for Chapter 1 services if they live in a targeted attendance area and score below a designated cutoff point on state-mandated tests or standardized reading tests. Most nonpublic schools participating in Chapter 1 instructional programs use either the Scott-Foresman Test or the Comprehensive Test of Basic Skills (C.T.B.S) as their screening instrument.

Nonpublic school students must score at or below a specific grade equivalent to be eligible for Chapter 1 instructional programs. The grade equivalent is a calculation of the grade placement in years and months of students for whom a certain score is typical. It represents the level of work a student is capable of doing. However, a ninth grade student who achieves a test score that is 11.6 grade equivalents does not belong in the eleventh grade; rather, the 11.6 grade equivalent score indicates that the student scored as well as a typical eleventh grader

would have scored on the ninth grade test. The designated cutoff point ranged from three months below grade level for students in first grade to two or more years below grade level for students in high school.

STUDENTS SERVED

During the 1988-89 school year, 5,707 students from 123 nonpublic schools were served by the Clinical and Guidance program. Almost two-thirds of the students received clinical and guidance services for the first time in 1988-89; one-quarter received them for a second year; and only 11.1 percent had received them for three or more years (see Table 1).

Reflecting the focus of Chapter 1 instructional programs, the program served many more elementary than secondary school students (see Table 1). More than 94 percent of participating students were in grades kindergarten through eight; less than six percent were in grades nine through twelve; 71 percent were in grades two, three, four, five, and six.

The vast majority of students receiving clinical and/or guidance services was enrolled in the two largest instructional programs, Corrective Reading and Corrective Mathematics; approximately 40 percent of the students in each of these programs participated in the Clinical and Guidance program. However, while only one in three English as a Second Language students received program services, almost three out of four Reading Skills Center students received them. Nevertheless, by

TABLE 1

Student Participation in the Clinical and Guidance Program by Grade and Number of Years in the Program, 1988-89

Grade[a]	Total Number of Students	Total Percentage of Students	Percentage of Students by Grade and Number of Years in Program: One	Two	Three or More
K	178	3.1	96.6	3.4	0.0
1	453	7.9	80.6	18.8	0.6
2	882	15.5	77.3	19.5	3.2
3	849	14.9	63.5	29.4	7.1
4	909	15.9	58.1	29.2	12.7
5	769	13.5	51.4	29.4	19.2
6	655	11.5	54.4	28.4	17.2
7	456	8.0	53.6	26.4	20.0
8	235	4.1	54.1	20.4	25.5
9	104	1.8	94.3	1.9	3.8
10	88	1.5	73.9	26.1	0.0
11	52	0.9	26.9	53.9	19.2
12	16	0.3	43.8	50.0	6.2
Ungraded	61	1.1	65.6	22.9	11.5
Total	5,707	100.0	63.6	25.1	11.1

[a] Data on grade was missing for 61 students.

- Almost two-thirds of the students were in their first year of program participation.
- The largest numbers of students were in grades two through six.

far the largest number of referrals were for students enrolled in the Corrective Reading program (see Table 2).

PROGRAM OBJECTIVES

The objectives for the 1988-89 Clinical and Guidance program were:

- Students were expected to make statistically significant mean gains on the standardized tests administered by the Chapter 1 instructional programs.
- E.S.L. students were expected to make a statistically significant mean gain on the program-developed Oral Interview Test (O.I.T.) administered by the Chapter 1 English as a Second Language program.
- All Clinical and Guidance students were expected to show a statistically significant mean difference on the program-developed Behavior Checklist.

PROGRAM EVALUATION

The purpose of the 1988-89 evaluation by the Office of Research, Evaluation, and Assessment/Instructional Support Evaluation Unit (OREA/I.S.E.U.) was to describe the program and to assess its impact on student achievement. The following methods were used:

- interviews with program staff and review of documents describing program organization and funding, services provided, and staff development training;
- analyses of data retrieval forms that report information about grade placement, number of years in the program, participation in other Chapter 1 programs, reasons for referral, type of session, and number of contact hours;
- analyses of student scores on standardized reading, mathematics, and language skills tests;
- analyses of E.S.L. students' scores on the Oral Interview Test (O.I.T.); and
- analyses of students' scores on the Behavior Checklist.

TABLE 2

Number and Percentage of Students
in the Clinical and Guidance Program
by Participation in Chapter 1 Instructional Programs, 1988-89

Student Participation in Chapter 1 Programs		Student Participation in the Clinical and Guidance Program	
Name of Program	Number of Students	Number of Students	Percentage of Students
Corrective Reading	7,943	3,405	42.9
Reading Skills Center	176	132	75.0
Corrective Mathematics	5,806	2,373	40.9
English as a Second Language	2,445	822	33.6
Total	16,370[a]	6,732[a]	41.1

[a] Since some students participated in more than one program, the total number of students is based on duplicated counts.

- Seventy-five percent of the Reading Skills Center students were referred to the Clinical and Guidance program.
- Approximately forty percent of the students in Corrective Reading and Corrective Mathematics were referred to the Clinical and Guidance program.
- Approximately one-third of the E.S.L. students were referred to the Clinical and Guidance program.

SCOPE OF THE REPORT

The purpose of this report is to assess the implementation and effectiveness of the 1988-89 Chapter 1 Clinical and Guidance program. Program organization and implementation are described in Chapter II. Student academic achievement is discussed in Chapter III. Conclusions and recommendations are offered in Chapter IV. In addition, an appe x briefly describes all Chapter 1 Nonpublic School Reimbursable Services for 1988-89.

II. PROGRAM ORGANIZATION AND IMPLEMENTATION

PROGRAM ORGANIZATION

Program Funding and Staff

During 1988-89, the Clinical and Guidance program was funded at approximately $5.7 million. Program staff included two coordinators, two field supervisors, 12 social workers, 58 guidance counselors, 36 psychologists, and one psychiatrist. The staff provided services to individual students, groups of students, or students and parents. A particular student could receive individual, group, and/or family counseling.

The Supreme Court Ruling and Program Organization since 1985

On July 1, 1985, the Supreme Court ruled that instruction or counseling by public school staff on the premises of nonpublic schools--local educational agencies' most common method to serve Chapter 1-eligible students from nonpublic schools--was unconstitutional. As a result, alternative means for providing Chapter 1 services were devised. Since the 1985-86 school year, eligible students attending nonpublic schools have received Chapter 1 services at public school sites, leased neutral sites, mobile instruction units (M.I.U.s), and nondenominational schools.

Public school sites are designated classrooms in public schools; leased neutral sites are classrooms in public buildings such as community centers; mobile instructional units are mobile classrooms generally parked outside the classroom being served. Students are bused or otherwise escorted to the Chapter 1 site

from their nonpublic school. Public schools, leased neutral sites, and M.I.U.s include space for clinical and guidance services.

In 1987-88, Chapter 1 services were expanded to provide remedial instruction to some nonpublic school students via computer-assisted instruction (C.A.I.). C.A.I. sites are classrooms in nonpublic schools used exclusively for Chapter 1 computer-assisted instruction. Chapter 1 teachers are not present at computer-assisted instruction sites. Instead, they monitor student progress through the curriculum and provide instructional assistance via modems from a Board of Education administrative center. At the C.A.I. site, noninstructional technicians handle problems with the equipment and maintain order and safety. C.A.I. sites do not include space for clinical and guidance services.

During the 1988-89 school year, the program initiated a walk-over service to provide students who receive computer-assisted instruction with counseling and guidance at nearby public schools. In addition, the staff served C.A.I. students with electronic blackboards, an after-school hotline, and weekend counseling and guidance sessions.

PROGRAM IMPLEMENTATION

Since counseling and guidance sessions could not be observed by OREA/I.S.E.U. evaluators, program documents, data retrieval forms, and interviews of program staff were the sources for the assessment of program implementation. An evaluation team visited

15 mobile instructional units and nine public school sites and interviewed six guidance counselors (12 interviews), four psychologists (seven interviews), and three social workers (five interviews).

Providing Clinical and Guidance Services to Students

Chapter 1 teachers, nonpublic school teachers, or school administrators, refer students to the program. In addition, students can enrol themselves. However, Chapter 1 teachers referred the largest number of students (92 percent).

Almost one-half of all referrals (43 percent) were for educational handicaps. The next most frequent reasons for referral were behavior problems (ten percent) and family problems (nine percent). Eighty-three percent of the students in their first year in the program were recommended for an additional year of program participation.

Most students (77 percent) received help from an individual staff member--a guidance counselor, a psychologist, or a social worker. However, nearly one in four students had needs that required a team approach. Overall, students receiving clinical and guidance services met with professional staff for an average of 12.4 sessions. While the mean number of sessions per student for guidance counselors, psychologists, or social workers hovered around the overall mean, the mean number of treatment sessions per student with needs requiring a team approach was substantially higher (see Table 3).

TABLE 3

Number and Percentage of Students Seen and the Mean Number of Sessions by Type of Service in the Clinical and Guidance Program, 1988-89

Type of Service	Students Seen		Mean Number of Sessions
	Number[a]	Percentage	
Individual Counseling:			
Guidance Counselor	3475	61.2	9.6
Psychologist	380	6.7	10.4
Social Worker	528	9.3	11.3
Subtotal	4383	77.2	NA
Team Counseling:			
Guidance Counselor and Psychologist	877	15.4	20.5
Guidance Counselor and Social Worker	176	3.1	14.4
Psychologist and Social Worker	156	2.7	24.1
Guidance Counselor, Psychologist and Social Worker	89	1.6	30.9
Subtotal	1298	22.8	NA
Total	5681	100.0	12.4

[a] Data were missing for 26 students.

- More than 60 percent of the students were seen exclusively by guidance counselors.
- Almost one-fourth of the students had problems which required a team approach by Clinical and Guidance program staff.
- Overall, students were seen for an average of 12.4 sessions.

Assessing Students' Needs

Program staff first assess the needs of a newly enrolled student by having Chapter 1 classroom teachers fill out the Behavior Checklist. The Behavior Checklist is a 25-item questionnaire identifying behaviors that, if practiced by the students, would interfere with successful academic performance. Teachers check how often (never, seldom, half of the time, often, always) a particular behavior is exhibited by a student.

The checklist is also used to evaluate student participation in the program. It is expected that participation will lead to an improvement in students' behavior and attitude. At the end of the school year, Chapter 1 teachers reevaluate their students using the Behavior Checklist.

After studying Behavior Checklist results, program staff assess an individual student's needs by interviewing the student, studying the family history, and reviewing school records. Individual, group, or family counseling may then be initiated.

Working with Students

Program staff reported that in their sessions with students, they used active and nonjudgmental listening techniques and tried to make sure that the student knew that the counselor was an ally. Working with students with different needs, program staff used different techniques to counsel and guide individual students. For example, with some students, it was necessary to deal directly with the student's issues, while with other students, it was necessary simply to help them identify their

options rather than solve their problems. In addition, the staff indicated that students frequently had problems communicating. In some cases, the counselor would simply "reflect what is said back to the student" so that the student would recognize her or his problem in communicating. In other cases, counselors would help students decode or rephrase their statements. Finally, program staff reported using relaxation games to lessen student anxiety and thus increase the chance of identifying and alleviating students' problems.

Working with Students, Parents, and Chapter 1 Teachers

Program staff consulted regularly with students' teachers and family members and acted as liaisons between parents, students, and Chapter 1 teachers. For example, in order to help parents become more supportive of their children, the staff tried to involve parents in activities such as the Parent Effectiveness Training program, guide them through the process of accepting help for their children, and offer them ways to deal with teachers.

Communicating Across Language Barriers

Sometimes counselors faced difficulties communicating with students and their parents due to language barriers. When language was a barrier, the counselor tried to get a speaker of the student's native language--usually an instructor who teaches English as a Second Language--to write or call the student's home or otherwise offer assistance. When the counselor was unable to find a translator, the counselor would refer the student to an

outside agency that could provide services to the student in her or his own language.

Making Referrals to Outside Agencies

Students and their families who needed assistance not offered by the program were referred to outside agencies such as the Jewish Board of Family and Children's Services, the Bronx Center for Community Services, the Fordham/Tremont Community Mental Health Center, the School Phobia Clinic, the Hotline for Child Abuse, and the Hotline for Substance Abuse. In addition, counselors sometimes referred students to outside agencies for medical problems, such as neighborhood ophthalmologists for eye examinations and prescriptions for glasses.

STAFF DEVELOPMENT TRAINING

Evaluators observed 14 staff development workshops. In addition, program staff were interviewed to ascertain their perceptions of the usefulness of staff development training. Staff development training included formally organized workshops, regularly scheduled meetings of clinical and guidance staff with field supervisors, and intraborough meetings of program staff.

Staff Development Training Workshops

A series of 22 staff development training workshops were held during the year to improve the services offered by the program. They served as a forum for sharing ideas and addressing specific problems raised by individual staff members. The workshops were usually attended by program staff and Chapter 1

teachers and sometimes by parents and students. The number of participants varied from 14 to 40.

The workshops included presentations by guest speakers such as psychiatrists, psychotherapists, representatives of professional associations, Board of Education personnel, and members of community-based organizations such as the Jewish Board of Family and Children's Services, the Bronx Center for Community Services, and the School Phobia Clinic. Workshop agendas included demonstrations, role playing, 'hands on' activities, and/or group discussions. Information booklets, fact sheets, and lists of reference materials were distributed to workshop participants.

Workshops focused on the particular concerns of program personnel and included the analyses and interpretations of typical and actual problem cases. Topics included:

- Initial Interview Techniques;
- The Placement of Students with Special Needs;
- Changing Behavior;
- Special Education at the Wishing Well School;
- School Phobia, Nonattendance, and School Avoidance: Case Presentations;
- Family Therapy with Low-Income, Single-Parent Families;
- Children of Alcoholics and Substance Abusers: Treatment Issues;
- Compulsive Gamblers: Diagnosis and Treatment Modalities;
- Children of the Holocaust;
- Loss and Bereavement;

- Are Women More Nurturing than Men, and If So, Why?;
- Preventive Services Offered by the Jewish Board of Family and Children's Services;
- Agency Policy and Current Special Considerations; and
- Overview and Research Support for Students and Primary Caregivers.

Staff Perceptions of Staff Development Training Workshops

Most counselors found the staff development training workshops to be informative and constructive. They believed that the workshops had opened channels of communication between program staff and Chapter 1 teachers, enhanced the sensitivity of staff members to the particular problems of students, and informed staff members about services offered by different community-based agencies. Most staff members emphasized the need for more intensive training and stressed the importance of having an opportunity to meet with other professionals and create a supportive network of colleagues.

Program staff reported that as a result of the workshops, they were:

- better able to identify students with learning disabilities;
- more informed of special training for and services available to learning disabled students;
- better able to identify behavioral problems of abused children;
- better able to identify behavioral problems of children of alcoholics and substance abusers;
- more creative in the delivery of service to an individual student or, when necessary, the family; and

- more informed of the variety of community-based resource centers and thus more effective in guiding children and their parents to the appropriate outside agencies.

III. STUDENT ACHIEVEMENT RESULTS

METHODS USED TO EVALUATE STUDENT ACHIEVEMENT

The impact of the Clinical and Guidance program on student achievement in reading, language skills, and mathematics was determined by comparing students' performance on standardized and program-developed tests against the program objectives, a statistically significant mean gain in between the pretest and the posttest. Pretests were administered in fall 1988, and posttests were administered in spring 1989. Test score data were analyzed for all students who were in the Chapter 1 program for at least five months and had complete test information. All Clinical and Guidance program students took the program-developed Behavior Checklist while standardized tests varied with instructional programs and grade levels.

In the Corrective Reading program, first grade students took the SESAT, and students in grades two through twelve took the Reading Comprehension subtest of the California Achievement Test (CAT). In the Reading Skills Center program, students in grades four through eight also took the Reading Comprehension subtest of the CAT.

In the Corrective Mathematics program, first grade students took the Stanford Early School Achievement Test (SESAT). Students in grades two through eight were tested on the Concepts, Computation, and Applications subtests of the Stanford Achievement Test (S.A.T). Students in grades nine through twelve were tested on the Stanford Test of Academic Skills (TASK).

In the English as a Second Language program, students in kindergarten and first grade took the Test of Basic Experience (TOBE). Students in second grade took the Reading and Writing and the Listening and Speaking subtests of the Language Assessment Battery (LAB). Students in grades three through eight took the Reading, Writing, and Listening subtests of the LAB. In addition, with the exception of second grade students, all student in the E.S.L. Program took the program-developed Oral Interview Test.

Standardized and Norm-Referenced Tests

On the standardized reading, language skills, and mathematics tests, students' raw scores were organized by grade and converted to normal curve equivalents (N.C.E.s),* and statistical analyses were carried out on the converted N.C.E. scores. Correlated t-tests were used to determine whether mean differences were statistically significant.

Statistical significance indicates whether the changes in achievement are real or occur by chance. However, achieving statistically significant mean gains does not address the issue of whether the mean gains are important to the students' educational development. For example, the importance of achieving statistically significant mean gains can be exaggerated

*Normal curve equivalent scores are similar to percentile ranks but, unlike percentile ranks, are based on an equal-interval scale ranging from 1 to 99, with a mean of 50 and a standard deviation of approximately of 21. Because N.C.E. scores are equally spaced, mathematical and statistical calculations such as averages are meaningful; in addition, comparisons of N.C.E. scores may be made across different achievement tests.

for large groups of students because even small mean gains by large groups of students will generally be statistically significant. Similarly, the importance of not achieving statistically significant mean gains can be overstated for small groups of students because it is more difficult for small groups to achieve mean gains that are statistically significant. Thus, an effect size (E.S.)* is reported for each mean difference to indicate whether each mean gain or loss was educationally meaningful.

The Program-developed Oral Interview Test

Students in the E.S.L. program were given the Oral Interview Test (O.I.T.) to determine their language proficiency. The O.I.T. is an informal, criterion-referenced instrument designed to assess students' cognitive and linguistic skills. Students respond to pictorial stimuli, and altogether, they are tested on 30 pictures or questions. The O.I.T. includes a warm-up interview that is not scored, a section measuring oral comprehension, a section measuring the ability to repeat sentences, and a section measuring oral discourse or fluency. The test determines whether students are placed at a beginner, intermediate, or advanced level. Test results were organized by grade and are reported in raw-score units. Statistical analyses

*The effect size, developed by Jacob Cohen, is the ratio of the mean gain to the standard deviation of the gain. This ratio provides an index of improvement irrespective of the size of the sample. According to Cohen, .2 is a small effect size, .5 is a moderate effect size, and .8 is a large effect size. Only effect sizes of .8 and above are considered educationally meaningful.

were carried out to determine whether mean differences were statistically significant, and an effect size was calculated for each mean difference to indicate whether each mean gain or loss was educationally meaningful.

The Program-developed Behavior Checklist

The Behavior Checklist is filled out by the student's teacher at the time of the referral and at the end of the school year. It is used to measure changes in behaviors and attitudes of individual program participants. The test consists of 25 items, and each item is an example of maladaptive behavior which, if practiced by students, would interfere with successful academic performance. On a scale from 0 to 4, the teacher indicates how frequently a particular behavior is exhibited by a student (never = 0, seldom = 1, half of the time = 2, often = 3, always = 4).

The total score is the sum of the responses. Thus, higher scores indicate multiple behavioral problems and/or problems of greater intensity, and lower scores indicate fewer and/or less severe behavior problems. Participation in the program should lead to an improvement in students' behaviors and attitudes and significantly decreased scores from pretest to posttest. However, since the Behavior Checklist has never been administered to students not receiving clinical and guidance services, one cannot assert with absolute confidence that a cause and effect relationship exists between the program and the improvement in behavior noted in the checklist results.

Since the checklist is a program-developed instrument, reliability and validity were determined by calculating the Cronbach alpha coefficient on responses for a randomly selected sample of 30 students. A high Cronbach alpha coefficient (.70 or higher) shows that the instrument is accurately measuring some characteristic of the people for which it is used and that individual items produce similar patterns of response for different people. The Cronbach alpha statistic for this sample was .94, indicating that the behavior checklist items were both homogeneous and valid.

Pretest and posttest scores on the Behavior Checklist were reported for 5,415 students or 95 percent of the total number of students who participated in the program. Test results were organized by grade and are reported in raw-score units. Statistical analyses were carried out to determine whether mean differences were statistically significant, and an effect size was calculated for each mean difference to indicate whether each mean gain or loss was educationally meaningful.

ACHIEVEMENT FINDINGS

Corrective Reading Program

First Grade. Table 4 presents data on student achievement on the Stanford Early School Achievement Test (SESAT). Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 4 shows that:

- The mean gains of 9.1 N.C.E.s on the Environment subtest and 9.2 N.C.E.s on the Aural Comprehension subtest were

TABLE 4

Mean N.C.E. Differences
on the Stanford Early School Achievement Test
for Full-Year, First Grade Corrective Reading Students
in the Clinical and Guidance Program by Subtest, 1988-89

Subtest	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference Mean	Difference S.D.	Effect Size
Environment	69	13.5	10.4	22.6	14.0	9.1[a]	15.3	0.6
Letters and Sounds	69	18.0	12.8	20.2	14.1	2.2	14.2	0.2
Aural Comprehension	69	20.2	13.2	29.4	14.0	9.2[a]	16.9	0.5

[a] The mean difference was statistically significant at the p≤.05 level.

- The mean gains of 9.1 N.C.E.s on the Environment subtest and 9.2 N.C.E.s on the Aural Comprehension subtest were statistically significant and represented moderate effect sizes.

- The mean gain of 2.2 N.C.E.s on the Letters and Sounds subtest was not statistically significant and represented a small effect size.

statistically significant and represented moderate effect sizes.

- The mean gain of 2.2 N.C.E.s on the Letters and Sounds subtest was not statistically significant and represented a small effect size.

Grades Two through Twelve. Table 5 presents data on student achievement on the Reading Comprehension subtest of the California Achievement Test (CAT). Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. However, for grades ten through twelve, the small numbers of students did not permit a valid test for statistical significance. Table 5 shows that:

- The overall mean gain of 12 N.C.E.s was statistically significant and educationally meaningful.
- Mean gains ranged from 8.8 N.C.E.s for students in the eighth grade to 15.1 N.C.E.s for students in the third and ninth grades.
- The effect size for students in the second grade was moderate. Effect sizes for grades three through eight were educationally meaningful.

Reading Skills Center Program

Table 6 presents data on student achievement on the Reading Comprehension subtest of the CAT for students in grades four through eight. Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 6 shows that:

- The overall mean gain of 8.5 N.C.E.s was statistically significant and represented an educationally meaningful effect size.

TABLE 5

Mean N.C.E. Differences on the Reading Comprehension Subtest of the California Achievement Test for Full-Year Corrective Reading Students in the Clinical and Guidance Program by Grade, 1988-89

		Pretest		Posttest		Difference[a]		Effect
Grade	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
2	412	22.3	12.9	33.4	13.9	11.1	15.6	0.7
3	477	20.4	12.1	35.5	14.0	15.1	13.4	1.1
4	518	22.3	12.3	34.5	11.7	12.1	13.1	0.9
5	436	24.0	10.5	33.8	11.4	9.8	10.6	0.9
6	344	24.3	12.1	37.2	12.4	12.9	12.1	1.1
7	227	28.2	11.5	38.8	10.1	10.6	11.0	1.0
8	69	28.0	11.2	36.8	13.0	8.8	9.1	1.0
9	11	20.7	12.9	35.8	14.6	15.1	7.6	2.0
10	9	26.1	9.3	36.7	13.0	10.6	7.1	NA
11	2	23.5	2.1	37.5	3.5	14.0	5.6	NA
12	6	8.7	8.5	20.2	15.3	11.5	13.3	NA
Total	2511	23.2	12.1	35.2	12.6	12.0	12.9	0.9

[a] Mean differences for grades two through nine and overall were statistically significant at the $p \leq .05$ level. For grades ten through twelve, the small numbers of students did not permit a valid test for statistical significance.

- The overall mean gain of 12 N.C.E.s was statistically significant and educationally meaningful.
- Mean gains ranged from 8.8 N.C.E.s for students in the eighth grade to 15.1 N.C.E.s for students in the third and ninth grades.
- The effect size for students in the second grade was moderate. Effect sizes for grades three through nine were educationally meaningful.

TABLE 6

Mean N.C.E. Differences on the Reading Comprehension Subtest of the California Achievement Test for Full-Year Reading Skills Center Students in the Clinical and Guidance Program by Grade, 1988-89

		Pretest		Posttest		Difference[a]		Effect
Grade	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
4	15	20.5	12.3	27.5	15.1	7.0	12.3	0.6
5	29	27.1	11.3	37.2	10.2	10.1	11.6	0.9
6	18	32.5	8.1	44.3	10.3	11.8	9.4	1.3
7	28	34.7	8.5	40.7	7.0	6.0	8.7	0.7
8	17	30.9	9.9	38.5	12.2	7.6	7.1	1.1
Total	107	29.7	10.9	38.2	11.6	8.5	10.0	0.9

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean gain of 8.5 N.C.E.s was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from six N.C.E.s for students in grade seven to 11.8 N.C.E.s for students in grade five.
- Effect sizes for students in grades four and seven were moderate. All other effect sizes were educationally meaningful.

- Mean gains ranged from six N.C.E.s for students in grade seven to 11.8 N.C.E.s for students in grade five.
- Effect sizes for students in grades four and seven were moderate. All other effect sizes were educationally meaningful.

Corrective Mathematics Program

First Grade. Table 7 presents data on the SESAT. The mean differences and effect sizes were calculated, and the mean difference was measured against the program objective, a statistically significant mean gain. Table 7 shows that:

- The overall mean gain of 26.8 N.C.E.s was statistically significant and represented an educationally meaningful effect size.

Grades Two through Eight. Table 8 presents data on the Concepts, Computation, and Applications subtests of the Stanford Achievement Test (S.A.T). Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 8 shows that:

- The overall mean gain of 14.1 N.C.E.s was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from 6.4 N.C.E.s for students in the eighth grade to 20.2 for students in the second grade.
- With the exception of students in grades five and eight, effect sizes were educationally meaningful.

Grades Nine through Twelve. Table 9 presents data on the Stanford Test of Academic Skills (TASK). Mean differences were calculated, but the small numbers of students did not permit a valid test for statistical significance. Nevertheless, mean

TABLE 7

Mean N.C.E. Differences
on the Stanford Early School Achievement Test
for Full-Year, First Grade Corrective Mathematics Students
in the Clinical and Guidance Program, 1988-89

		Pretest		Posttest		Difference[a]		Effect
Grade	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
1	45	10.1	8.6	36.9	15.0	26.8	14.9	1.8

[a] The mean difference was statistically significant at the $p \leq .05$ level.

- The overall mean gain of 26.8 N.C.E.s was statistically significant and represented an educationally meaningful effect size.

TABLE 8

Mean N.C.E. Differences on the Total Scores of the Concepts, Computation, and Applications Subtests of the Stanford Achievement Test for Full-Year Corrective Mathematics Students in the Clinical and Guidance Program by Grade, 1988-89

Grade	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference[a] Mean	Difference[a] S.D.	Effect Size
2	316	17.2	12.3	37.4	17.0	20.2	14.2	1.4
3	356	18.8	10.8	33.2	15.7	14.4	12.4	1.2
4	401	25.6	11.5	40.4	1[illegible]	14.8	12.6	1.2
5	310	24.0	10.9	34.0	15.4	10.0	13.5	0.7
6	216	22.6	10.7	36.6	13.4	14.0	12.9	1.1
7	113	32.8	10.1	42.4	11.6	9.6	12.5	0.8
8	60	31.4	12.3	37.8	14.1	6.4	11.3	0.6
Total	1,772	22.7	12.1	36.9	15.5	14.1	13.5	1.0

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean gain of 14.1 N.C.E.s was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from 6.4 N.C.E.s for students in the eighth grade to 20.2 for students in the second grade.
- With the exception of students in grades five and eight, effect sizes were educationally meaningful.

TABLE 9

Mean N.C.E. Differences
on the Stanford Test of Academic Skills
for Full-Year Corrective Mathematics Students
in the Clinical and Guidance Program by Grade, 1988-89

		Pretest		Posttest		Difference[a]		Effect
Grade	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
9	1	17.0	0.0	24.0	0.0	7.0	0.0	NA
10	3	27.0	17.3	40.3	5.9	13.3	14.0	NA
11	1	13.0	0.0	27.0	0.0	14.0	0.0	NA
12	2	10.5	13.4	22.0	4.2	11.5	9.2	NA
Total	7	18.9	13.9	30.9	9.8	12.0	9.2	NA

[a] Statistically significance was not computed. The small numbers of students in each grade did not permit a valid test for statistical significance.

- The overall mean gain was 12 N.C.E.s.

gains were large, ranging from seven N.C.E.s to 14 N.C.E.s. Table 9 shows that:

- The overall mean gain was 12 N.C.E.s.

English as a Second Language Program

Kindergarten and First Grade. Table 10 presents data on the Test of Basic Experience (TOBE). Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 10 shows that:

- The overall mean gain of 11.2 N.C.E.s was statistically significant and represented a moderate effect size.
- Mean gains were 15.8 N.C.E.s for kindergarten students and 8.5 N.C.E.s for students in first grade.
- The effect size for kindergarten students was educationally meaningful.

Grade Two. Table 11 presents data on the Reading and Writing and the Listening and Speaking subtests of the Language Assessment Battery (LAB). Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 11 shows that:

- The mean gains of 19.5 N.C.E.s on the Reading and Writing subtest and 20.2 N.C.E.s on the Listening and Speaking subtest were statistically significant.
- Effect sizes were educationally meaningful.
- The mean posttest score on the Reading and Writing subtest was above grade level.

Grades Three Through Eight. Table 12 presents data on the Reading subtest of the LAB. Mean differences and effect sizes

TABLE 10

Mean N.C.E. Differences on the Test of Basic Experience for Full-Year English as a Second Language Students in the Clinical and Guidance Program by Grade, 1988-89

Grade	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference[a] Mean	Difference[a] S.D.	Effect Size
K	142	11.9	13.3	27.2	15.8	15.3	16.2	0.9
1	208	13.5	12.5	22.0	15.2	8.5	13.9	0.6
Total	350	12.9	12.8	24.1	15.6	11.2	15.2	0.7

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean gain of 11.2 N.C.E.s was statistically significant and represented a moderate effect size.
- Mean gains were 15.8 N.C.E.s for kindergarten students and 8.5 N.C.E.s for students in first grade.
- The effect size for kindergarten students was educationally meaningful.

TABLE 11

Mean N.C.E. Differences on Subtests
of the Language Assessment Battery
for Full-Year, Second Grade English as a Second Language Students
in the Clinical and Guidance Program, 1988-89

Subtest	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference[a] Mean	Difference[a] S.D.	Effect Size
Reading and Writing	184	33.9	17.2	53.4	29.6	19.5	24.1	0.8
Listening and Speaking	190	21.3	12.7	41.5	26.3	20.2	22.6	0.9

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The mean gains of 19.5 N.C.E.s on the Reading and Writing subtest and 20.2 N.C.E.s on the Listening and Speaking subtest were statistically significant.
- Effect sizes were educationally meaningful.
- The mean posttest score on the Reading and Writing subtest was above grade level.

TABLE 12

Mean N.C.E. Differences on the Reading Subtest of the Language Assessment Battery for Full-Year English as a Second Language Students in the Clinical and Guidance Program by Grade, 1988-89

		Pretest		Posttest		Difference		Effect
Grade	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
3	69	38.7	13.9	48.3	14.2	9.6[a]	13.6	0.7
4	26	29.4	13.6	41.8	24.3	12.4[a]	16.3	0.8
5	28	24.7	17.7	32.3	21.1	7.6[a]	11.6	0.7
6	16	26.3	8.7	39.4	11.1	13.1[a]	13.7	1.0
7	19	23.3	13.5	29.9	11.5	6.6[a]	9.2	0.7
8	16	22.1	15.7	31.2	22.3	9.1	17.6	0.5
Total	174	30.7	15.7	40.4	19.0	9.7[a]	13.7	0.7

[a] The mean difference was statistically significant at the $p \leq .05$ level.

- The overall mean gain of 9.7 N.C.E.s was statistically significant and represented a moderate effect size.
- Mean gains ranged from 6.6 N.C.E.s for seventh grade students to 13.1 N.C.E.s for sixth grade students.
- Effect sizes for grade four and six were educationally meaningful. The other effect sizes were moderate.
- The mean posttest score of 48.3 N.C.E.s for the third grade was only 1.7 N.C.E.s away from grade level.

were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 12 shows that:

- The overall mean gain of 9.7 N.C.E.s was statistically significant and represented a moderate effect size.
- Mean gains ranged from 6.6 N.C.E.s for seventh grade students to 13.1 N.C.E.s for sixth grade students.
- Effect sizes for grade four and six were educationally meaningful. The other effect sizes were moderate.
- The mean posttest score of 48.3 N.C.E.s for the third grade was only 1.7 N.C.E.s away from grade level.

Table 13 presents data on Writing subtest of the LAB. Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 13 shows that:

- The overall mean gain of 12.6 N.C.E.s was statistically significant and represented a moderate effect size.
- Mean gains ranged from 9.6 N.C.E.s for third grade students to 16.2 N.C.E.s for eighth grade students.
- Effect sizes for students in grades seven and eight were educationally meaningful. All other effect sizes were moderate.
- The mean posttest scores for grades three, four, and six were above grade level, and the overall posttest score of 49.7 N.C.E.s approached grade level.

Table 14 presents data on the Listening subtest of the LAB. Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 14 shows that:

- The overall mean gain of 17.5 N.C.E.s was statistically significant and represented an educationally meaningful effect size.

TABLE 13

Mean N.C.E. Differences on the Writing Subtest of the Language Assessment Battery for Full-Year English as a Second Language Students, in the Clinical and Guidance Program by Grade, 1988-89

		Pretest		Posttest		Difference[a]		Effect
Grade	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
3	66	44.1	16.2	53.7	16.2	9.6	15.5	0.6
4	26	36.8	16.2	51.1	28.6	14.3	23.7	0.6
5	29	32.4	23.8	47.1	30.4	14.7	27.3	0.5
6	16	38.9	15.1	51.0	22.2	12.1	19.0	0.6
7	17	26.2	13.1	41.1	21.0	14.9	18.3	0.8
8	15	26.2	13.4	42.4	26.5	16.2	17.0	1.0
Total	169	37.1	18.2	49.7	23.3	12.6	19.9	0.6

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean gain of 12.6 N.C.E.s was statistically significant and represented a moderate effect size.
- Mean gains ranged from 9.6 N.C.E.s for third grade students to 16.2 N.C.E.s for eighth grade students.
- Effect sizes for students in grades seven and eight were educationally meaningful. All other effect sizes were moderate.
- The mean posttest scores for grades three, four, and six were above grade level, and the overall posttest score of 49.7 N.C.E.s approached grade level.

TABLE 14

Mean N.C.E. Differences on the Listening Subtest of the Language Assessment Battery for Full-Year English as a Second Language Students in the Clinical and Guidance Program by Grade, 1988-89

		Pretest		Posttest		Difference[a]		Effect
Grade	N	Mean	S.D.	Mean	S.D.	Mean	S.D.	Size
3	66	33.0	15.8	48.2	20.1	15.2	20.0	0.8
4	26	30.2	21.5	57.2	31.7	27.0	23.2	1.2
5	28	21.1	15.5	42.0	29.2	20.9	24.1	0.9
6	16	28.6	16.5	38.9	10.9	10.3	15.8	0.7
7	19	25.1	19.8	34.8	23.8	9.7	16.6	0.6
8	16	19.7	20.5	42.1	28.4	22.4	16.7	1.3
Total	171	28.1	18.2	45.6	25.0	17.5	20.8	0.8

[a] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean gain of 17.5 N.C.E.s was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from 9.7 N.C.E.s for seventh grade students to 27.0 N.C.E.s for fourth grade students.
- Effect sizes for grades six and seven were moderate. All other effect sizes were educationally meaningful.
- The mean posttest score for the fourth grade was above grade level. For grade three, it was only 1.8 N.C.E.s away from grade level.

- Mean gains ranged from 9.7 N.C.E.s for seventh grade students to 27.0 N.C.E.s for fourth grade students.
- Effect sizes for grades six and seven were moderate. All other effect sizes were educationally meaningful.
- The mean posttest score for the fourth grade was above grade level. For grade three, it was only 1.8 N.C.E.s away from grade level.

Oral Interview Test. Table 15 presents data on the Oral Interview Test (O.I.T.). Second grade students did not take the O.I.T. because their oral communications skills were tested on the Listening and Speaking subtest of the LAB (see Table 11). Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 15 shows that:

- The overall gain of 6.6 raw-score points was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from 5.3 raw-score points for students in the fourth grade to 7.3 raw-score points for students in the third grade.
- All effect sizes were educationally meaningful.

Behavior Checklist

Table 16 presents data on the Behavior Checklist. Mean differences and effect sizes were calculated, and mean differences were measured against the program objective, a statistically significant mean gain. Table 16 shows that:

- The overall mean difference of 10.7 raw-score points was statistically significant and represented a moderate effect size.
- Mean differences ranged from 6.1 raw-score points for grade twelve to 11.4 raw-score points for grade four.
- Effect sizes were large and educationally meaningful.

TABLE 15

Mean Raw-Score Differences on the Oral Interview Test for Full-Year English as a Second Language Students In Grades Kindergarten, One, and Three through Eight in the Clinical and Guidance Program by Grade, 1988-89

Grade[b]	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference[a] Mean	Difference[a] S.D.	Effect Size
K	141	4.0	3.7	10.7	6.5	6.7	5.1	1.3
1	207	6.4	3.8	12.8	5.1	6.4	4.1	1.6
3	69	11.7	5.8	19.0	6.0	7.3	4.8	1.5
4	26	13.7	7.0	19.0	6.4	5.3	3.2	1.7
5	29	14.4	8.5	20.4	7.4	6.0	3.5	1.7
6	16	12.4	6.3	19.4	4.2	7.0	5.1	1.4
7	18	11.7	9.0	17.4	8.6	5.7	4.0	1.4
8	16	9.6	6.6	16.4	6.4	6.8	4.6	1.5
Total	522	7.7	6.1	14.3	6.9	6.6	4.5	1.5

[a] Mean differences were statistically significant at the $p \leq .05$ level.

[b] Second grade students did not take the O.I.T. because their oral communications skills were tested on the Listening and Speaking subtest of the LAB (see Table 11).

- The overall gain of 6.6 raw-score points was statistically significant and represented an educationally meaningful effect size.
- Mean gains ranged from 5.3 raw-score points for students in the fourth grade to 7.3 raw-score points for students in the third grade.
- All effect sizes were educationally meaningful.

TABLE 16

Mean Raw-Score Differences on the Behavior Checklist for Clinical and Guidance Program Students, 1988-89[a]

Grade	N	Pretest Mean	Pretest S.D.	Posttest Mean	Posttest S.D.	Difference[b] Mean	Difference[b] S.D.	Effect Size
K	170	43.4	19.2	33.1	17.8	10.3	11.2	0.9
1	436	45.8	18.2	34.8	16.8	11.0	10.1	1.1
2	857	43.7	17.0	33.0	14.8	10.7	10.1	1.1
3	811	43.2	16.5	32.5	13.9	10.7	9.5	1.1
4	870	44.1	17.4	32.7	14.7	11.4	9.8	1.2
5	747	42.3	15.3	31.7	13.6	10.6	9.1	1.2
6	632	42.9	16.0	32.4	13.0	10.5	9.5	1.1
7	434	41.6	17.6	30.8	14.7	10.8	10.6	1.0
8	220	39.5	16.6	30.0	14.5	9.5	8.3	1.1
9	91	41.0	10.0	32.3	8.8	8.7	5.9	1.5
10	84	40.7	12.4	30.6	10.9	10.1	5.4	1.9
11	47	38.9	13.9	29.2	13.1	9.7	5.6	1.7
12	16	36.3	22.2	30.3	21.6	6.1	8.1	0.8
Total	5415	43.1	16.7	32.4	14.4	10.7	9.6	1.1

[a] A decrease from pretest to posttest indicates improvement in behavior and attitude.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- The overall mean difference of 10.7 raw-score points was statistically significant and represented a moderate effect size.
- Mean differences ranged from 6.1 raw-score points for grade twelve to 11.4 raw-score points for grade four.
- Effect sizes were large and educationally meaningful.

COMPARISON WITH PAST YEARS

For comparisons of student achievement on selected tests with that in previous years, the number of students, mean gain, standard deviation of the mean gain, and effect size are reported. From the 1985-86 through the 1987-88 school years, overall mean gains for students in all instructional programs generally met or exceeded the program's criteria for success, a mean gain of five N.C.E.s or a statistically significant increase in raw scores from pretest to posttest. However, in 1988-89, the criteria for success were changed. Now, in all instructional programs and on all tests, the program objective was a statistically significant mean gain.

Corrective Reading Program, 1985-86 to 1988-89

Table 17 presents data on norm-referenced tests from 1985-86 through 1988-89. From 1985-86 to 1986-87, overall mean gains remained basically stable at nearly double the program criterion for success, a five N.C.E. gain. In 1987-88, it dropped to 4.4 N.C.E.s. However, the small mean gain may have been the result of the re-norming of the Reading Comprehension subtest of the C.A.T. In 1988-89, the mean gain increased to 12 N.C.E.s. This gain was statistically significant and met the program's criteria for success, a statistically significant mean gain. It also represented a large and educationally meaningful effect size (see Table 17).

TABLE 17

Mean N.C.E. Differences on Norm-Referenced Tests of Corrective Reading Program Students in the Clinical and Guidance Program, 1985-86 to 1988-89

Year	Number of Students[a]	Mean Gain[b]	Standard Deviation	Effect Size
1985-86	5,630	9.2	14.7	0.6
1986-87	2,935	11.1	15.3	0.7
1987-88	2,765	4.4	15.8	0.3
1988-89	2,511	12.0	12.9	0.9

[a] The number of participants was affected by the 1985 Supreme Court decision restricting services at nonpublic school sites.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains for the 1985-86 and 1986-87 school years met the program criterion for success, a five mean N.C.E. gain. The mean gain in 1987-88 dropped to 4.4 N.C.E.s and did not meet the program criterion for success.
- The mean gain of 12.0 N.C.E.s for the 1988-89 school year met the program's criterion for success, a statistically significant mean gain.
- Effect sizes for the 1985-86 and 1986-87 school years were moderate. The effect size for 1987-88 was small, but in 1988-89, it was large and educationally meaningful.

Reading Skills Center Program, 1985-86 to 1988-89

Table 18 presents data on norm-referenced tests from 1985-86 through 1988-89. From 1985-86 to 1986-87, overall mean gains remained basically stable at nearly double the program criterion for success, a five N.C.E. gain. In 1987-88, it dropped to 2.3 N.C.E.s. However, the small mean gain may have been the result of the re-norming of the Reading Comprehension subtest of the C.A.T. In 1988-89, the mean gain increased to 8.5 N.C.E.s. This gain was statistically significant and met the program's criteria for success, a statistically significant mean gain. It also represented a large and educationally meaningful effect size (see Table 18).

Corrective Mathematics Program, 1985-86 to 1988-89

Table 19 presents data on norm-referenced tests from 1985-86 through 1988-89. From 1985-86 to 1987-88, overall mean gains remained basically stable at two to three times the program criterion for success, a five N.C.E. gain. In 1988-89, the mean gain was 14.1 N.C.E.s. This gain was statistically significant and met the program's criteria for success, a statistically significant mean gain. It also represented a large and educationally meaningful effect size (see Table 19,.

English as a Second Language Program, 1985-86 to 1988-89

Table 20 presents data on the Test of Basic Experience for students in kindergarten and first grade from 1985-86 through 1988-89. From 1985-86 to 1987-88, overall mean gains for kindergarten students increased from 8.9 N.C.E.s to 21.4 N.C.E.s

TABLE 18

Mean N.C.E. Differences on Norm-Referenced Tests of Full-Year Reading Skills Center Program Students in the Clinical and Guidance Program, 1985-86 to 1988-89

Year	Number of Students[a]	Mean Gain[b]	Standard Deviation	Effect Size
1985-86	423	11.7	14.5	0.8
1986-87	137	11.2	13.1	0.9
1987-88	167	2.3	14.0	0.2
1988-89	107	8.5	10.0	0.9

[a] The number of participants was affected by the 1985 Supreme Court decision restricting services at nonpublic school sites.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains for the 1985-86 and 1986-87 school years met the program criterion for success, a five N.C.E. mean gain. The mean gain in 1987-88 dropped to 2.3 N.C.E.s and did not meet the program criterion for success.
- The mean gain of 8.5 N.C.E.s for the 1988-89 school year met the program criterion for success, a statistically significant mean gain.
- Effect sizes for the 1985-86 and 1986-87 school years were large and educationally meaningful. The effect size for 1987-88 was small, but in 1988-89, it was once again educationally meaningful.

TABLE 19

Mean N.C.E. Differences on Norm-Referenced Tests of Corrective Mathematics Program Students in the Clinical and Guidance Program, 1985-86 to 1988-89

Year[a]	Number of Students[b]	Mean Gain[c]	Standard Deviation	Effect Size
1985-86	4,265	14.0	13.1	1.1
1986-87	2,205	12.8	13.1	1.0
1987-88	2,217	15.6	13.6	1.1
1988-89	1,772	14.1	13.5	1.0

[a] From 1985-86 through 1987-88, data is for students in grades one through twelve. In 1988-89, data is for students in grades two through eight, and the mean gain, standard deviation, and effect size is for the total scores on the Concepts, Computation, and Applications subtests of the S.A.T.

[b] The number of participants was affected by the 1985 Supreme Court decision restricting services at nonpublic school sites.

[c] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains for the 1985-86 to 1987-88 school years remained basically stable at two to three times the program criterion for success, a five N.C.E. mean gain.
- The mean gain of 14.4 N.C.E.s for the 1988-89 school year met the program's criterion for success, a statistically significant mean gain.
- Effect sizes for the 1985-86 to 1988-89 school years were educationally meaningful.

TABLE 20

Mean N.C.E. Differences on the Test of Basic Experience of E.S.L. Students in Kindergarten and First Grade in the Clinical and Guidance Program, 1985-86 to 1988-89

Year	Number of Students[a]	Mean Gain[b]	Standard Deviation	Effect Size
Kindergarten:				
1985-86	199	13.7	16.9	0.8
1986-87	140	21.4	16.7	1.3
1987-88	110	15.0	15.3	1.0
1988-89	142	15.3	16.2	0.9
First Grade:				
1985-86	359	11.0	14.5	0.8
1986-87	197	12.7	15.3	0.8
1987-88	176	10.8	13.7	0.8
1988-89	208	8.5	13.9	0.6

[a] The number of participants was affected by the 1985 Supreme Court decision restricting services at nonpublic school sites.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains for kindergarten students from 1985-86 to 1987-88 met the program criterion for success, a five N.C.E. mean gain. The mean gain of 15.3 N.C.E.s for 1988-89 met the program's criterion for success, a statistically significant mean gain. Effect sizes were educationally meaningful.
- Mean gains for first grade students from 1985-86 to 1987-88 met the program criterion for success, a five N.C.E. mean gain. Effect sizes were educationally meaningful.
- The mean gain of 8.5 N.C.E.s for 1988-89 met the program's criterion for success, a statistically significant mean gain. The effect size was moderate.

and then dipped to 15 N.C.E.s, roughly three times the program criterion for success, a five N.C.E. gain. In 1988-89, the mean gain was 15.3 N.C.E.s. This gain was statistically significant and met the program's criteria for success, a statistically significant mean gain. It also represented a large and educationally meaningful effect size (see Table 20).

From 1985-86 to 1987-88, overall mean gains for first grade students increased from 7.9 N.C.E.s to 12.7 N.C.E.s and then dipped to 10.8 N.C.E.s, two times the program criterion for success, a five N.C.E. gain. In 1988-89, the mean gain was 8.5 N.C.E.s. This gain was statistically significant and met the program's criteria for success, a statistically significant mean gain. It also represented a large and educationally meaningful effect size (see Table 20).

Table 21 presents data on the LAB. For E.S.L. students in grade two, scores are reported for the Auditory subtest of the Stanford Achievement Test from 1985-86 through 1987-88 and for Reading and Writing subtests of the LAB for 1988-89. For students in grades three through e ght, scores are reports for the Reading subtest of the LAB for 1987-88 and 1988-89. For students in grades two through eight on all tests for all years, the mean gains were statistically significant and met the program criterion for success, either a five N.C.E. mean gain through 1987-88 or a statistically significant mean gain in 1988-89. The gains represented moderate or large effect sizes (see Table 21).

TABLE 21

Mean N.C.E. Differences on the Language Assessment Battery of E.S.L. Students in Grades Two through Eight in the Clinical and Guidance Program: 1985-86 to 1988-89

Year	Number of Students[a]	Mean Gain[b]	Standard Deviation	Effect Size
Second Grade:[c]				
1985-86	405	8.9	11.4	0.8
1986-87	180	8.9	11.6	0.8
1987-88	136	8.2	13.1	0.6
1988-89	184	19.5	24.1	0.8
Grades Three through Eight:[d]				
1987-88	160	9.5	13.3	0.7
1988-89	174	9.7	13.7	0.7

[a] The number of participants was affected by the 1985 Supreme Court decision restricting services at nonpublic school sites.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

[c] Students were tested on the Auditory subtest of the Stanford Achievement Test until 1988-89 when they were tested on the Reading and Writing subtests of the Language Assessment Battery.

[c] Students were tested on the Reading subtest of the Language Assessment Battery.

- Mean gains for second grade students from 1985-86 to 1987-88 met the program criterion for success, a five N.C.E. mean gain. The mean gain of 19.5 N.C.E.s for 1988-89 met the program's criterion for success, a statistically significant mean gain. With the exception of 1987-88, effect sizes were educationally meaningful.

- Mean gains for students in grades three through eight in 1987-88 and 1988-89 met the program's criteria for success. Effect sizes were moderate.

Table 22 presents data on the Oral Interview Test from 1985-86 through 1988-89. During this period, overall mean gains remained basically stable and met the program criterion for success, a statistically significant mean gain. Mean gains also represented large and educationally meaningful effect sizes (see Table 22).

Clinical and Guidance Program, 1985-86 to 1988-89

Table 23 presents data on the Behavior Checklist from 1985-86 through 1988-89. During this period, overall mean gains remained basically stable and met the program criterion for success, a statistically significant mean gain. Mean gains also represented large and educationally meaningful effect sizes (see Table 23).

TABLE 22

Mean Raw-Score Differences
on the Oral Interview Test
of E.S.L. Students
in the Clinical and Guidance Program,
1985-86 to 1988-89

Year	Number of Students[a]	Mean Gain[b]	Standard Deviation	Effect Size
1985-86	1,398	6.2	3.6	1.7
1986-87	743	6.4	3.9	1.6
1987-88	527	6.6	3.5	1.9
1988-89	522	6.6	4.5	1.5

[a] The number of participants was affected by the 1985 Supreme Court decision restricting services at nonpublic school sites.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains for the 1985-86 to 1988-89 school years remained basically stable and met the program criterion for success, a statistically significant mean gain.
- Effect sizes for the 1985-86 to 1988-89 school years were educationally meaningful.

TABLE 23

Mean Raw-Score Differences
on the Behavior Checklist
in the Clinical and Guidance Program,
1985-86 to 1988-89

Year	Number of Students[a]	Mean Difference[b]	Standard Deviation	Effect Size
1985-86	10,027	10.8	10.3	1.1
1986-87	5,367	11.7	11.0	1.1
1987-88	5,110	11.7	10.0	1.2
1988-89	5,415	10.7	9.6	1.1

[a] The number of participants was affected by the 1985 Supreme Court decision restricting services at nonpublic school sites.

[b] Mean differences were statistically significant at the $p \leq .05$ level.

- Mean gains for the 1985-86 to 1987-88 school years remained basically stable and met the program criterion for success, a statistically significant mean gain.
- Effect sizes for the 1985-86 to 1988-89 school years were educationally meaningful.

IV. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

During the 1988-89 school year, the Clinical and Guidance program served 5,707 Chapter 1-eligible students from 123 nonpublic schools. In general, the program achieved its goals--identifying and alleviating the emotional and social problems that interfere with students' academic performance.

Serving C.A.I. Students

Since the 1985 Supreme Court decision, program staff have counseled and guided students at Chapter 1 program sites--public schools, leased neutral sites, mobile instructional units, and nondenominational schools. In 1987-88, the instructional programs began computer-assisted instruction (C.A.I.) at some nonpublic school sites. However, because of the Supreme Court decision, C.A.I. sites do not include space for clinical and guidance services. In 1988-89, the Clinical and Guidance program initiated a walk-over service for C.A.I. students at nearby public schools.

Serving E.S.L. Students

One in seven students served by the program was in the English as a Second Language program (822 out of 5,707 students). When language was a barrier to communication, staff tried to get a speaker of the student's native language to write notes to or call the student's parents. When they could not find a translator, counselors referred the student to an outside agency

that could provide services to the student in her or his own language.

Staff Development Training Workshops

The 22 staff development training workshops held during the year served as forums for sharing ideas, discussing typical and actual problem cases, and addressing the particular concerns of program staff. In interviews, staff members emphasized the need for more intensive training, stressed the importance of having an opportunity to meet with other professionals, and described the workshops as informative and constructive.

Student Achievement in Instructional Programs

Students' scores on tests administered by instructional programs are indirect measures of the success of the program in identifying and alleviating the emotional and social problems of students. In general, with three exceptions, students in all instructional programs and in all grades made statistically significant mean gains from pretest to posttest on standardized and program-developed tests, meeting the program's criteria for success.

First grade students in the Corrective Reading program, however, did not make a statistically significant mean gain on the Letters and Sounds subtest of the Stanford Early School Achievement Test. In addition, the small numbers of students in grades ten through twelve in the Corrective Reading program and in grades nine through twelve in the Corrective Mathematics program did not permit a valid test for statistical significance.

Improvement in Student Behavior

Student performance as perceived by their Chapter 1 teachers and reported on the Behavior Checklist is a direct measure of the success of the program. On the checklist, mean differences by grade and overall were statistically significant, meeting the program criterion for success. In addition, mean differences for students in kindergarten through grade seven and in grade ten were greater than ten raw-score points. Finally, effect sizes for all grades and overall were large and educationally meaningful.

One cannot assert with absolute confidence that a cause and effect relationship exists between the program and improvement in student behavior noted in checklist results. However, 92 percent of the students were referred to the program by Chapter 1 teachers, and these same teachers completed the checklist at the time of referral and at the end of the program. The uniformity of perceived improvement in the behavior of students suggests that the program achieved its goals, identifying and alleviating the emotional and social problems of students.

RECOMMENDATIONS

Staff members described the staff development training workshops as informative and constructive.

- The staff development training program should continue as currently organized and build on identified staff training needs and interests.

In general, students in all instructional programs and in all grades made statistically significant mean gains from pretest

to posttest. Moreover, on the Behavior Checklist--the direct measure of the success of the program--mean differences by grade and overall were statistically significant and effect sizes for all grades and overall were large and educationally meaningful.

- Current clinical and guidance intervention into the social and emotional problems that interfere with student academic achievement should be continued.

APPENDIX A

Brief Description of Chapter 1 Nonpublic School Reimbursable Services, 1988-89

Chapter 1 Nonpublic School Reimbursable programs provide supplementary, individualized instruction to students attending nonpublic schools in New York City. Students are eligible for Chapter 1 services if they live in targeted attendance area and score below a designated cutoff point on state-mandated standardized reading tests.

On July 1, 1985, the Supreme Court held that instruction by public school teachers on the premises of nonpublic schools--local educational agencies' most common method of serving Chapter 1-eligible children--was unconstitutional. As a result, alternative methods for providing Chapter 1 services to eligible nonpublic school students were devised. Students attending nonpublic schools now receive Chapter 1 services at mobile instruction units, public school sites, leased neutral sites, and nondenominational schools and via computer-assisted instruction in designated classrooms in nonpublic schools.

CORRECTIVE READING PROGRAM

The Corrective Reading program provides instruction in reading and writing. The goal is to enable students to reach grade level in reading. During 1988-89, the program served 7,943 students in grades kindergarten through twelve in 162 nonpublic schools. The total included 3,287 students receiving computer-assisted instruction and 4,656 students receiving face-to-face instruction. Program staff included a coordinator, three field supervisors, and 90 Corrective Reading teachers. Instruction was provided to small groups of students, one to five days per week, in sessions ranging from 30 to 60 minutes. Chapter 1 funding totaled $7.8 million.

READING SKILLS CENTER PROGRAM

The Reading Skills Center program provides instruction in reading and writing to students in grades four through eight. The goal is to enable students to reach grade level in reading. During 1988-89, the program served 176 students from four nonpublic schools. Program staff included a coordinator and seven teachers. Instruction was provided to small groups of about five students, three to five days per week, for sessions lasting from 45 to 60 minutes. Chapter 1 funding totaled $552,903.

CORRECTIVE MATHEMATICS PROGRAM

The Corrective Mathematics program provides instruction in mathematics. The goals are to deepen students' understanding of mathematical concepts and to improve their ability to perform computations and solve problems. During 1988-89, the program served 5,806 students attending 130 nonpublic schools. The total included 3,689 students receiving face-to-face instruction and 2,117 students receiving computer-assisted instruction. Program staff included a coordinator, two field supervisors, and 70 Corrective Mathematics program teachers. Instruction was provided to small groups of students, one to five days per week, in sessions ranging from 45 to 60 minutes. Chapter 1 funding totaled more than $5.3 million.

ENGLISH AS A SECOND LANGUAGE

The English as a Second Language program provides intensive English language instruction to limited English proficient students. The goal of the program is to help students gain the listening, speaking, reading, and writing skills necessary to improve their performance in school. During 1988-89, the program served 2,445 students in kindergarten through eighth grade in 69 nonpublic schools. Two thousand and twelve of these students received face-to-face instruction, and 433 of them computer-assisted instruction. In addition, a Read-Along component provided some students with tape recorders, storybooks, and audio tapes for home use. Program staff included a coordinator, two field supervisors, and 42 teachers. Instruction was provided to small groups of students, two to three days a week, in sessions ranging from 30 to 60 minutes. Chapter 1 funding totaled $2.7 million.

CLINICAL AND GUIDANCE PROGRAM

The Clinical and Guidance program provides diagnostic and counseling services to students enrolled in Chapter 1 nonpublic school programs--Corrective Reading, Reading Skills Center, Corrective Mathematics, and English as a Second Language. The goal of the program is to alleviate emotional or social problems that interfere with the students' ability to profit from remedial education. During 1988-89, the program served 5,707 students from 123 nonpublic schools. The staff included two coordinators, two field supervisors, 58 guidance counselors, 36 psychologists, one psychiatrist, and 12 social workers. Chapter 1 funding totaled $5.8 million.