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ABSTRACT

This final report presents the results of a qualitative and quantitative evaluation of the Title I Institutionalized Facilities Program in New York City for the 1980-81 school year. The areas of evaluation included: physical facilities, staff, instructional approaches in reading, mathemalics and writing, materials selection and utilization, recordkeeping, and class size. Although most areas of the program were found to be effective, the results of the quantitative analysis of achievement data indicated that the proposed 80 parcent of the population did not attain the of one skill per six weeks in reading, criterion mastery ra mathematics or writing. A substantial positive correlation between skills mastery and the number of sessions attended provided evidence of program effectiveness. Suggested program improvements included: (1) better lighting conditions; (2) a needs assessment for increased machematics instruction at several sites; (3) the development of an effective reinforcement system; (4) cooperation with house parents and counseling to enhance student motivation; (5) increased use of less conventional instructional materials; and (6) greater autonomy for teachers in materials selection and utilization. (JCD)

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TITLE I INSTITUTIONALIZED FACILTIES PROGRAM 1980-81

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MEW YORK CITY PUBLIC SCHOOLS OFFICE OF EDUCATIONAL EVALUATION Richard Guttenberg, Administrator

A SUMMARY OF THE EVALUATION OF THE 1980-81 TITLE I INSTITUTIONALIZED FACILITIES PROGRAM

'January 12, 1982

This program provided ramediation, usually after regular school hours, in reading, mathematics, and writing to approximately 2,000 children and adolescents residing in 45 group homes or institutions for the neglected and/or delinquent. The program, which used an individualized diagnosticprescriptive approach, employed 11 itinerant supervisors, 234 teachers, and three paraprofessionals.

The program objectives proposed that, by June 1981, 80 percent of the target population would master at least one skill in reading, mathematics, and writing for each six weeks of instruction. Although on-site interviews and observations revealed that the program was implemented as proposed and operated smoothly, quantitative data analysis indicated that the three objectives were not met. Specifically, the criterion of one skill mastered for each six weeks of instruction was met by 65 percent of the students in reading, 62 percent in mathematics, and 27 percent in writing.

In-depth data analysis suggests that the discrepancy between the qualitative (i.e., interviews and observations) and the quantitative findings is largely attributable to the transiency of the population (a limitation beyond the direct control of program staff); the mean number of days enrolled was 28 days in the fall and 23 days in the spring. The correlation coefficients between total skills mastered and total sessions attended were .41 for reading and .34 for math; hence the program did have a meaningful impact upon the acquisition of skills in both areas. Indeed, the percentages of variance in achievement accounted for by attendance were approximately 17 percent for reading and 12 percent for math; these percentages are similar to those observed for other Title I programs for the handicapped. Pupil achievement was further limited by low levels of pupil motivation.

The conclusions of the evaluation lead to the following major recommendations:

- --the individualized diagnostic-prescriptive approach appears effective and ought to be continued;
- --to improve student motivation, an integrated system of reinforcement should be designed after consulting



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with program teachers and agency staff; and

--although mostlof the staff were highly experienced, those requesting assistance should be provided with additional training.

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Figure 1. Cumulative frequency distribution of the number of reading objectives mastered every six weeks by students in the Institutionalized Facilities Program (as measured by Fountain Valley).....

I. PROGRAM DESCRIPT'ION

During the 1980-81 school year, the Division of Special Education of the New York City Public Schools used E.S.E.A. Title I funds to sponsor a program of remediation in reading, mathematics, and writing for children and ado escents residing in group homes or institutions for the neglected and/or delinquent. The target population consisted of approximately 2,000 students in 45 residential facilities. Remetial instruction was provided, with a few exceptions, after regular school hours. Program staff included a coordinator, 11 itinerant supervisors, 234 teachers, and three paraprofessionals. Instruction was individualized using a diagnostic-prescriptive methodology. The performance objectives of the program were that 80 percent of the participants would master at least one new objective in reading, math, and writing for every six weeks of instruction.

II. EVALUATION METHODOLOGY

A qualitative evaluation of the program was conducted through site visits and interviews by Office of Educational Evaluation (O.E.E.) field consultants to 21 randomly-selected program sites in which a total of 717 students (37 percent of the target population) were registered. The consultants observed classroom activities, inspected facilities, examined student records, and interviewed teachers. Data were collected and recorded on structured observation and interview forms hich focused on the following aspects of the program: physical facilities; state instructional approaches; materials; student records; and class size.

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A quantitative evaluation of pupil progress in reading, mathematics, and writing was performed through the collection and analysis of criterion-referenced-test data. The following sections present the findings from the analyses of these qualitative and quantitative data.

III. QUALITATIVE EVALUATION

PHYSICAL FACILITIES

The program was housed in group homes and institutions. Instruction was provided in either study dens, informal living-room areas, or dining rooms. At a typical site, furniture and equipment consisted of moveable tables and chairs, cabinets, and bookshelves. Storage space and lighting were adequate at most locations. In general, physical facilities were reported to be satisfactory by both field consultants and teachers.

STAFF ·

Twenty-one teachers were interviewed to determine their degree of preparation for the program, elicit suggestions for improving services, and assess the adequacy of supervisory support: All teachers appeared to be qualified both in terms of formal academic training and work experience. Eighty-one percent had completed graduate course work in special education and 40 percent held masters' degrees in the field. Three teachers latked formal academic training in special education, but had taught special education for at least six years. Work experience for all 21 teachers was extensive: the mean number of years of overall teaching was 13 (ranging from three to 25 years); the mean in special education was nine years (ranging from three to 21 years); and the mean number of years in programs similar to the

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Institutionalized Facilities Program was five (ranging from one to 15 years).

When asked about additional training and assistance needs, eight of the 21 teachers did not cite any area in particular. Six teachers mentioned the need for more instructional material, an issue which will be discussed at greater length in a later section. Four teachers, none of whom had masters' degrees, indicated a need for additional training and/or more opportunities to meet with other teachers to share ideas.

When asked for suggestions as to how the program might be improved, most of the responses related to the need for more intensive and varied instruction. One teacher suggested that the program would be more effective if the students received more instructional sessions each week. Two others, at sites where only reading and writing were taught, indicated the need for a mathematics teacher. Almost all of those interviewed indicated a need for additional staff to reduce what they felt was an excessively high student to teacher ratio.

Interviews revealed a good deal of variability among the different facilities in the amount of supervisory support. Sixteen of the 21 sites had been visited an average of four times with a range of between two and eight visits. Five sites had not been visited at the time of these interviews (December, 1980) and four teachers at these facilities indicated that they needed additional supervisory assistance, mostly to obtain materials.

Two of the teachers interviewed indicated a need for better coordination with the regular educational program of their respective institutions. These teachers explained that they did not have an opportunity to consult with the regular classroom teachers to ascertain the instructional goals and curriculum established by the agency teachers for the students that they served. Hence,

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they functioned in isolation and were hampered in providing an integrated program of services to en ance and reinforce regular instruction.

Another limitation cited by two of the interviewees was the frequent turnover of the pupil population. Pupil transiency fragmented and truncated instruction.

INSTRUCTIONAL APPROACHES

Individualized instruction was by far the most common approach observed by field consultants. In several classes students were given assignments to complete independently which were later checked by their teachers. In other settings students were tutored by either a teacher or paraprofessional. Typically, the tutor assigned the work, observed the child, made corrections, and encouraged the student to attend to the task. Individualized reading instruction concentrated on comprehension, phonics, spelling, and composition. Math instruction focused upon basic computational skills. Observers noted that in most classes the atmosphere was conducive to learning, teaching was well organized, and instruction proceeded in an orderly fashion.

In addition to their observations of instruction, field consultants asked teachers which instructional approaches they found most effective. Consistent with what had been observed, the majority endorsed an individualized approach. They indicated that it facilitated concentration, minimized students' embarrassment when they made mistakes, and allowed a good student-teacher relationship to develop. Additionally, teachers reported that the one-to-one approach reduced discipline and behavior problems and allowed them to accomodate different ability and achievement levels more easily. The respondents emphasized the importance of being sensitive to the affective needs of these students

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through a flexible approach to instruction, the provision of social and emotional support to students, the establishment of trust and rapport, and the demonstration of an active concern for the students' lives outside of the classroom. Some teachers stressed the need for teaching to the real-world needs of the youngsters through training in daily living and survival skills. One teacher noted that lessons had to be planned to ensure pupil success and thereby avoid frustration; short instructional periods were most effective.

Most teachers seemed aware of and sensitive to the motivational problems of their students; lack of student motivatic was frequently identified as a major problem. In addressing the issue of poor motivation, teachers offered two solutions. Some said the responsibility was primarily the agency's; motivation might be improved by better scheduling of students' class time, more effective use of reinforcement systems by agency personnel, and greater emphasis on the importance of school by house parents. Otr r teachers viewed student motivation as primarily their own responsibility. They proposed more active teacher involvement for students who were resistant, apathetic, or distruptive, either through more interesting and more stimulating instruction or counseling.

MATERIALS

Commercial materials were observed in use at all sites; they clearly predominated over noncommercial and teacher-made materials. A wide variety of items were observed by field consultants, including: reading materials, such as the <u>Fountain Valley System</u>, <u>B. rnell-Loft Specific Skills Series</u>, <u>Critical Reading</u>, the <u>SRA Reading for Survival</u> series, phonics workshers

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and worksheets; and vocabulary skills builders (e.g., <u>Grow in Word Power</u>.) Commercial math materials included the <u>BASE Math System</u>, <u>Preliminary Math</u> and workbooks, and mini-workbooks in basic arithmetic.

Teacher-made or other non-commercial materials were in use at only three sites. These materials consisted of newspaper clippings, group-home newsletters, and exercises designed to follow the regular curriculum. *Audiovisual equipment was observed at two sites.

The majority of interviewees said that the materials ordered were useful. It was apparent from both observations and interviews that they preferred commercial materials to their own. The item considered most userul for reading was the <u>Barnell-Loft Specific Skills'Series</u>. Teachers said they valued its simplicity, focus on specific skills, and the fact that it was graded and appropriate for different "teading levels. Several teachers also liked the <u>Fountain Valley System</u>, but a few others indicated that students found it dull and complicated. The <u>SRA Reading for Survival</u> series was also popular, along with a variety of other materials in comprehension, phonics, and vocabulary.

For math instruction, the <u>BASE Math System</u> was considered effective, although one teacher noted that it only went as high as the eighth grade. The <u>Spectrum</u> series, Benton's <u>Mastery Drills</u>, <u>Preliminary Math</u>, and the <u>Computa-</u> <u>tion Workshop</u> were also popular. While several teachers emphasized the value of materials that could be individually tailored to student needs, others opted for materials which were consistent with instruction in the regular school program.

Reading materials found ineffective were stories with which students

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could not identify, outdated textbooks, and items with too much instruction in grammar. The only math material mentioned as ineffective was the <u>Chal-</u> <u>lenge Series</u>, which one teacher said did not offer instruction in word problems.

A few teachers said they could use additional materials not commercially available. These included items related to survival skills, writing skills, the high school equivalency test, and multi-level math instruction.

Surprisingly, although most sites seemed well supplied and the teachers indicated that their materials were effective, when asked to identify areas where they needed additional assistance, materials were most frequently mentioned. Interviewees asked for a inder range of materials such as magazines, thesauruses, graph paper, and a variety of high-interest books to improve vocabulary. Two teachers suggested that a materials workshop would be helpful for sharing ideas and comparing materials with teachers from other sites.

RECORDS

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Pupil records were generally well maintained. Individual folders were observed at every site and nearly all the folders that were examined contained test results, samples of students' classwork and homework, and logs of work completed and proposed. Additionally, some folders also contained observations of students' behavior. The folders did not contain records of students' work prior to the current year.

Records were generally stored in locked drawers, closets, or offices. However, two teachers indicated that folders were in unlocked facilities and four others transported the records between their sites and their homes.

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CLASS SIZE

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About 60 percent of the classes at the 21 sites that were visited had seven students on register; the average register of the remainder was eight. Thus, all of these classes were well within the program guidelines of one teacher per eight students. Nevertheless, teachers at three sites reported that they had too many students and needed assistance. Student registers at these sites were eight, five, and four respectively.

* IV. QUANTITATIVE EVALUATION

Data were reported for 2,048 students in grades kindergarten through 12 and in ungraded classes. Complete achievement data were submitted for 1,822 students, or 89 percent of the population. The majority of students were in grades 8 through 12 (51 percent) or in ungraded classes (37 percent); 11 percent were in grades kindergarten through 7. Most of the students were English speaking; only 7.2 percent were bilingual.

Student enrollment for the entire school year ranged from zero to 143 days. The mean number of enrollment days was 28 and 23 for the fall and spring semesters, respectively; the mode for each semester was 30. These low mean days of enrollment highlight the transient nature of the student population in the Institutionalized Facilities Program.

The mean percentage attendance was 32 percent. Twenty-nine percent of the students achieved 100 percent attendance in the fall; 36 percent achieved the same in the spring. The mean number of absences was five in the fall and 4.8 in the spring.

The following sections present the analyses of data to determine whether the program objectives were schieved in reading, mathematics, and writing.

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READING

Instructional Time

Students in the program received classroom instruction from their regular class teachers, as well as remedial instruction from the staff of the Institutionalized Facilities Program. Ninety-four percent of the students received one hour of regular-class reading instruction five days a week. The number of weeks of regular reading instruction for the entire school year ranged from zero to 40; the mean was 24, and the median and the mode were 30.

The E.S.E.A. Title I-funded remedial reading sessions averaged 60 minutes. Seventy-three percent of the students attended two sessions per week, 12 percent attended four and 1° percent attended three. The number of weeks of remedial reading for the entire school year ranged from zero to 40 weeks; the mean was 16 weeks, the median 15, and the mode 30.

Reading Achievement

The reading objective for the program proposed that by June 1981, 80 percent of the studen.. would master reading skills at the rate of one new skill each six weeks of instruction. Mastery of reading skills was measured by the ongoing administration of the criterion-referenced <u>Fountain Valley Reading</u> <u>System</u>. Reading skills were operationally defined by the test's short-term objectives. Figure 1 presents the cumulative frequency distribution of these data (i.e., the number of reading skills mastered by the target students per six weeks of instruction). The intersection of the solid lines drawn perpendicular to each axis symbolizes the criterion for the objective (i.e., 80 percent of the students mastering at least one new skill each six weeks). As observed in Figure 1, the function for the rate of skills mastery passed



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below the criterion point. The actual percentage of the population meeting or surpassing the one-skill criterion rate was 85 percent. Thus, the program objective for reading was not attained.

As observed in Table 1, which presents these same data in tabular form, the rate of mastery ranged from a high of 18 skills per six weeks (achieved by seven students or one percent of the population) to less than one skill per six weeks (412 students or 35 percent). The modal mastery fate was one, achieved by 278 students (23 percent). Mastery rates of two and three skills per six weeks were observed for 10 percent and 12 percent of the population, respectively.

Table 2 presents the frequency distribution of total reading skills mastered by the program's students for the duration of the project. Total mastery ranged from a high of 17 new skills (achieved by one student) to a low of zero skills (332 students or 18.2 percent). The mean and median for total skills mastered were 3.2; the mode was zero. More than 72 percent of the students mastered at least two new reading skills and 82 percent mastered at least one.

The transiency of the population and the resultant wide range of variance in total instructional time, render the relationship between total skills mastery and number of program sessions attended important measures of this project's effectiveness. The observed Pearson product-moment correlation coefficient between these two variables was .41. Approximately 17 percent $(\underline{r}^2 = .168)$ of the variance in total skills mastered was accounted for by the total number of sessions attended. Thus, although the objective in reading was not attained, attending the program had an important and meaningful effect upon reading skills mastery.

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TABLE 1

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FREQUENCY DISTRIBUTION OF THE NUMBER OF READING SKILLS MASTERED EACH SIX WEEKS

| Number of Skills Mastered per 6 Weeks | Number of <u>Students</u> | Relative <u>Percent</u> | Cumulative Percent |
|--|---------------------------|----------------------------|-----------------------|
| 18 | * 7 | 1 | 0 |
| 12 | 22 | 2, | 1 |
| 10 | 4 | 0 | 3 |
| 9 | 17 | 1 | 4 |
| 8 | 17 | 2 | 6 |
| 7 | 10 | 1 | 7 🖋 |
| 6 | 81 | 6 | 13 |
| 5 | 4 | 1 | 14 |
| 4 | 76 | 6 | · 20 |
| 3 | 116 | 10 | 30 |
| 2 | 135 | 12 | 42 |
| 1 | 278 | 23 | 65 |
| Less than 1 | | ` 35 | 100.0 |
| | , 1179 | | |

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NOTE:

E: The dashed line in this and subsequent tables represents the criterion.

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-12-

| Number of Skills Mastered | Number.of. Students | Relative , Percent | Cumulative Percent |
|------------------------------|------------------------|-----------------------|-----------------------|
| 17 | 1 . | 0.1 | 0.1 |
| • 16 | 1 | 0.1 | 0.2 |
| 15 | 0 | 0.0 | 0.2 |
| 14 | 0 | 0.0 | 0.2 |
| 13 | 1 | 0.1 | 0.3 |
| í ^y 12 | 8 | 0.4 | ٥.7. |
| . 11 | 7 | 0.4 | 1.1 |
| -10 | 9 | 0.5 | 1.6- |
| 9 | 58 | 3.2 | 4.8 |
| 8 | - 65 | 3.6 | 8.4 |
| · 7 | 67 | 3.7 | 12.1 |
| 6 | 113 | 6.7 | 18.3 |
| 5 . | 169 5 | 9.3 | 27.6 |
| 4 | 275 | 15.1 | 42.7 |
| 3 | 253 | 13.9 | 56.6 |
| ° 2 | 290 | 15.9 | 72.5 |
| · / 1 | 173. | 9.5 | 82.0 |
| 0 | 332 | 18.2 | 100 |
| | 1822 | 100.0 | |

FREQUENCY DISTRIBUTION OF THE TOTAL NUMBER OF READING SKILLS MASTERED

TABLE 2

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MATHEMATICS

Instructional Trime

Data³on mathemàtics instructional time and achievement were submitted for 1,013 students. These students received approximately one hour of regular mathematics instruction five days a week. The number of weeks of mathematics instruction for the school year ranged from zero to 40; the mean was 24 and the median and mode were 30.

These students received remedial mathematics instruction from program personnel each week for either two 45-minute sessions or four 30-minute sessions. The total number of weeks of remedial reading provided to the students ranged from zero to 35; the mean and the median were 17 and the mode was 30.

Mathematics Achievement

The mathematics objective proposed that by June, 1981, 80 percent of the target students would master mathematics skills at the rate of at least one new skill each six weeks of instruction. Mastery of mathematics skills was measured by the ongoing administration of the <u>Basic Arithmetic Skills Eval</u><u>uation</u>. Mathematics skills were operationally defined by the test's short-term objectives. Figure 2 presents the cumulative frequency distribution of the mastery rate for mathematics skills acquisition. As observed, the cumulative frequency function falls short of the proposed criterion: 62 percent of the students met the mastery-rate criterion. Thus, the program's mathematics objective was not attained.

Table 3 presents these same data in tabular form. The number of skills mastered per six weeks varied from-a high of 12 (achieved by six students)

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TABLE 3

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FREQUENCY DISTRIBUTION OF THE NUMBER OF MATHEMATICS SKILLS MASTERED EACH SIX WEEKS

| Number of Skills Mastered per 6 Weeks | • Number of ' Students | | Relative <u>Percent</u> | Cumulative Percent |
|--|---------------------------|------------|----------------------------|-----------------------|
| 12 | 6 | 1 | 0 | 0. |
| · 11 | · 0 | | Ò | . 0 |
| 10 | .0 | | 0 | 0 |
| 9 | [`] 2 | | 0 | 1 |
| 8 | 2 | , ¶ | 0 | 1 |
| 7 | 0 | | . 0 | · 1 |
| 6 | 46 | | 6 ['] | · 7 |
| 5 | . 4 | | 0 | 7 |
| 4 | 52 | | 7 | 14 |
| ʻ3 | 112 · | • | 13. | 27 |
| 2 | 1,26 | | 15 | 42 |
| 1 | 166 | | 20 | 62 |
| Less than 1 | <u>318</u> 834 | | 38 ຸ | 100 |
| | | | | |

| | 2 _ | T t | |
|-------------------------------------|-----------------------|---------------------|-----------------------|
| Number of <u>SKills Mastered</u> | Number of Students | Relative Percent | Cumulative Percent |
| 15 | 15 | · 1.5 | 1.5 |
| 14 | 11 | 1.1 | · 2.6 |
| 13 | 30 | . 3.0 | 5.6 |
| 12 | 25 | 2.5 | 8.Ì |
| 11 | . 50 | 4.9 | 13.0 |
| 10 | 32 | 3.2 | 16.2 |
| 9 | . 76 | 7.5 | 23.7 |
| . 8 | 47 | 4.6 | 28.3 • |
| 7 - / | 117 | 11.5 | 39.8 |
| 6 | 64 | 6.3 | 46.1 |
| 5, | 121 | 11.9 | 58 . 0 |
| 4 | 82 | 8.1 | 66.1 |
| 3 | 134 | 13.2 | 79.3 |
| . 2 | 49 | 4.3 | 84.1 |
| . 1 | 50 | 4.9 | 89.0 |
| 0 | 110 | 10.9 | 99.9 |
| | 1013 | 99.9 | |

FREQUENCY DISTRIBUTION OF THE TOTAL NUMBER OF MATHEMATICS SKILLS MASTERED

TABLE 4

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to a low of less than one (318 students or 38 percent of the population). The modal rate was one skill, achieved by 166 students (20 percent). Fortytwo percent mastered two or more skills each six weeks; 27 percent mastered ⁻ at least three. The mean mastery rate was two skills per six weeks and the median was 1.4 skills.

Table 4 presents the frequency distribution of the total number of mathematics skills mastered. Total mastery varied from a high of 17 new skills (one student) to a low of zerc skills (332 students or 18.2 percent). At least one new math skill was mastered by 82 percent of the students; at least two were mastered by 72.5 percent and at least three by 56.6 percent. More than one-quarter of the students (27.6 percent) mastered five or more skills.

The total number of mathematics objectives mastered correlated .34 with the number of sessions attended. Thus, attendance accounted for almost 12 percent (r^2 = .116) of the variance in mathematics achievement.

WRITING

Instructional Time

Data on writing achievement were reported for 277 students; data on language arts achievement were reported for 68 students. These students received regular instruction in these skills for one hour, five days per week. The number of weeks of writing instruction varied from zero to 40; the mean and the mode were 30.

Remedial sessions in writing and language arts ran for 30 minutes for 60 percent of the students and 60 minutes for 21 percent. Ninety-seven percent of the students received remedial inst oution two days per week and three percent received it once a week. The number of weeks students



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received remedial writing ranged from zero to 35; the mean was 29.4 weeks, the median 30.1 weeks, and the mode 30.

Writing Achievement

The mastery of language arts and writing skills was based upon teacher judgment. These skills were operationally defined by the State Education Department's taxonomy of skills.

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For those students receiving language arts instruction, the number of writing objectives mastered every six weeks ranged from zero to 1.5; for those receiving writing instruction, it ranged from zero to three. The mean number of language arts objectives mastered in each six-week period was .77; the mean mastery rate per six weeks for writing was .66.

Twenty-seven percent of the students mastered one new language arts objective every six weeks; twenty-two percent mastered one writing objective for the same time period. Both of these mastery rates were well below the program objective of 30 percent mastery.

Table 5 presents the frequency distribution of the total number of writing skills mastered. At least three objectives were mastered by 25.7 percent of the students and at 'last two by 29.3 percent. These data were not tabled for language arts mastery due to the low frequency of mastery.

The number of writing skills mastered correlated .23 with total number of sessions attended. Thus, approximately five percent of the variance in writing skills mastered ($r^2 = .053$) was accounted for by sessions attended.

V. CONCLUSIONS AND RECOMMENDATIONS

Data from observations and interviews suggest that the 1980-81 Institu-



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| TABLE 5 |
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FREQUENCY DISTRIBUTION OF THE TOTAL NUMBER OF WRITING SKILLS MASTERED

| Ni <u>Ma</u> | umber of Skills stered per 6 Weeks | Number of Students | Relative Percent | Cumulative Percent |
|-----------------|---------------------------------------|----------------------------|---------------------|-----------------------|
| ſ | 7 | 1 | 0.4 | 0.4 |
| • | б. | 5 | 1.8 | 2.2 |
| | 5 | ٤. 8 | 2.9 | 5.1 |
| | 4 | 25 | · 9.0 | 14.1 |
| | 3 | 32 | 11.6 | 25.7 |
| | . 2 | 10 | 3.6 | ▲ 29.3 |
| | 0 . | <u> 196 </u> 277 | 70.8 | 100.1 |
| | / | | | |



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tionalized Facilities Program functioned effectively and operated smoothly. However, the results of the quantitative analyses of achievement data indicated that the proposed percentage of the population (i.e., 80 percent) did not attain the criterion mastery rate (i.e., one skill per six weeks) in either reading, mathematics, or writing. One factor which must be considered when reviewing these findings is the transient nature of this student population. It is apparent from attendance information and teacher interviews that the actual instructional time for the students was quite limited. As indicated in the previous section, the mean number of days enrolled was only 28 days in the fall and 23 days in the spring. Since much of this time was spent in establishing operational routines and gathering baseline data, the actual number of sessions of direct instruction was less than the days enrolled. Evidence that the program did have a meaningful impact upon the population is the substantial positive correlation between skills mastery and sessions attended (r = .41 for reading and r = .34 for math). These correlations are similar to those observed for most of the Title I reading and math models for the handicapped in the New York City Public Schools. (See Final Evaluation Report for the Title I/PSEN Individualized Reading and Math Services for the Handicapped Program, 1980-81).

A summary of conclusions and recommendations which might enhance the program are delineated below.

--<u>Physical Facilities</u>. The physical facilities were generally adequate except for poor lighting at two sites. Due to the fact that problems in this area, unless they are major, are usually overlooked, supervisors should be sensitive to physical conditions that might adversely affect learning.

--<u>Staff</u>. The teachers were qualified for the program in terms of both academic background and experience.



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In addition, most of the teachers appeared to receive sufficient supervisory support. However, a small number of teachers expressed a need for additional training and it seems that this could be pursued on an individual basis next year. In addition, a review should be made of the need for increased mathematics instruction at several sites.

--Instructional Approaches. The individual/zed diag-

- nostic prescriptive approach appeard to be effective. The major problem related to instruction was poor student motivation and population insiency. Communication between teachers, supervisers, and agency staff about ways to enhance student motivation would be fruitful. Some suggested strategies are improved student scheduling, the development of an effective reinforcement system, greater cooperation with house parents, and counseling.
- --Materials. Although the findings were equivocal, many teachers indicated a need for a greater variety of materials. Perhaps a more detailed discussion of materials at orientation and greater flexibility during the prcgram's operation would increase the use of less conventional materials and grant teachers more autonomy in maials selection.
- --<u>Records</u>. Student records appeared to be well-maintained at nearly all the sites visited. An effort might be made, however, to include the students' prior educational history.

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--<u>Class Size</u>. In general, classes were small enough to effectively implement individualized instruction. At three sites, however, teachers felt they had too many students. Perhaps supervisors could make a site-bysite review of teaching loads and discuss this problem with individual teachers.

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