This document presents a description and evaluation of the Comprehensive Hearing Impaired Reception Program (CHIRP). This program was designed to improve effective communication skills for hearing handicapped students whose native language was not English, and whose language deficiencies prevented them from effective participation in the learning process. A total of 47 students, all of Hispanic background participated in the program. The program supplemented the regular services provided in resource rooms and in a work-study program for the hard of hearing in several schools. In the resource rooms, handicapped students received supportive services for part of the school day, and the remainder of their time was spent in regular classes. The program consisted of individual and small group language lessons conducted for at least 40 minutes daily. The evaluation included pre- and post testing with the newly prepared Rating Scale of Pupils' Ability to Speak English and the Rating Scale of Pupils' Ability to Speak Spanish tests. Although the results did not reveal significant changes, the program served a target population in need of its services. As an adjunct to the resource room program, the program appears limited to the extent to which it went beyond the scope of the services already provided. (Author/AM)
An evaluation of a New York City school district educational project funded under Title I of the Elementary and Secondary Education Act of 1965 (PL 89-10) performed for the Board of Education of the City of New York for the 1974-75 school year.
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Chapter I: THE PROGRAM

The Comprehensive Hearing Impaired Reception Program (CHIRP) was designed to improve effective communication skills for 65 hearing handicapped students whose native language was other than English, and whose language deficiencies prevented them from effective participation in the learning process. Through individual and small group language lessons conducted for at least 40 minutes daily, the students were to improve their oral and receptive language abilities. A teacher-coordinator, two teachers, and four paraprofessional educational assistants were to be assigned to the program. Students were to be selected on the basis of their hearing handicap and their foreign language background; school personnel and parents were to participate in the selection process.

A total of 47 eligible students, all of Hispanic background, were identified. The program, implemented essentially as planned, supplemented the services provided in "resource rooms" and in a work-study program for the hard-of-hearing in several schools. In these resource rooms, handicapped students received supportive services for part of the school day; the remainder of their time was spent in regular classes. Children served in the resource rooms received such help so that they could benefit more substantially from classroom instruction and participate in class activities. Children served additionally by this present program were deemed to need extra help because of their non-English language background. It should be noted that children with hearing handicaps have difficulty with language development; the combination of the
hearing handicap and the need to function in two languages can cause severe language deficiencies.

Most students were bused to schools with resource rooms from their homes; in some cases, they attended their neighborhood school, received itinerant help, and periodically were brought by their parents for extra lip reading instruction to other locations. Personnel in this program worked both in the students' home schools and in the schools with resource rooms.

One staff member, a paraprofessional, was assigned to a work-study program serving non-English speaking hard-of-hearing young adults. Many of these people had recently arrived in this country with little or no previous formal schooling; the hearing of some had, upon their arrival, been greatly improved by proper equipment.

Two of the program staff members were assigned to single locations; the others traveled to two, three, or four locations on regular schedules. It was not deemed advisable to spread the services beyond the limits of reasonable geographic traveling distances and stops for staff members.

The program's teacher-coordinator had had advanced training for, and experience with hearing handicapped children, having previously served as a resource room teacher. She spoke Spanish fluently, as did the teachers and paraprofessionals who served in the program.

A number of administrative difficulties prevented the program from starting on time, and, in May, one of the paraprofessionals left without notice. However, despite these difficulties, by March 24, 1975, instruction had begun on a daily basis, and continued through the end of the school year in all but two of the 14 program sites.
Chapter II: EVALUATIVE PROCEDURES

The evaluation objective, as stated in the evaluation design prepared by the Office of Educational Evaluation, was to determine the extent to which the participants have demonstrated statistically significant improvement in their ability to speak English and Spanish.

The newly prepared Rating Scale of Pupils' Ability to Speak English and the Rating Scale of Pupils' Ability to Speak Spanish was to be administered on a pre- and posttest basis to all participants. The median test for correlated samples was to be used to determine the statistical significance of differences between pre- and post-ratings.

The Rating Scale of Pupils' Ability to Speak English was administered to students in the program during the weeks of April 7 - 11, 1975 and June 5 - 9, 1975.

The release of the newly-prepared Scale in Spanish, however, which had not yet occurred at the time the evaluation design was prepared, was subsequently cancelled, and, correspondingly, it was necessary to cancel that aspect of the evaluation study as well.

The median test was carried out as planned, and the results presented in Chapter III of this report.
In addition to the test analysis, the evaluator was directed to determine the extent to which the program was implemented as proposed. The evaluator visited each staff member at work (with the exception of the person who left before a visit could be scheduled), and return visits were made to three program sites. Instructional sessions were observed; teachers, paraprofessionals, and school staff members who worked with the program staff were interviewed. The evaluator participated in a staff workshop, conferred frequently with the project coordinator, observed supervisory meetings of the latter with staff members, and observed a conference between a staff member and a parent.
Chapter III: THE FINDINGS

In this section, the results of the analysis of pre- and post-tests on the Rating Scale of Pupils' Ability to Speak English, and information derived from observations and interviews are presented.

Analysis of Test Data

Although a total of 47 students were identified for program participation, only 34 complete sets of pre- and posttest scores were available for analysis. Of the 13 students with missing scores, five were absent from the posttest, four were discharged before completion of the program, and four were absent from school for extended periods, or, in the case of the work-study students, out of school for temporary employment.

The distribution of test scores on the Rating Scale of Pupil Ability to Speak English is presented in Table 1. The score interval 10 - 14 has been broken down to present the scores above and below the median (12.5) of the total set of scores.
Table 1

Frequency Distribution of Pre- and Posttest Scores
Scores on Rating Scale of Pupils' Ability to Speak English

<table>
<thead>
<tr>
<th>Scores</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>1 - 4</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>5 - 9</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>10 - 12.5</td>
<td>3</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>12.5 - 14</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>15 - 19</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>20 - 24</td>
<td>3</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>25 - 29</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>36</td>
<td>72</td>
</tr>
</tbody>
</table>

A median test for correlated samples was applied to the data, as planned, to determine whether there was a significant change between pre- and posttest scores. This test involves determining the common median of the pre- and posttest scores, determining how many individuals who scored below the median on the pretest scored above this point on the posttest (positive changes) and how many who had scored above the median on the pretest scored below it on the posttest (negative changes). A chi square test of the significance of the difference between proportions is then applied, using the formula below, with Yates' correction (Guilford, 1965, p. 242).

\[
\chi^2 = \frac{((b - c) - 1)^2}{b + c}
\]

where \( b \) is the number of positive changes and \( c \) is the number of negative changes.
The common median for the 34 students tested was 12.5. On the pretest, 16 students scored above the median; on the retest, 18 scored above the median (two positive changes). No negative changes from above to below the median were recorded. Of course, for the present analysis, the number of changes was too small to permit statistical inference. However, the analysis is presented for illustration.

$$\chi^2 = \frac{(2 - 0 - 1)^2}{2 + 0} = \frac{1}{2} = .5$$

A Chi Square of .5 would not be significant were there enough change scores to permit this inference. It should be noted that the median test involves only those change scores with regard to crossing the common median; however, of the 34 students, 16 (47.1%) made actual improvements in their test scores; six of these were improvements of five points or more.

**Observation of the On-going Program**

At each of the elementary program sites visited, the program staff member was observed giving language development lessons to students on an individual or small group basis, or helping the children with their classroom assignments, using school textbooks, workbooks, special bilingual materials or pictorial materials obtained under this program. Children worked on opposites (large-small, up-down), sentence patterns (today is..., yesterday was..., tomorrow will be...), constructing sentences (I eat an apple, the boy is riding a bicycle), etc. In one school one boy worked with the male paraprofessional in setting up an electrical circuit, with battery, wires, bell, and other equipment; then language patterns (battery-batteries, baby-babies) were developed and reinforced.
The student then explained the workings of the circuit to the visiting program coordinator and evaluator with great pride and enthusiasm, and in some detail, despite his speech and language difficulties. In another location, the teacher played chess with one child and then with another, stimulating language interaction among three children present. Another teacher worked on reading comprehension with a boy who did not know the word "grass" or the concept of "shade," but who was eager to learn.

The students seemed highly motivated and responsive, and intensely involved in the learning situation. Often, they seemed reluctant to leave their classes for this special instruction, and then reluctant to go back to their classes. They seemed, for the most part, Spanish-dominant, although deficient in the development of both languages. Frequently, the teacher was able to develop comprehension by communicating in Spanish; the use of the two languages in instruction appeared highly effective.

The program coordinator was very knowledgeable, capable, conscientious, and flexible. Teachers and paraprofessionals appeared to be intensely involved with their work with the students.

In most locations the facilities used were adequate for individual instruction, although some were tiny, closet-like basement rooms, which had to be shared with the regular teacher. One teacher worked with her students in a basement lunchroom; noise directly outside and within the lunchroom seemed distracting to the evaluator but did not appear to disturb the children. The rooms were all attractively decorated with stimulating and useful materials and with student work; other materials were observed stored for easy access and in use.
Records were kept by the resource room teacher regarding the students' hearing capacities and corrective services. It seemed that the children's hearing aids were frequently in disrepair, that parents were difficult to contact and to motivate to make the complex arrangements for medical diagnosis, correction, and adjustment.

In the work-study program, the paraprofessional was assigned to help the regular teacher who was also bilingual. Students were taught to travel independently and were given instruction on various aspects of employment and careers, as well as fundamental English as a Second Language and academic instruction. Some students could not tell time, others were just learning to read, and all were in need of speech training. Here, too, students were highly motivated and eager to learn, pressing even the evaluator into service to listen to them, read or to serve as a speech model. During one of the evaluator's visits, the teacher was administering the mandated City-wide ESL tests to individuals; the testing took much more time than expected, and the students who were waiting did little other than wait. The room used was relatively barren of stimulating materials, although there were some materials in a closet. During another visit, a lesson was presented to the total group which seemed to be directed toward the needs of only one of the students.

The evaluator participated in a workshop for staff members conducted by the project coordinator at program headquarters. A bilingual school social worker who deals with handicapped children spoke, discussing the initiation and conduct of parent conferences (use very "plain" Spanish; use repetition; give parents your phone number; be positive). She also discussed the psychological
difficulties of handicapped children in families struggling with economic and linguistic hardships, and emphasized the need for parents to recognize, understand, and deal effectively with their children's needs and abilities.

Discussion arose regarding home visits, which were strongly recommended by the speaker; the need for coordination with both classroom teachers and parents was further discussed by the group. The staff members indicated that they were somewhat limited in what they could initiate by the routines of the resource room teachers and by some of the schools' restrictions.

Discussion of the Findings

The program, then, indeed, served the needs of the population of the population for which it was intended. As an adjunct to the resource room program, however, it appeared somewhat limited in the extent to which it went beyond the scope of the services already provided. Pulling a child out of his regular class for two periods daily rather than one may not be the best approach for the child. The resource room already represents a compromise between special education classes and regular class instruction for participating youngsters; it has some of the drawbacks of all such compromises. The child who is pulled out of his regular class for special lessons misses some work while he is gone; it may be hard for him to know whether he misunderstands subsequent instruction because he was "absent," or because of his hearing handicap, or because of perceived lack of ability. Moreover, since the student is bused to a school with a resource room, he has to make, and keep, friendships in both locations. Such social relationships are especially difficult for handicapped children to maintain, and important for their development. A different approach seems necessary.
Chapter IV: SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The Comprehensive Hearing Impaired Reception Program served 47 hard-of-hearing Hispanic students from poverty areas, supplementing the services provided in resource rooms and in a work-study program for the hard-of-hearing in several schools. Individual and small-group language lessons were conducted.

Students were tested on a pre- and posttest basis on the Rating Scale of Pupils’ Ability to Speak English, and the data analyzed, using a median test for correlated samples. Although the results did not reveal significant changes, the program served a target population in need of its services, and had potential for significant effects.

Recommendations

The program should be refunded, with modifications. The activities of the bilingual personnel assigned to supplement the services of the resource room personnel should not necessarily parallel their routines, but, where indicated, staff members should work as a team, carrying out complementary functions. For instance, since the more the resource room teacher knows about the child’s functioning in school, at home, and at play, the program staff member can, as a regular part of his or her duties, spend time observing the child in his own classroom, visiting him at home, and working not only with the handicapped child, but with invited friends as well. As a bilingual person, the program staff member can best communicate with the parents; assistance to them in understanding and helping...
their children should have positive results. Spending time with the children individually, in their classrooms, and in their homes, may have additional benefits, as well. It is hard for these children to express themselves; words do not come easily in either language and their speech is often difficult to understand. If the bilingual staff member is familiar with a setting and with the people in it, the child can more easily relate an event. This type of language expression can be most beneficial to the child. This recommended approach, it is believed, should serve to help the student more adequately in academic areas as well as in social and psychological areas as well.

Assistance might be given to the personnel in the work-study program in curriculum and in small group and individualized learning techniques.
Use Table 30C. for norm referenced achievement data not applicable to tables 30A. and 30B.

### 30C. Standardized Test Results

In the table below, enter the requested information about the tests used to evaluate the effectiveness of major project components/activities in achieving desired objectives. Before completing this form, read all footnotes. Attach additional sheets if necessary.

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Activity Code</th>
<th>Test Used</th>
<th>Form</th>
<th>Level</th>
<th>Total</th>
<th>Group Tested</th>
<th>Score Type</th>
<th>Number Tested</th>
<th>Pretest Date</th>
<th>Pretest Mean</th>
<th>Posttest Date</th>
<th>Posttest Mean</th>
<th>Statistical Data</th>
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<tbody>
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<td>Rating Scale</td>
<td>Pre Post</td>
<td>Pre Post</td>
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<td>61</td>
<td>36 6</td>
<td>4/75</td>
<td>6/75</td>
<td>median, test for correlated samples</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>6 1 4 6 1 7 2 2</td>
<td>Pupils' Ability to Speak English</td>
<td>1974</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

1. Identify Test Used and Year of Publication (MAT-58; CAT-70, etc.)
2. Total number of participants in the activity
3. Identify the participants by specific grade level (e.g., grade 3, grade 5). Where several grades are combined, enter the last two digits of the component code.
4. Total number of participants included in the pre and post test calculations.
5. 1 = grade equivalent; 2 = percentile rank; 3 = Z Score; 4 = Standard score (publisher's); 5 = stanine; 6 = raw score; 7 = other.
6. S.D. = Standard Deviation
7. Test statistic (e.g., t; F; X^2).
8. Obtained value
9. Specify level of statistical significance obtained (e.g., p ≤ .05; p ≤ .01).
In this table enter all data loss information. Between MIR, item #30 and this form, all participants in each activity must be accounted for. The component and activity codes used in completion of item #30 should be used here so that the two tables match. See definitions below table for further instructions.

<table>
<thead>
<tr>
<th>Component Code</th>
<th>Activity Code</th>
<th>(1) Group I.D.</th>
<th>(2) Test Used</th>
<th>(3) Total N</th>
<th>(4) Number Tested/ Analyzed</th>
<th>(5) Number Tested/ Analyzed</th>
<th>(6) Reasons why students were not tested, or if tested, were not analyzed</th>
<th>Number/ Reason</th>
</tr>
</thead>
<tbody>
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<td>Rating Scale of Pupils</td>
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<td>36</td>
<td>10</td>
<td>21.2</td>
<td>absent from posttest - illness</td>
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<td>6 1 4 6 1 7 2 2 61</td>
<td>Ability to Speak English</td>
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<td>discharged</td>
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<td></td>
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<tr>
<td>6 1 4 6 1 7 2 2 61</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>absent for extended period</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6 1 4 6 1 7 2 2 61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>out of school on work assignment</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

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

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

(3) Number of participants in the activity.

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

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

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