Designed to treat reading problems which are beyond the scope of regular classroom reading instruction, the clinic program provides for short, moderate, and long term remediation. Diagnosis of pupils referred by the schools is conducted by a team consisting of a reading clinician, psychologist, nurse and speech and hearing specialist. Based on the diagnostic screening, a highly organized instructional plan is written for each child. The child receives his individually prescribed remediation from a certified reading clinician for 1 hour a day, 5 days a week, for his assigned term. The ultimate objective of the clinic is to enable each child to benefit from regular classroom reading instruction upon completion of his remediation term. Children who test within a year of their reading expectancy level are released from the clinic and provided with followup service by special consultants. Inservice training, provision and interpretation of diagnostic and remedial information, and consultative assistance are additional services the clinic provides. The clinic diagnosed about 730 pupils during the 1969-70 school year and remediated 532 of these children. (Author/WR)
Model Programs
Compensatory Education

Diagnostic Reading Clinic
Cleveland, Ohio

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Model Programs

Compensatory Education

Diagnostic Reading Clinic
Cleveland, Ohio

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Elliot L. Richardson, Secretary
Office of Education
S. P. Marland, Jr., Commissioner of Education
This is the third in NCEC’s Model Programs series, whose purpose is to inform educators about successful ongoing programs and to provide them with sufficient information to decide if locally modified replications would be desirable. Included in this series are descriptions of 15 “successful” compensatory education programs for disadvantaged children currently operating in the Nation’s schools.

Under contract to the Office of Education, the American Institutes for Research in the Behavioral Sciences, Palo Alto, Calif., identified—through a literature search and nominations by local, State, and national educational agencies—over 400 candidate programs in this area. Of this number only 17 met the stringent criteria for success established by AIR in conjunction with OE. It should be noted that most of the programs rejected during the study were not rejected because they were demonstrated failures but rather because their evaluation methodology was so inadequate that a conclusion about success or failure could not be drawn.

Short descriptions of each program in the series have been prepared, covering such topics as context and objectives, personnel, methodology, inservice training, parent involvement, materials and equipment, facilities, schedule, evaluation data, budget, and sources for further information.

Six of the programs in this series were formerly written up in the It Works series published by OE in 1969. These six continue to operate successfully, as evidenced by the evaluation data; and since the It Works booklets are out of print, the program descriptions have been updated and included in this Model Programs series.

Two other programs—Programed Tutorial Reading Project, Indianapolis, Indiana, and Summer Junior High Schools, New York, New York—identified as exemplary compensatory education programs were included in the former Model Programs series on reading. Since these program descriptions are still available from the U.S. Government Printing Office, they were not republished for this series.

Two previous Model Programs series have been issued—one on reading (10 programs) and childhood education (33 programs). Booklets on these programs are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 for 15 to 25 cents each.
Overview

The Diagnostic Reading Clinic’s interdisciplinary staff provides diagnostic and remediation services to children in grades four through seven from 90 of Cleveland’s Elementary and Secondary Education Act title I schools. Designed to treat reading problems which are beyond the scope of regular classroom reading instruction, the clinic program provides for short-, moderate-, and long-term remediation.

Indepth diagnosis of pupils referred by the schools is conducted by a team consisting of a reading clinician, psychologist, nurse, and speech-and-hearing specialist. Based on results of the diagnostic screening, a highly organized instructional plan—consisting of carefully selected techniques, procedures, and materials—is written for each child by the remediation team. The child receives his individually prescribed remediation from a certified reading clinician for 1 hour a day, 5 days a week, for his assigned term.

The ultimate objective of the clinic is to enable each child to benefit from regular classroom reading instruction upon completion of his remediation term. Children who test within a year of their reading expectancy level (as determined by the Bond-Tinker
formula \( \frac{\text{IQ}}{\sum \text{years in school}} + 1.0 \) is released from the clinic and provided with followup service by special consultants who use various incentives to encourage maintenance and improvement of reading skills.

Inservice training, provision and interpretation of diagnostic and remedial information, and consultative assistance on a request basis are additional services the clinic provides for the feeder schools. Parent involvement is also an important component of the clinic program.

The clinic diagnosed about 730 pupils during the 1969-70 school year and remediated 532 of these children. Evaluation of the 1969-70 program was based mainly on reading achievement gains of a random sample of 62 students with a grade-level distribution corresponding to that of the entire clinic population. Reading grade-equivalent gains were measured by preservice and postservice administrations of the Gates-MacGinitie Reading Test. Regardless of length of treatment, all gains were found to be statistically significant. Moreover, educational significance of these gains was confirmed by the fact that each of the three service groups (short-, moderate-, or long-term remediation) made greater than the expected gain for "average" readers (test norms). Comparison of gains across service groups indicated that the moderate-term group had the greatest rate of gain in both comprehension and vocabulary. Teacher perceptions of the participants' classroom behavior, and parents' reports of their children's home behavior were quite positive.

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\( \text{Reading expectancy level is computed according to the Bond-Tinker formula: } \text{Reading grade} = \frac{\text{IQ} \times \text{number of years in school}}{\sum} + 1.0 \ \text{year, in which IQ is an index of rate of learning something new and 1.0 year is added because the child starts school at grade 1.0. For further details, see Bond, G. L., and Tinker, M. A. Reading Difficulties: Their Diagnosis and Correction, 2d ed. New York: Appleton-Century Crofts, 1957.} \)
Located in the heart of Cleveland, the Diagnostic Reading Clinic serves 90 title I schools. About 17 percent of the children in these schools receive public welfare, approaching the citywide welfare rate of 23 percent for the school-age population. Clinic enrollees came from neighborhoods characterized by severe economic disadvantage and high mobility. The citywide pupil mobility rate was greater than 50 percent, with the number of children emigrating from Cleveland schools far exceeding entries.

The Diagnostic Reading Clinic began as an Office of Economic Opportunity project in 1966, but was transferred to title I in 1967. The clinic was one of several projects which comprised Cleveland’s title I program. Other title I components in which some children at the clinic participated included the nutrition program (free lunch and breakfast) and special remedial math instruction. The only special reading program these children received, however, was provided at the clinic. The clinic provided in-depth diagnosis of reading disability and an interdisciplinary approach to remedial reading instruction for pupils with reading problems beyond the scope of the schools’ instructional services. Limited facilities and lack of specialized help in the schools thus contributed to the need for reading clinic services.

Pupils in grades four through seven in title I schools are recommended to the Diagnostic Reading Clinic by teachers and principals on the basis of serious reading retardation. Children with severe behavioral problems or low test IQ’s are assumed to be unable to benefit from the clinic program. The decision to focus on children in grades four through seven, rather than the lower elementary grades, was based on the assumption that younger children who read below grade level may simply need more maturation time to catch up with their peers. On the other hand, the developmental level of upper
elementary age children is presumed to be such that, by grade four, children reading 1 or 2 years below their grade level are likely to require special remediation.

The clinic's diagnostic screening process identifies youngsters with the most severe reading disabilities of those nominated by the schools. On the basis of the prognosis obtained from these tests, the specialized clinic staff provides individually prescribed techniques, procedures, and materials to children who have been scheduled for short-, moderate-, or long-term remediation periods. The clinic's objective is to bring these children within 1 year of their reading expectancy level before returning them to their regular classrooms.

The specific aims of the clinic are as follows:

- To improve the reading skills of children with serious reading disabilities in an effort to bring them up to an appropriate level for their reading expectancy.
- To provide followup services for clinic pupils at their home schools in an effort to continue reading progress.
- To coordinate services of related disciplines in the diagnosis and correction of reading difficulties.
- To facilitate parental involvement and support in the remediation of pupils' reading disabilities.
- To provide consultation services to classroom teachers of referred pupils.

**Personnel**

*Educational program manager (three-fourths time).—*The program manager is responsible for the operation of the clinic, recruitment and inservice training of the staff, coordination of the clinic's program with other compensatory projects, provision for parent participation, and involvement of the school staff in the clinic's efforts to improve the reading achievement of their students.
Staff assistant.—The staff assistant directs and supervises the clinic staff, establishes and administers referral procedures, and provides consultation services for pupils, parents, and other school personnel.

Reading clinicians (16).—The reading clinicians complete a training sequence which equips them to diagnose and remediate. They must meet the State of Ohio certification requirements for a reading specialist.

Social workers (2).—The social workers are responsible for collecting and interpreting family history through home visits and parent interviews. In addition, they provide consultative and supportive services to clinic staff and school staff to develop strategies for more effective solutions to children’s problems.

Speech therapist.—The State-certified speech therapist interprets and reports findings of evaluations of speech, voice, hearing, and auditory discrimination as they relate to progress in reading. On the basis of her recommendations, children receive additional indepth evaluation at the clinic.

Psychologists (2).—Psychologists administer and interpret appropriate individual psychological tests, using and interpreting projective techniques when necessary. Psychologists also provide consultative services to school and clinic staff, parents, and teachers.

Nurse.—The nurse compiles and interprets records of each child’s health status in addition to administering the Keystone, Snellen, and (if necessary) the Reading Eye Camera tests. She consults with parents and provides referrals as needed for medical services.

Teacher assistants (3).—The teacher assistants are members of the community who volunteer to assist in tutorial and small-group work, in addition to supervising the arrival,
departure, lunch, and movement of pupils.

Drivers (5).—The drivers, knowledgeable in basic clinic philosophy, transport pupils to and from the clinic each hour. They are responsible for as many as 70 clinic pupils per day.

Clerks (3).—Clerks' clinic duties include typing, duplicating, filing, and other clerical tasks. The clerks are responsible for the maintenance of files and records, and receive inservice training in connection with their clinic employment.

Methodology

When the scope and nature of a reading disability requires specialized help, the reading clinic offers precise diagnosis by a specialized team which includes a reading clinician, psychologist, speech and hearing specialist, and nurse. A variety of evaluative devices are used to achieve an objective analysis of each pupil's disability. Tested skills include word recognition, vocabulary, comprehension, and oral reading. In addition, reading interests and attitudes are assessed. Other areas evaluated include auditory discrimination, visual-motor status, listening skills, scholastic aptitude, and personal adjustment. Case-study procedures are used to collect data about the child's home, school, and developmental and medical history. Medical and psychiatric specialists are often consulted for diagnosis.

Once the handicapping factors causing the child's reading disability are identified, instructional methods and materials are carefully selected by the remediating clinician and the clinic's staff assistant. In planning for each child's instruction, the characteristics of his growth and development are also considered. The prescribed instructional materials and methods reflect the following characteristics: (1) highly individualized remedial treatment, dictated by the child's instructional needs, (2) highly organized instructional plan which is meaningful and appropriate for the child, (3) concern for the
child’s need to feel successful, and (4) provision for articulation and followup with the child’s regular classroom so that reading progress initiated by the clinic can be maintained and strengthened.

Schedule and facilities.—Pupils are scheduled for either short-term (6 to 12 weeks), moderate-term (13 to 20 weeks), or long-term (up to 1 full school year) remediation at the clinic. Pupils are not told what group they are in, and are returned to their regular classroom ahead of schedule if they reach within 1 year of their expectancy level when measured by standardized reading tests and if they can perform independently in the use of regular classroom materials at least half of the time.

Pupils are transported to the clinic daily for 1 hour of remedial instruction, tailored to each child’s specifically identified needs. During the hour, the reading clinicians employ a variety of techniques, procedures, and materials to stimulate, motivate, and provide direct instruction and practice of skills. Materials play a critical role in methodology and are selected to support the prescribed techniques. In addition, however, materials must be suitable in type, format, and difficulty level. Emphasis is on “off-the-shelf” items rather than clinic-developed materials.

The typical instructional hour is divided into four time segments:

Phase-in: Brief review of prior learning, or use of a special game or other activity to “get set” for the hour’s work.

Group instruction: Basic teaching of specific skills, as determined by individually prescribed remediation procedures.

Independent activity: Games, devices, and guided workbook or worktext activities designed to either test or further develop independence.
Phase-out: Quick goodbye game or other pleasant activity designed to show, rather than to tell, how successful the student has been. This activity might include Consonant Lotto, End-In-E Game, First Phonic Slide Rule, Group Sounding Game, Phonetic Word Wheel, Syllable Game, Vowel Lotto, or Spin-A-Test. In addition, some work to take home might be assigned.

Remediation sessions are held in about 10 classrooms at the clinic. In each class there are two clinicians and about 10 children. Although clinicians view children as individuals, they recognize the need of a disabled reader to share reading experiences with other children who are having similar difficulties and overcoming them. Thus, during the hour, the child might be grouped with a small number of children whose needs, strengths, and disabilities are similar to his own. The clinician-pupil ratio during group instruction ranges from 1:8 to 1:4, with the latter occurring more often.

Due to the highly specific nature of each child's instructional treatment, it is extremely difficult to associate a routine set of remediation activities and teaching procedures with the clinic program. A hypothetical case study prepared by a member of the clinic staff is presented under Case Study to illustrate the clinic's diagnostic and remediation procedures.

Materials and equipment.—The following list represents a small fraction of the more than one hundred different items of audiovisual equipment, reading series, book collections, workbooks, dictionaries and reading labs, games and devices, supportive materials, and general equipment used at the clinic. For further details, the clinic staff should be contacted (see "Sources for Further Information").
### Examples of Reading Series
- *Cracking the Code*
- *Deep-Sea Adventure Series*
- *Jim Forest Series*
- *Morgan Bay Mysteries*
- *Pacemaker Classics*
- *Sounds of Books*

### Examples of Workbooks
- *Building Reading Skills*
- *Eye and Ear Fun Workbooks*
- *Ginn Enrichment Workbook*
- *Language Experience in Reading*
- *Merrill Linguistic Series*
- *Phonics Is Fun Books*
- *Phonics We Use*
- *Reading for Concepts*
- *Structural Reading Series*

### Publisher
- Science Research Assoc.
- Field Educational Pub. Co.
- Field Educational Pub. Co.
- Field Educational Pub. Co.
- Fearon
- Holt, Rinehart and Winston
- McCormic-Mathers
- McGraw-Hill
- Ginn
- Encyclopedia Britannica
- Charles E. Merrill
- Modern Curriculum Press
- Lyons & Carnahan
- McGraw-Hill
- Singer

### Audiovisual Equipment
- Audiovisual cards
- Carousel slide projector
- Controlled reader
- Instamatic projector
- Language masters
- Opaque projector
- Overhead projector
- Record players
- Tape recorder
Inservice training and feedback to classroom teachers.—Monthly inservice opportunities are provided for the classroom teacher to help her understand the clinical procedure and to view the child’s disability in a new light. Frequently, the classroom teacher is guided in adapting classroom procedures to reinforce the remediation services of the clinic. In addition, new instructional techniques for enhancing specific reading skills are demonstrated by speakers who include university educators and reading experts. Teachers are also brought to the clinic for inservice visits. Other sessions focus on gaining parent and community involvement. Specific techniques are discussed for assisting parents in dealing with the reading problems of their children.

Monthly conferences between clinic staff and classroom teachers are held to advise teachers on remedial procedures and to correct specific classroom reading problems. Teachers also receive a diagnostic summary, periodic progress reports, and a final report on each of their pupils at the clinic.

Parent participation.—Prior to a child’s screening by clinic staff, his parents are asked to send him in for diagnosis. If evaluative tests indicate the child’s reading achievement could be enhanced by special remediation, the parents are asked for permission to enroll him in the clinic program. Parents are also invited to visit the clinic and to attend monthly meetings. Their opinion of the clinic program is frequently solicited in the course of these meetings and during home visits by the social workers. Parents are encouraged to be supportive in dealing with their child’s reading problems. They are informed of their child’s progress every 4 weeks and, when the child has completed his prescribed treatment, the parents receive the clinic’s final report and recommendations.

Followup services for pupils returned to classes.—An important facet in the continued improvement of children returned from the clinic to the regular classroom is reinforce-
ment of the reading skills acquired during remediation. Incentives include personal encouragement and individualized attention in reviewing and reinforcing necessary reading skills. These followup services are provided by upper elementary consultants after studying the pupil’s case records and consulting the classroom teacher, principal, and the parents.

The following hypothetical case study illustrates the clinic’s diagnostic and prescriptive remediation procedures.

Gilbert X is 12 years, 3 months old. He entered the school district in the first semester of first grade from a suburban kindergarten. Gilbert’s school experience included attendance in two inner city schools. His rate of progress in first grade began to deviate from the norm, and by the time he had reached fifth grade, his school records clearly established him as a youngster who probably would acquire reading skills more slowly than his peers.

Before in-depth diagnosis was initiated, the social worker learned that Gilbert’s mother was deceased and that he lived with his grandmother. During the diagnostic intake procedures, his medical history, vision, and hearing appeared satisfactory. The diagnostician determined from observation that he was a cooperative, persistent child, despite the physical discomfort of a cold. Specific tests indicated an oral reading grade of 2.7 on the Gates-McKillop and, on the Gates-MacGinitie, a reading vocabulary grade of 1.9 and a reading comprehension grade of 2.2.

Additional information from the WISC, administered by the staff psychologist, indicated a verbal IQ score of 87, a performance IQ score of 67, and a full scale IQ of 75. The psychologist’s notes described him as a well-developed adolescent whose test behavior was cooperative; however, he evidenced generally poor work habits, short atten-
tion span distractability, and limited ability to judge the results of his endeavors. She concluded that, on the basis of the Wide Range Achievement Test, his reading skill was not commensurate with his age, grade, or intelligence level. She recommended remediation, but cautioned that the prognosis was uncertain.

Gilbert’s reading expectancy was approximated at 6.0, which indicated a vocabulary disability of 4.1 years and a comprehension disability of 3.8 years.

Gilbert was a challenging candidate. He read at about the second-grade level and, with factors like intelligence and years in school considered, his expectancy was grade six. The Gates-McKillop scores alluded to weakness in word analysis, consonant blends, digraphs, vowel sounds and generalizations, word parts, blending, syllabication, and phrasing skills. His Gates-MacGinitie scores indicated he lacked power in the application of the skills he did have.

On the basis of the aforementioned characteristics, the following remediation plan was developed:

Vocabulary—Since he knew only 172 of the 220 Dolch Basic sight vocabulary words, immediate attention should be given to, first, checking comprehension of unknown words and, second, providing drill cards with the word in isolation on one side and in a sentence on the other.

Word Attack—Cracking the Code is recommended as an instructional vehicle since it is designed to teach decoding to students in the intermediate grades who have not yet mastered an independent word-attack procedure. The program’s interest level is intermediate and above, and introduces the child to patterns of sound-spelling relationships which will, for the most part, be new. The reader work-test provides a structured pattern.
Comprehension—A variety of comprehension skills need further development and reinforcement. The following materials should be used:

- Reading for Concepts
- Reading for Meaning
- New Practice Readers
- Barnell Loft Specific Skill Series:
  - Getting the Facts
  - Using the Context
  - Getting the Main Idea
  - Drawing Conclusions

The 1969-70 budget for the Diagnostic Reading Clinic shows the breakdown of costs for the funding period which began on September 1, 1969, and ended August 31, 1970:

<table>
<thead>
<tr>
<th>Item</th>
<th>Budget (in $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instructional salaries and fringe benefits*</td>
<td>224,265</td>
</tr>
<tr>
<td>Clerical salaries and fringe benefits</td>
<td>8,325</td>
</tr>
<tr>
<td>Office supplies</td>
<td>490</td>
</tr>
<tr>
<td>Instructional materials and supplies</td>
<td>18,000</td>
</tr>
<tr>
<td>Library materials and textbooks</td>
<td>1,000</td>
</tr>
<tr>
<td>Consultants for inservice</td>
<td>250</td>
</tr>
<tr>
<td>Travel—professional meetings</td>
<td>500</td>
</tr>
<tr>
<td>Nurse salary and fringe benefits</td>
<td>8,800</td>
</tr>
<tr>
<td>Dispensary supplies</td>
<td>100</td>
</tr>
</tbody>
</table>

* Includes entire instructional staff—clinicians, psychologists, speech therapist, instructional aides, and one-third administrative cost.
Building maintenance and security services 10,000
Phone and utilities 420
Audiovisual equipment 3,600
Station wagon operation and maintenance 6,800
Drivers' salaries and fringe benefits 33,000
Food services 3,000

Total $318,550

It was estimated that clinic services are provided at a per-pupil cost of about $286 for long-term pupils, $191 for moderate-term pupils, and $140 for short-term pupils. Calculation of the cost of each month of grade-equivalent growth revealed that an additional $17 expenditure was needed for each unit of growth exhibited by long-term pupils, as compared to about $14 per unit for moderate- and short-term pupils.

### Evaluation

During the 1969-70 school year the clinic served 532 public and nonpublic school pupils, 64 percent of whom were boys. Fifty-one percent of the served population were in the fourth grade, 27 percent were fifth graders, 19 percent were from the sixth grade, and the remaining 3 percent were seventh graders.

Forty-two percent of the participants were assigned to the long-term service group, averaging approximately 5.1 months service; 46 percent received moderate-term service, averaging 3 months; and 12 percent were in the clinic for a short-term period, averaging 2.5 months. On the basis of diagnostic testing, it was determined that most of the children had decoding process difficulties. Their most pressing educational needs required further development of (1) oral and written language understanding, (2) com-
munication skills, (3) concentration skills, (4) work-study skills, and (5) self-concept.

For evaluation purposes, a random sample of 62 students was selected from the clinic population. The sample was composed of 42 boys and 20 girls from 22 target title I schools. The distribution of the sample across grade levels corresponded closely to that of the entire clinic population.

The primary objective of the evaluation was to determine the reading achievement gains made by the clinic’s participants. Their reading performance, difficulties, habits, and final home classroom marks were also determined via classroom teacher and parent questionnaires. The findings of each of these data collection efforts are summarized as follows:

The participants’ reading achievement gains, as measured by the Gates-MacGinitie Reading Test administered prior to the start and upon completion of service, were compared to the gains expected on the basis of test norms for each service period. Each student was pretested on a form of the test appropriate for his reading level and posttested with an alternate form at the appropriate grade level. The time between pretest and posttest was directly related to the child’s progress and the service group of which he was a member. An average of 5.1 months elapsed between pretest and posttest for the long-term service group, 3.0 months for the moderate-term service group, and 2.5 months for the short-term group.

The number of participants in each service group, their average term of service in months, and their grade-equivalent pretest, posttest, and gain scores on the vocabulary and comprehension subtests of the Gates-MacGinitie Reading Test are summarized in table 1.
Table 1.—Gates-MacGinitie Reading Test grade-equivalent pretest, posttest, and gain scores for the three service groups

<table>
<thead>
<tr>
<th>Service group</th>
<th>Average service in months</th>
<th>Pre-</th>
<th>Post-</th>
<th>Gain</th>
<th>Pre-</th>
<th>Post-</th>
<th>Gain</th>
<th>Comprehension Post-</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
<td>(8)</td>
<td>(9)</td>
</tr>
<tr>
<td>Long term</td>
<td>17</td>
<td>5.1</td>
<td>3.03</td>
<td>3.87</td>
<td>.84**</td>
<td>2.43</td>
<td>4.29</td>
<td>1.86**</td>
<td></td>
</tr>
<tr>
<td>Moderate term</td>
<td>35</td>
<td>3.0</td>
<td>3.58</td>
<td>4.17</td>
<td>.59**</td>
<td>2.89</td>
<td>4.40</td>
<td>1.51**</td>
<td></td>
</tr>
<tr>
<td>Short term</td>
<td>10</td>
<td>2.5</td>
<td>3.24</td>
<td>3.71</td>
<td>.47*</td>
<td>3.11</td>
<td>3.72</td>
<td>.61**</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05
**p<.01

The grade-equivalent gains shown in columns six and nine can be expressed in terms of months by moving the decimal point one place to the right. Thus the gains for each group were greater than the expected gain for "average" readers. It can therefore be concluded that the gains for all three groups in vocabulary and comprehension were statistically and educationally significant.

Also illustrated is the fact that all three service groups made greater gains in comprehension than in vocabulary. In terms of rate of gain (gain divided by months of service) for the comprehension subtest, the moderate-term service group had 5.03 months per month; the long-term group, 3.65 months per month; and the short-term group, 2.44 months per month. A similar pattern was observed for rates of gain on the vocabulary subtest—the moderate-term group again had the largest rate of gain, 1.97 months per month; the long-term group had the next largest rate of gain, 1.88 months per month; and the short-term group had the smallest with 1.65 months per month.
On the basis of these data, it can be concluded that the Diagnostic Reading Clinic achieved its goals of producing statistically and educationally significant reading gains.

At the end of the service year, classroom teachers were asked to rate the clinic participants' reading performance and behavior in the classroom. In terms of use of reading materials in the classroom, the teachers rated 35 percent of the students as being able to handle classroom reading materials "always" or "most of the time," 54 percent as "sometimes," and 11 percent as "rarely."

The final grades assigned to the clinic's participants in the home classroom are summarized in table 2. The group with the greatest reading difficulties prior to clinic service, the long-term group, all received passing grades (C or D) in reading from their regular classroom teachers. Twenty percent of the moderate-term group received an A or B, 77 percent received a C or D, and 3 percent received a failing grade. The short-term group all received passing grades with 10 percent receiving B, 70 percent C, and 20 percent D.

The distribution of final reading grades assigned across groups also appears in table 2. Only 2 percent of all the students received a failing final reading grade, with all of the failures belonging to the moderate-term service group.

Classroom teachers also rated the classroom behavior of the clinic's participants at the end of the school year in terms of (1) participation in class, (2) written assignments, (3) self-confidence, (4) rapport with classmates, and (5) attitude toward school. Table 3 summarizes the distribution of students by improvement categories for each of the behaviors rated. Approximately 80 percent of the students showed "some" to "very much" improvement in each of the behavior areas rated.
Table 2.—Percent of clinic participants by their final reading grades assigned by their classroom teacher

<table>
<thead>
<tr>
<th>Service group</th>
<th>Final reading grade</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
</tr>
<tr>
<td>Long term</td>
<td>—</td>
<td>—</td>
<td>59</td>
<td>41</td>
<td>—</td>
</tr>
<tr>
<td>Moderate term</td>
<td>6</td>
<td>14</td>
<td>48</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>Short term</td>
<td>—</td>
<td>10</td>
<td>70</td>
<td>20</td>
<td>—</td>
</tr>
<tr>
<td>Total group</td>
<td>3</td>
<td>10</td>
<td>55</td>
<td>30</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3.—Percent of clinic participants showing various levels of improvement according to their classroom teachers' ratings

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Participation</th>
<th>Assignments</th>
<th>Confidence</th>
<th>Rapport</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>6</td>
<td>10</td>
<td>13</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Some</td>
<td>53</td>
<td>68</td>
<td>45</td>
<td>27</td>
<td>47</td>
</tr>
<tr>
<td>Very much</td>
<td>34</td>
<td>16</td>
<td>37</td>
<td>47</td>
<td>29</td>
</tr>
<tr>
<td>Doesn't apply</td>
<td>2</td>
<td>—</td>
<td>—</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>No answer</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>10</td>
</tr>
</tbody>
</table>

Classroom teachers were also asked in what behavior areas the clinic's participants made the greatest improvement. They reported the greatest changes in (1) mastery of word analysis skills, (2) knowledge of sight words, (3) motivation to master reading, (4) self-confidence, and (5) comprehension.
A parent questionnaire was sent to the home of the Clinic's participants. On the basis of a 60 percent return, the following conclusions were drawn. Eighty percent of the parents reported that their children enjoyed reading more, took more books from the library, and read more at home. Fifty-two percent stated that their children enjoyed attending the clinic. The parents were unanimous in recommending that the clinic services be continued.

In summary, the Diagnostic Reading Clinic achieved its goals in terms of its participants' reading achievement, teachers' perceptions of the participants' classroom behavior, and parents' reports of their children's home behavior.

Sources for Further Information

Further information concerning the Diagnostic Reading Clinic may be obtained from:

Dr. Margaret Fleming, Directing Supervisor
Division of Research and Development
Cleveland Public Schools
1380 East Sixth Street
Cleveland, Ohio 44114
(216) 696-2929

Mrs. Pauline Davis, Program Manager
Diagnostic Reading Clinic
4940 Carnegie Avenue
Cleveland, Ohio 44103
(216) 391-5280

Fifteen promising compensatory education programs for the disadvantaged are included in this series. Following is a list of the programs and their locations:

College Bound Program, New York, N.Y.
Diagnostic Reading Clinic, Cleveland, Ohio
The Fernald School Remediation of Learning Disorders Program, Los Angeles, Calif.
Higher Horizons 100, Hartford, Conn.
The Juan Morel Campos Bilingual Center, Chicago, Ill.
Learning To Learn Program, Jacksonville, Fla.
More Effective Schools Program, New York, N.Y.
Mother-Child Home Program, Freeport, N.Y.
Preschool Program, Fresno, Calif.
Project Conquest, East St. Louis, Ill.
Project Early Push, Buffalo, N.Y.
Project MARS, Leominster, Mass.
Project R-3, San Jose, Calif.
PS 115 Alpha One Reading Program, New York, N.Y.
Remedial Reading Laboratories, El Paso, Texas

Two programs also identified for this series were described in the Model Programs—Reading series: Programmed Tutorial Reading Project, Indianapolis, Ind., and Summer Junior High Schools, New York, N.Y. Since these program descriptions are still current and available from the Superintendent of Documents, U.S. Government Printing Office, they were not rewritten for this series.