

DIAGNOSIS AND TREATMENT OF READING  
DISABILITIES OF SEVEN ELEMENTARY  
SCHOOL PUPILS

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By

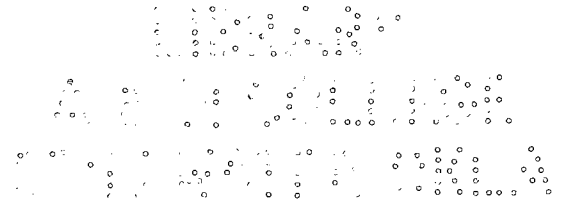
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W. B. A.

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CHAPTER I  
INTRODUCTION

In the selection of a problem for a special study as a part of the requirements for a Master's Degree, the writer, being aware of the need for a remedial program for the deficient readers of the Central Grade School, Holdenville, Oklahoma, and desiring to aid the children in overcoming their reading difficulties, undertook the task of diagnosing the most seriously retarded cases in reading and of giving remedial aid to the cases selected.

Interest in the diagnosis of reading difficulties is not new. Intensive research on the subject of reading has been carried on since 1879, but the greatest progress in the diagnosis of reading handicaps has been made during the past twenty-five years. The more prominent sources in which the causes of the reading defects<sup>1</sup> have been sought are: (a) defective organs, (b) certain unusual organic characteristics, (c) deficient psychological processes, (d) constitutional and educational immaturity, (e) unfortunate forms of motivation, (f) and inadequate reading technique caused by ineffective teaching or unfortunate accidents of trial and error learning, or both.

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<sup>1</sup>  
A. I. Gates, The Improvement of Reading, Chapter I, p. 5

The theory that reading difficulty is due to defective organs was most prevalent before 1910.<sup>2</sup> It appears in such diagnosis as "congenital alexia", "word blindness", and others which were based on the assumption that word images or memories were localized in certain circumscribed parts of the brain and that these parts might be congenitally defective or injured by disease or accident.<sup>3</sup> In early literature 4 per cent of the school population were diagnosed as "word blind".<sup>4</sup> James Hinshelwood,<sup>5</sup> in his treatise on Congenital Word Blindness proposed the hypothesis that children who were unable to learn to read but who showed no difficulty in visual acuity were congenitally word blind owing to failure of certain localized parts of the brain to develop their functions. Cases of individuals who, after brain injuries, lost the ability to read words but could recognize the isolated letters composing the words are described in Henry Head's<sup>6</sup> treatise on Aphasia and Kindred Disorders of Speech. K. S. Lashley<sup>7</sup> concludes

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<sup>2</sup>  
Ibid., p. 5.

<sup>3</sup>  
Ibid.

<sup>4</sup>  
Emmett A. Betts, Prevention and Correction of Reading Difficulties, Chap. I, p. 8.

<sup>5</sup>  
James Hinshelwood, Congenital Word Blindness.

<sup>6</sup>  
Henry Head, Aphasia and Disorders of Speech.

<sup>7</sup>  
K. S. Lashley, Brain Mechanisms and Intelligence.

that an apparent word blindness may be due to inability to see the letters in a definite spatial arrangement.

From an early period investigators also tried to trace reading difficulties to defects in the eyes, ears, speech organs, and other organs, as well as, or instead of, in the brain.<sup>8</sup> Dr. Louis Emile Javal's<sup>9</sup> work as a pioneer in reading research has a profound influence on later research. While he was carrying on his research in the field of physiologic optic study he became vitally interested in the study of problems related to reading. Javal was the first to learn that the eyes make saccadic or discontinuous movement during the reading process. Later Dr. James McKeen Cattel's<sup>10</sup> studies disclosed evidence that perception did not proceed by letters but rather by words, phrases, and sentences.

Dr. Samuel T. Orton<sup>11</sup> has suggested the hypothesis that faulty reading is due not to an organic defect in the brain but to failure to train the brain to work exclusively from the dominant or leading hemisphere.

W. F. Dearborn and other investigators have stated that certain unusual organic characteristics such as

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<sup>8</sup>

A. I. Gates, The Improvement of Reading, p. 6.

<sup>9</sup>

Earl A. Taylor, Controlled Reading, p. 29.

<sup>10</sup>

Grace E. Storm, and Nila B. Smith, Reading Activities in the Primary Grades, p. 81.

<sup>11</sup>

Samuel T. Orton, "Word Blindness in School Children," Arch., Neur. and Psychiat. XIV, 1925, pp. 581-615.



left-handedness or right-eyedness or mixed hand and eye dominance are the main causal factors involved in difficulties in reading.<sup>12</sup> However, Gates,<sup>13</sup> Monroe,<sup>14</sup> Hildreth,<sup>15</sup> and other recent writers disclose evidence from their experimental studies that organic defects may be in some cases primary or contributing causes of trouble, but that other factors are the real sources of trouble.

The rapid growth of experimental psychology after 1900 resulted in a tendency to consider defective psychological processes such as visual perception, visual discrimination, visual imagery, visual memory, weak auditory power, and defective visual-auditory association as causes of difficulties in reading. Defects or deficiencies in one or more of these psychological processes whether due to organic defect, native or acquired, were thought to interfere with learning to read.<sup>16</sup>

Authorities on the teaching of reading conclude that handicaps in reading result from allowing the child to read before he is physiologically or mentally mature enough to profit from the instruction given. Mental

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<sup>12</sup>

Gates, op. cit., p. 7.

<sup>13</sup>

Ibid., p. 345.

<sup>14</sup>

Marion Monroe, Children Who Cannot Read, p. 91.

<sup>15</sup>

Gertrude Hildreth, Learning the Three R's, pp.410-11.

<sup>16</sup>

Gates, op. cit., p. 8.

immaturity, incomplete development of the visual or auditory apparatus, lack of precision in motor control and speech are examples of organic or physiological deficiencies which may cause difficulties.<sup>17</sup> Reading readiness tests have been developed recently to determine when a child has naturally reached the adequate level of maturation. The first experimental study of reading readiness to determine when a child is mentally mature was made by Erby Deputy.<sup>18</sup> No amount of zeal, industry, prodding, or tutoring can compensate for the mental maturation necessary in initial success.<sup>19</sup>

Immaturity due to limited experiences and educational contacts rather than to physiological or organic factors are involved in various degrees in reading difficulty.<sup>20</sup>

Specialists in reading, psychologists, and psychiatrists are disposed to believe that inadequate motivation is probably at the bottom of most failures in reading.<sup>21</sup> Instances of misleading motivation, dislike, negativistic

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Ibid., pp. 9-10.

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Erby Deputy, "Predicting First Grade Reading Achievement," Teachers College Contribution to Education, No. 426, Bureau of Publications, Teachers College, Columbia University, 1930.

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Hildreth, op. cit., p. 302.

20

Gates, op. cit., pp. 11-12.

21

Ibid., p. 12.

attitude and rationalizations are found among poor readers and non-readers.

A very recent development in diagnosing reading defects is one in which it is assumed that reading deficiencies may be due to ineffectual types of teaching or unfortunate accidents in the learning process.<sup>22</sup> Failure to acquire one or more of the many techniques involved in reading is believed to be a frequent source of the difficulty.<sup>23</sup>

Dr. Lois H. Meeks<sup>24</sup> proved in her study that failures were sometimes due to ineffective modes of reaction and to the inability of the pupils to discover by themselves effective types of response. In this study the individual's interest usually depended upon his achievement.

Arthur I. Gates's<sup>25</sup> viewpoint concerning causes of reading difficulty is that most of the difficulties, ranging from the least to the most serious are due to failures to acquire techniques that might have been acquired had the right guidance been given in the initial state of learning.

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<sup>22</sup>

Ibid., pp. 12-14.

<sup>23</sup>

Ibid., pp. 14-17.

<sup>24</sup>

Dr. Lois H. Meeks, "A Study of Learning and Retention in Young Children," Teachers College Contribution to Education, No. 164, Bureau of Publications, Teachers College, Columbia University, 1925.

<sup>25</sup>

Gates, op. cit., p. 17.

The fact that a pupil may fail to learn to read and yet be of adequate intelligence is receiving increasing attention from many educators. Until recent years teachers have felt that any pupil who attended school regularly could learn to read, and that if he did not he must either be lazy or stupid.<sup>26</sup> In the traditional schools, retarded pupils, regardless of their needs, were all given the same treatment.

In an attempt to organize a remedial program for the retarded readers in Central Grade School, Holdenville, Oklahoma, where no program for remedial instruction is provided, the aims of this study as set up by the writer are:

1. To discover the cases most seriously in need of remedial aid.
2. To determine the causes and specific difficulties of each case.
3. To provide a program of remedial instruction in reading that will create in each child a desire to read.
4. To provide a program of remedial instruction that will develop in each child the ability to read.

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<sup>26</sup>

Marion Monroe, Children Who Cannot Read, p. 1.

## CHAPTER II

## MATERIALS AND PROCEDURE

The first step undertaken in this study was to locate the pupils who were most seriously in need of diagnostic aid and to select from this group the disability cases to whom remedial treatment should be given.

Disability cases in reading may be defined as those pupils who have made slower progress in learning than their abilities and opportunities would lead one to anticipate, or those whose learning opportunities have been inadequate.<sup>1</sup> Hildreth<sup>2</sup> concludes that all children who rate below norms on standard tests are not disability cases, but that the grade standards for reading that have been in force, achievement in relation to ability, reading achievement in proportion to achievement in other subjects of the curriculum, qualitative aspects of achievement as well as absolute score, and length of time the child has spent in learning to read are to be considered in judging a disability case. A pupil of normal learning ability, who has been taught by the usual normal methods for normal pupils, may be in need of intensive study if he is retarded to the extent of a half year in general reading proficiency at grades

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<sup>1</sup> Gertrude Hildreth, Learning the Three R's, p. 542.

<sup>2</sup> Ibid., pp. 573-4.

one, two, and three, and to the extent of a year in grades four, five, and six.<sup>3</sup>

The past records of children in regular classes show that success without retardation for children rating below 90 I. Q. on the Binet-Simon Intelligence Test is usually impossible.<sup>4</sup> Gates<sup>5</sup> says that despite the fact that physical, mental, and emotional obstacles are numerous and serious, it is believed that most children of an intelligence quotient above 70 may be taught to read if the right procedures, sufficient repetition, and time are employed.

A reading survey of the thirty-nine third grade pupils, of which the writer is the instructor, was made during the second month of school. Oral and silent reading rate and comprehension were tested in this preliminary survey. With the aid of the results from these tests the children, who presented the most serious reading problems, were selected. After further study of these selected cases three boys were found to be in need of remedial aid. These boys will be designated as A, B, and C throughout the study.

In order to select pupils for special study in the first, second, fourth, fifth, and sixth grades, the

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<sup>3</sup>

Ibid.

<sup>4</sup>

Ibid., p. 289.

<sup>5</sup>

A. I. Gates, The Improvement of Reading, p. 18.

class records of all pupils in these grades were carefully checked. Those pupils who were being considered by their teachers as failures in reading but able to benefit from remedial treatment were given standard achievement tests. It was evident from the results of these tests that one first grade boy, one second grade boy, one fourth grade boy, and one sixth grade boy were in need of remedial instruction. These five boys will be designated as D, E, F, and G, respectively.

A complete diagnosis of the pupil selected could not be confined to the giving of standard reading tests. The diagnosis involved securing information by standard reading tests as shown in the case studies, informal reading tests, mental tests, observation of pupil at work and play, and data in regard to each pupil's age, conduct, interest and attitudes, home environment, and physical condition.

Each child who was selected for study was given the Stanford Revision of the Binet-Simon Intelligence Test. The average I. Q. of the seven cases was 101, ranging from 88 to 114. An adequate mental capacity for learning, which is a most significant factor in the process of learning, was found in each case to which the writer has attempted to give remedial aid.

In the diagnosis of these pupils the Betts Ready to Read Tests<sup>6</sup> were administered to each child with the Ophthalmic Telibinocular instrument. From the results of the Visual Sensation and Perception Tests it was found necessary to refer one child to an optometrist or an oculist. The parents of this child had his eyes examined by an optometrist and the child was immediately fitted with glasses.

Each child's auditory acuity was tested with the Betts<sup>7</sup> Auditory Test and the watch ticking test. There was no lack of auditory acuity indicated by these tests but one child made low scores on the auditory word discrimination test prepared by Marion Monroe.<sup>8</sup>

The hand dominance<sup>9</sup> of each child was checked with the picking up test, throwing test, receiving test, using a spoon, using scissors, using knife, using a dust cloth, hammering nails, catching a ball, shooting marbles, and a writing test. Every child except one tested dominantly right handed in all the tests. This child wrote and used the scissors and spoon with his left hand but he performed all other acts with his right hand. No record could be found whether he had

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<sup>6</sup> Emmett A. Betts, Betts Ready to Read Tests.

<sup>7</sup> Ibid.

<sup>8</sup> Marion Monroe, Children Who Cannot Read, p. 199.

<sup>9</sup> Gates, op. cit., pp. 574-5.



ever used his right hand in writing. However, the writer classified him as right handed since he did only three of the acts with his left hand.

Eye dominance of each child was tested with the finger sighting test.<sup>10</sup> Right eye dominance was found in each case. According to the results of the eye and hand dominance tests the pupils selected for study may be classified as pure dextrals.

One child was referred to a physician for a complete physical examination. The diagnosis of this examination showed the need for the removal of his tonsils and adenoids. This operation was performed about two months after the remedial work had begun. There was no noticeable change in the boy except that he seemed to be more energetic after he had entirely recovered from the operation. One factor, however, is ability and willingness to put forth effort and lack of impediment to effort.

In order to enlist the cooperation of the parents a consultation was held with the parents of each child. An informal visit was made to the home to check the home environment. One of the cases was from a home of unfavorable social and economic conditions. One was from a home of very favorable environment. The other cases were from homes of average social and economic conditions.

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<sup>10</sup>

Ibid., p. 577.

The remedial instruction was scheduled so that it became a definite part of each pupil's daily program. Care was taken to see that the remedial instruction did not deprive the pupils of any enjoyable activity in which they desired to have an active part. Instead of depriving these pupils of school activities they especially enjoy, the writer encouraged them to take part in games, athletics, and other school activities.

Since the three pupils, designated as A, B, and C, were in the writer's home room the program was arranged so as not to let other pupils in the room feel that the remedial instruction was a penalty that was being applied to these special pupils. Every effort possible was made to keep the pupils receiving special aid from being embarrassed and to interest them in their work. These three pupils worked with the remainder of the group in spelling, arithmetic, language, art, and music. Activities in these subjects worked out around reading as a center was arranged for the entire group of pupils.

Individual reading instruction was also provided for the other problem cases designated as D, E, F, and G at a definite time each day. A schedule was arranged so that a period of twenty to thirty minutes in length was devoted to each pupil. Through the cooperation of the home room teachers of these pupils, they were provided with opportunities to have carefully arranged

reading experiences during the day. Individual instruction was given to cases D, E, F, and G in a room where no one was present except the pupil and the teacher. Cases A, B, and C, also, received individual instruction in a room where no one was present except the pupil and the teacher during the first two months of instruction. The rest of the time they were instructed in a classroom where the third grade was present. This was done so that the writer could begin remedial work with the other cases.

The remedial instruction was based on the specific needs and interests of the learner. The instruction given followed the same principles that are observed in regular class work, with the exception of certain digressions to meet the particular need of each individual. The first and most important thing to accomplish was to engage the child's interest and cooperation in overcoming any defect. An effort was made to make the pupil feel that he must assume most of the responsibility for improving his reading ability. It was also necessary for him to feel that the work being given him was a privilege. Each child's individual difficulties were explained to him and things pointed out to him that he could do to help overcome the difficulties.

The writer strove to retain an optimistic attitude and to gain the child's confidence. Pennell and Cusack<sup>11</sup>

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Mary E. Pennell, and Alice M. Cusack, The Teaching of Reading for Better Living, p. 56.

state that the teacher's attitude toward a child who is being given remedial work in reading is one of the most important factors in overcoming a defect. Hildreth<sup>12</sup> states that it is not so much the method of instruction used in retraining that is the important factor in improvement, but the opportunity the special arrangements make for the individual to read under the supervision of a sympathetic, tolerant friend who is able to find out the specific problems and difficulties of the child of whatever nature they may be. This author also claims that remedial instruction is more difficult than normal initial instruction because wrong habits must be destroyed and unfavorable attitudes overcome. Hildreth believes that growth or maturity and responsiveness rather than method is the important factor in the learning process. Tinker<sup>13</sup> believes that motivation is very important in remedial instruction.

The requirements of each child were kept within his learning span so that achievements worthy of recognition could always be found. Evidence of success seemed to encourage the pupils to continue their work more than anything. Individual records of successes and

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<sup>12</sup>Hildreth, op. cit., p. 676.<sup>13</sup>Miles A. Tinker, "Remedial Methods for Non-Readers," School and Society, Vol. 40, No. 1034.

and errors were both kept by the pupil and the teacher. This created a competitive impulse in the child which caused him to increase his rate of improvement.

The writer tried to select materials for the remedial work that would have real content value and appeal to the pupils. The material chosen was within the pupil's range of mastery. This was a more difficult task with the older pupils as they were not interested in the material that contained such a small vocabulary. In order to arouse and sustain the interest of the pupil and to prepare him for the comprehension of all types of reading, the material had to be of various types. Blackboard work and printed charts were used at first with retarded primary children.

All printed materials used by the remedial pupils were those which they had never seen or handled before. This new material helped to create an interest in reading by arousing the pupil's curiosity as to what the books contained. Workbooks, textbooks, library books, children's newspaper, and magazines formed the basic material of the instruction for the cases who were able to read. Materials of different types based on the same vocabulary were used in order to give the pupils practice in recognition of new words which they had mastered, to improve comprehension, and to increase the

rate of reading. The Work Play Series;<sup>14</sup> The Curriculum Foundation Series;<sup>15</sup> Alice and Jerry Series;<sup>16</sup> Child Development Series;<sup>17</sup> and Social Science Readers<sup>18</sup> were used in this study because of the various types of material in each series based on almost the same vocabulary.

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A. I. Gates, M. B. Huber, and J. Y. Ayer, The Work-Play Book Series, Grades 1-4.

15

William S. Gray (Directing Editor), The Curriculum Foundation Series, Grades 1-4.

16

Julia Hahn, and Julia Harris, The Child Development Readers, Grades 1-3.

17

Mable O'Donnell and Alice Carey, The Alice and Jerry Books, Grades 1-2.

18

Blanche Dearborn, Social Science Readers.

## CHAPTER III

## CASE STUDIES

Case A. A Third Grade Boy Who Had  
Difficulty in Comprehension

## 1. Case History:

Case A was a boy in the first half of the third grade at the time the diagnosis began. He was mentally mature for the grade in which he was placed but was retarded in reading to such an extent that his parents had become alarmed. His work in other subjects was satisfactory when verbal directions were given. His past records showed that he entered school when he was six years and three months of age and had experienced reading difficulty since that time. The parents of this boy reported that he had acquired a dislike for reading during the second half of the first grade. This boy had been promoted each year despite his weakness in reading. He had attended public school regularly and had been sent to one private summer school to take extra work in reading.

Case A is an only child and is from a home above the average in social and economic conditions. He had been offered every opportunity favorable to rapid development.

## 2. Diagnosis:

Case A's C. A.<sup>1</sup> was 8.6 years. On the Stanford Binet Test his I. Q.<sup>2</sup> was 105, which gave him a M. A.<sup>3</sup> of 9.0 and a M. G.<sup>4</sup> of 3.5.

The results of the Betts Ready to Read Tests showed no defects in visual or auditory acuity. From the finger sighting test and the handedness tests given he was found to have right-eye and right-hand dominance.

Standard reading achievement tests and informal reading tests were given to determine Case A's accomplishments in reading. Table I includes the names of the

TABLE I

CASE A'S READING GRADE SCORES  
ON FIVE TESTS, FIRST SET

Tests	Novem- ber	Standard for Mental Age
1. Gates Primary Reading Test: Form 1		
Word Recognition	1.8	3.5
Sentence Reading	1.5	3.5
Paragraph Reading	1.5	3.5
2. Metropolitan Primary Reading Tests:		
Word Picture	1.6	3.7
Word Recognition	2.1	3.7
Word Meaning	1.5	3.7
Reading Completion	1.6	3.7
Paragraph Reading	0.0	3.7
Vocabulary	1.8	3.7
3. Williams Primary Reading Test:	1.6	3.7
4. Gray's Oral Reading Test:	1.9	3.5
5. Gates Graded Word Pronunciation Test:	1.8	3.5

1. C. A. = Chronological Age  
2. I. Q. = Intelligence Quotient  
3. M. A. = Mental Age  
4. M. G. = Mental Grade



reading tests which were given, the reading grade made, and the standard reading grade scores for his mental age.

The results of the standard reading tests and the informal reading tests indicated that Case A was retarded in all phases of reading but that he was somewhat better in oral reading and isolated word recognition than in comprehension of silent reading. After a careful examination of the test material it became apparent that Case A's specific difficulty was lack of ability to comprehend material read. The cause of his inability to comprehend the material read was overemphasis on correct recognition and pronunciation of words rather than upon thought getting. This accounted for his ability to read better orally than silently. On Gray's Oral Reading Paragraphs he read slowly, without any expression. He carefully studied the words that gave him difficulty and repeated the phrases that contained the difficult words. Before attempting the pronunciation of a new word he spelled the word to himself. He used lip movement during silent reading.

### 3. Remedial Instruction:

Case A was given individual reading instruction that would increase his ability to comprehend. Because he disliked reading, it was necessary to arouse an interest in reading before real progress could be made. Since he enjoyed his art classes, he was asked to do

some special work in art. The instructor wrote all the directions for drawing, coloring, cutting, and assembling parts on the blackboard. The boy became interested in reading and following the directions. This art period was gradually changed to a reading period. Word and picture checking exercises, phrase and picture matching games, and the reading of single paragraphs followed by comprehension exercises were substituted for the art materials. Later, easy, interesting books were given him to read. Motives were provided for all the reading during the period of remedial instruction and comprehension was carefully checked after the reading of each assignment. Opportunities were provided for reading in leisure time.

The difficulties caused from lip movement and ways of overcoming the habit were explained to the pupil. Devices used were: 1. Holding finger on the lips, 2. Pressing the tongue in the roof of the mouth, 3. Pressing the tongue between the teeth. Oral reading was practiced on material after it had been read silently and comprehension had been checked. Word recognition was taught incidentally. He was encouraged to use context clues as the basis method of word recognition. Phonetic analysis and syllabication were stressed in both spelling and in reading.

After Case A had received two months of remedial instruction he was given the Gates Primary Reading Test, Form II. Table II contains the reading grade scores made before the remedial work began, the scores made two months later, and the standard reading grade scores for his mental age.

TABLE II

CASE A'S REPEATED READING GRADE SCORES,  
SHOWING PROGRESS

Test	Novem- ber	Janu- ary	Standard Reading Scores for Mental Age
Gates Primary Reading Test:	Form I	Form II	
Word Recognition	1.8	2.5	3.6
Sentence Reading	1.5	2.7	3.6
Paragraph Reading	1.5	2.5	3.6

The reading grade scores made on these tests showed an improvement of seven months in word recognition, twelve months in sentence reading, and ten months in paragraph reading. The evidence of improvement in comprehension was very encouraging to this pupil.

The remedial instruction was continued two months longer. Reading material that contained a vocabulary on the level with his reading grade was provided for him. More drill was given on word meaning and word recognition. Speed in silent reading was stressed during the last two months of the instruction.

## 4. Results of the Training:

At the end of four months of individual reading instruction Case A was given standard reading tests again. The reading grade scores which he made in November, January, and March and the standard reading grade scores for his mental age are included in Table III.

TABLE III  
PROGRESS CHART OF CASE A ON  
STANDARD READING TESTS

Tests	Novem-ber	Janu-ary	March	Standard for Mental Age
1. Gates Primary Reading Test:	Form I	Form II	Form III	
Word Recognition	1.8	2.5	3.3	3.8
Sentence Reading	1.5	2.7	3.4	3.8
Paragraph Reading	1.5	2.5	3.7	3.8
2. Metropolitan Primary Reading Test:	Form I		Form II	
Word Picture	1.6		3.3	4.0
Word Recognition	2.1		3.3	4.0
Word Meaning	1.5		3.8	4.0
Reading Completion	1.6		4.0	4.0
Paragraph Reading	0.0		4.0	4.0
Vocabulary	1.8		4.0	4.0
3. Williams Primary Reading Test:	1.6		4.7	4.0
4. Gray's Oral Reading Test:	1.9		3.9	3.8
5. Gates Graded Word Pronunciation Test:	1.8		3.8	3.8
6. Gates Silent Reading Test:			Form I	
Grades 3-8:				
General Significance			3.8	3.8
Prediction of Outcome			3.9	3.8
Precise Direction			4.0	3.8
Details			3.9	3.8

The March scores made on the Gates Primary Reading Tests and the first four tests on the Metropolitan Primary Tests were the highest scores given on those tests. In order to check Case A's achievement in reading, more accurately, the Gates Silent Reading Test for grades three to eight was given to him at the end of the period of instruction.

The scores made on the tests indicated that Case A had made considerable progress in all phases of reading. His reading grade scores equalled the reading grade scores for his mental age.

After the individual remedial instruction was discontinued this boy did satisfactory work in reading in the second half of the third grade which was the grade level for his mental age.

Case B. A Third Grade Boy Who Had  
Difficulty in Word Recognition

1. Case History:

Case B was a boy in the first half of the third grade when the study of his case began. He had experienced difficulty in reading since he first entered school. His work in arithmetic, spelling, and language had been unsatisfactory since he entered the second grade. He had been considered dull by his former teachers because of his inability to progress in his school work.

Case B was the oldest in a family of three children, one boy and two girls. His sister in the second grade was doing average second grade work. This boy had not received much encouragement to read at home. There were very few books in the home suitable for him to read. The social and economic conditions of this family were average. His father was a clerk in a bank and his mother worked in a store. The children were cared for during the day by their grandfather.

2. Diagnosis:

Case B's C. A. was 8.6 years. On the Stanford Binet Test his I. Q. was 114, which gave him a M. A. of 9.9 and a M. G. of 4.1. He rated above the average in intelligence.

The results of the Betts Ready to Read Tests showed normal visual and auditory acuity. The handedness and

eyedness tests showed right-hand and right-eye dominance. This boy was referred to a physician for a physical examination. It was necessary that his tonsils and adenoids be removed but this operation was not performed until three months after the remedial instruction began.

A study of the reading difficulties of this case was made through the use of standardized reading tests and informal reading tests. The names of the standard reading achievement tests used in the diagnosis, the reading grade scores made, and the standard reading grade scores for his mental age are included in Table IV.

TABLE IV

CASE B'S READING GRADE SCORES ON  
FIVE TESTS, FIRST SET

Tests	Novem- ber	Standard for Mental Age
1. Gates Primary Reading Test:	Form I	
Word Recognition	1.8	4.2
Sentence Reading	2.1	4.0
Paragraph Reading	2.1	4.0
2. Metropolitan Primary Reading Test:		
Word Picture	1.7	4.4
Word Recognition	1.7	4.4
Word Meaning	1.8	4.4
Reading Completion	2.2	4.4
Paragraph Reading	2.3	4.4
Vocabulary	1.8	4.4
3. Williams Primary Reading Test:	1.9	4.0
4. Gray's Oral Reading Test:	1.8	4.0
5. Gates Graded Word Pronunciation Test:	1.7	4.0

The reading grade scores indicated that Case B was greatly retarded in reading for both his chronological age and his mental age. A careful study of this case showed that his major difficulty was in word recognition. He was unable to recognize words because of his inability to combine the use of phonetic analysis, visual analysis, and syllabication with his ability to use context clues. It was evident from his oral reading that he depended upon the context as an aid in pronunciation and for meaning. He confused such words as "then" and "when"; "there" and "where"; "me" and "we"; "so" and "on"; "home" and "house"; and "come" and "came". His slow rate of reading was due to excessive lip movement and an inadequate sight vocabulary.

Lack of adequate home adjustment which would make for a good place to read and someone interested in the results of his reading may have been the cause of his being retarded in reading.

### 3. Remedial Instruction:

Remedial instruction that would develop independence in word recognition and a more fluent rate of reading was organized. The instructor secured a group of first readers that Case B had never handled. After Case B had read the stories silently, comprehension was checked by his reading orally the parts of the story that contained the answers to questions. During his



oral reading words were selected, on which he needed drill. A record was made of these words. They were reviewed each day at the beginning of the period until he was able to recognize them quickly. It was not necessary to stress the use of context clues, since he was already efficient in this skill. Configuration and word analysis were emphasized. Phonetic analysis, visual analysis, and syllabication of words were stressed in his spelling, as well as, in reading.

The following games were used to increase Case B's ability in recognizing words.

- a. Arranging words in groups according to their initial, middle, or ending sound.
- b. Selecting words that rhyme.
- c. Adding the endings, ing, er, and ed to words.
- d. Flash card drills.

Case B kept a record of his errors and successes in word recognition. The evidence of success created an interest in his work. No doubt the teacher's interest in his success was a further important factor since the mother may have had little time to attend to her son's hopes and aspirations. As Case B's ability in word recognition increased, he was given more difficult material to read.

After eight weeks of individual reading instruction he was given the Gates Primary Reading Tests, Form II.

The reading grade scores which he made before the training began, the scores made eight weeks later, and the standard reading grade scores for his mental age are shown in Table V.

TABLE V  
CASE B'S REPEATED READING GRADE SCORES,  
SHOWING PROGRESS

Tests	Novem-	Janu-	Standard for Mental Age
	ber Form I	ary Form II	
Gates Primary Reading Test:			
Word Recognition	1.8	3.3	4.2
Sentence Reading	2.1	3.2	4.2
Paragraph Reading	2.1	3.4	4.2

The reading grade scores made on these tests indicated that he had made rapid improvement in the recognition of words and in the comprehension of sentences and paragraphs.

The remedial reading instruction was extended eight weeks longer. The reading material was changed often in order to keep Case B interested in the work. Audience reading situations were provided when it was possible. Comprehension and rate of reading were stressed more during the second half of the period of instruction than the first.

#### 4. Results of the Training:

At the end of the period of individual instruction for Case B standard achievement tests for reading were given again. Table VI includes the names of the tests

given, the reading grade scores which he made in November, January, and March, and the standard reading grade scores for his mental age.

TABLE VI  
PROGRESS CHART OF CASE B ON  
STANDARD READING TESTS

Tests	Novem- ber	Janu- ary	March	Standard for Mental Age
1. Gates Primary Reading Test:	Form I	Form II	Form III	
Word Recognition	1.8	3.3	3.3	4.4
Sentence Reading	2.1	3.2	3.4	4.4
Paragraph Reading	2.1	3.4	3.7	4.4
2. Metropolitan Primary Reading Test:	Form I		Form II	
Word Picture	1.7		3.3	4.7
Word Recognition	1.7		3.3	4.7
Word Meaning	1.8		3.8	4.7
Reading Completion	2.2		4.0	4.7
Paragraph Reading	2.3		4.3	4.7
Vocabulary	1.8		4.8	4.7
3. Williams Primary Reading Test:	1.9		4.8	4.6
4. Gray's Oral Reading Test;	1.8		4.4	4.4
5. Gates Graded Word Pronunciation Test:	1.7		4.4	4.4
6. Gates Silent Reading Test Grades 3-8:			Form I	
General Significance			4.3	4.4
Prediction of Outcomes			4.2	4.4
Precise Directions			4.2	4.4
Details			4.2	4.4

The March scores made on the Gates Primary Reading Test and the first four tests of the Metropolitan Primary Reading Test are the highest scores given on these tests. The Gates Silent Reading Tests for grade three to eight were given at the end of the training period to aid in checking Case B's accomplishments in reading.

The reading grade scores made on these tests showed that he had made marked progress in all phases of reading. His average reading grade was still five weeks below the reading grade for his mental age. However, his reading grade was one year above the grade for his chronological age. After carefully studying his test papers and observing his work it was evident that more practice in reading was all that he needed; plus someone who was interested in his growth improvement.

Case C. A Third Grade Boy Who Had Difficulty  
in All Phases of Reading

1. Case History:

Case C was a boy in the first half of the third grade at the time of the examination. He had experienced reading difficulties since he first entered school. After spending two years in the second grade he was promoted to the third grade despite the fact he could not read. At the time of this study he was doing satisfactory work in arithmetic. He also managed to memorize his spelling words, but his spelling was very unsatisfactory in other written work. Case C refused to read orally or silently from the third grade material that was being used in his class. He complained about the reading being too difficult for him. During silent reading he studied the pictures in the story.

Case C was the older of two children in this family. His sister in the second grade was also experiencing reading difficulty. The social and economic conditions of this family were average. There was no reading material in the home suitable for children to read. The city's daily newspaper, which does not contain a children's page, was the only reading material in the home.

2. Diagnosis:

Case C's C. A. was 9.6 years. On the Stanford Binet Test his I. Q. was 90, which gave him a M. A. of 8.7 years and a M. G. of 3.2

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Since his mental age was eight years and seven months he was mentally retarded eleven months.

The results of the Betts Ready to Read Tests indicated a defect in visual acuity. The child's parents had his eyes tested by an optometrist, who fitted him with glasses. The test showed no defect in auditory acuity. From the finger sighting test he was found to be right-eyed. In the handedness tests given him he was left-handed in three tests and right-handed in all others. The three tests in which he used his left hand were writing, cutting with the scissors, and eating with a spoon.

Standard reading achievement tests and informal reading tests were given to determine Case C's reading level. Table VII includes the names of the tests which were used, the reading grade scores made, and the standard reading grade scores for his mental age.

The results of the standard and the informal tests showed that Case C was retarded in all phases of reading. His level of reading on the Gates Test and Metropolitan Test was low first grade. He failed to score on the oral reading test. After examining the test material and observing the pupil at work it was learned that he had not acquired any method of word attack. He formed the habit of repeating phrases while waiting for the word to be pronounced for him. On the isolated word

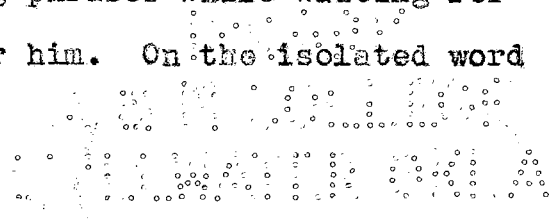


TABLE VII

CASE C'S READING GRADE SCORES ON  
FIVE TESTS, FIRST SET

Tests	Decem- ber	Standard for Mental Age
1. Gates Primary Reading Test: Form I		
Word Recognition	1.2	3.2
Sentence Reading	1.2	3.2
Paragraph Reading	1.4	3.2
2. Metropolitan Primary Reading Test:		
Word Picture	1.4	3.4
Word Recognition	1.3	3.4
Word Meaning	1.2	3.4
Sentence Completion	0.0	3.4
Paragraph Reading	0.0	3.4
Vocabulary	0.0	3.4
3. Williams Primary Reading Test:	1.4	3.4
4. Gray's Oral Reading Test:	0.0	3.2
5. Gates Graded Word Pronunciation Test:	1.4	3.2

pronunciation test he attempted fifteen of the words but pronounced only two correctly. On Monroe's<sup>1</sup> Auditory Word-Discrimination test he made four errors which indicated a slight difficulty in discrimination of sound.

The pairs of words which he confused the sounds were bud and but, chin and shin, bit and bet, and swing and sling.

### 3. Remedial Instruction:

It was necessary to arouse his interest in reading before attempting any method of instruction. Since he

<sup>1</sup> Marion Monroe, Children Who Cannot Read, p. 199.

was interested in his arithmetic work the instructor used arithmetic as a device for teaching reading. Story problems made of very few words were printed on unruled notebook paper. Each day he was given problems which contained five or six new words. Care was taken in selecting the words used in the story problems. Words were used that could be arranged so as to give emphasis to the sound of the initial letter or letters, the middle elements, and the last letter or letters. He was encouraged to use context clues and picture clues as an aid to word recognition. Pictures were used to illustrate some of the problems. Arithmetic problems were used for his reading material for four weeks. He acquired a sight vocabulary of about one hundred words.

#### EXAMPLES OF THE ARITHMETIC PROBLEMS

1. A farmer sold one cow for \$25 and one cow for \$23. How much money did he get for the two cows?
2. A farmer sold one cow for \$15, one cow for \$20, and one cow for \$24. How much money did he get for the three cows?
3. One cow was sold for \$50 and one was sold for \$22. How much did the farmer get for the two cows?



4. The farmer sold his big cow for \$40 and his small cow for \$20. Did he get more money for his big cow? How much more money did he get?
5. A boy told a farmer he wanted to buy five cows. The farmer sold the boy four cows. Did the boy get as many cows as he wanted?

The words that are underscored in the problems are the new words. The other words in the problems are repetitions of the words that have been used.

During the reading of these arithmetic problems Case C became interested in learning to read. He was then given easy reading material such as primers that he had never handled before. Motives were provided for both silent and oral reading during the period of instruction. The reading was immediately followed by oral or written comprehension exercises. Simple material was given him to read during his leisure time for entertainment. Word games and other drill exercises were used to help him in word recognition.

After Case C had received two months of individual reading instruction he was given the Gates Primary Reading Test, Form II. Table VIII contains the reading grade scores made before the remedial work began, the scores made two months later, and the standard reading grade scores for his mental age.

TABLE VIII

CASE C'S REPEATED READING GRADE SCORES  
SHOWING PROGRESS

Tests	Decem- ber	Febru- ary	Standard for Mental Age
Gates Primary Reading Test: Form I		Form II	
Word Recognition	1.2	2.1	3.5
Sentence Reading	1.2	2.4	3.5
Paragraph Reading	1.4	2.1	3.5

The reading scores made on these tests showed an improvement of eight months in word recognition, eleven months in sentence reading, and six months in paragraph reading.

Remedial instruction was continued two months longer. Various types of materials that were on the level with his increasing abilities were provided for him.

#### 4. Results of the Training:

At the end of the training period for Case C standard reading tests were given to him again. The reading grade scores which he made in December, February, and April, and the standard reading grade scores for his mental age are included in Table IX.

The scores indicated that Case C had made progress in all phases of reading but that he was not yet up to the standard for his mental age. The instructor suggested that individual remedial instruction be continued until his reading grade score equals or exceeds the standard score for his mental age.

TABLE IX  
 PROGRESS CHART OF CASE C ON  
 STANDARD READING TESTS

Tests	Decem- ber	Febru- ary	April	Standard for Mental Age
1. Gates Primary Reading Test:	Form I	Form II	Form III	
Word Recognition	1.2	2.1	3.0	3.5
Sentence Reading	1.2	2.4	3.1	3.5
Paragraph Reading	1.4	2.1	3.0	3.5
2. Metropolitan Primary Reading Test:	Form I		Form II	
Word Picture	1.4		3.3	3.7
Word Recognition	1.3		3.2	3.7
Word Meaning	1.2		3.2	3.7
Reading Completion	0.0		3.3	3.7
Paragraph Reading	0.0		3.2	3.7
Vocabulary	0.0		3.0	3.7
3. Williams Primary Reading Test:	1.4		3.2	3.7
4. Gray's Oral Reading Test:	0.0		3.0	3.5
5. Gates Graded Word Pronunciation Test:	1.4		3.0	3.5

Case D. A First Grade Boy Who Had Made  
no Progress in Reading

1. Case History:

Case D was a boy in the second half of the first grade when the study of this case began. He entered school at the age of five years and nine months. The records showed that he had spent fourteen months in the first grade. He had repeated the first half of grade one three times. His parents became alarmed when he failed to learn to read the third time he repeated the work.

Case D was the younger boy in a family of two children. His brother, who was in the fifth grade, was doing satisfactory work. The home environment of this pupil was average. His father was a barber. Since he was the youngest child the environmental atmosphere may have been over protected.

2. Diagnosis:

Case D's C. A. was 7.3 years. On the Stanford Binet Test his I. Q. was 102, which gave him a M. A. of 7.5 years and a M. G. of 2.1. The Betts Ready to Read Tests showed that he had normal visual and auditory acuity. The handedness and eyedness tests indicated right-hand and right-eye dominance. There was no physical defect to interfere with his learning.

This boy was unable to score on any of the standard reading tests because of his inability to read. The scores made on the Metropolitan Reading Readiness Test, which was given to him, indicated that he was ready to master the subject of reading.

### 3. Remedial Instruction:

It was not difficult to get Case D to attend the period of individual reading instruction. He seemed to be more happy when he was doing his work alone than when he was in the room with his classmates. The individual instruction began with a study of word recognition and word meaning. Words and phrases were first introduced to Case D by means of pictures. The words and phrases were printed on cards separate from the pictures so that he could practice matching the words with the pictures. Words and sentences which denote action, such as, run, hop, sit, Run to the door., Hop to the door., were taught in the form of a game. To train Case D to note similarities and differences in words he was allowed to select words that were alike from a number of word cards. Two or more words alike were considered a book. He was interested in seeing how many books he could make with the words.

As soon as Case D showed an interest in reading from printed material he was given a primer<sup>(1)</sup> and the

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(1) A. L. Gates, and Huber, "The Work Play Books," "Peter and Peggy," Primer.

preparatory workbook<sup>(2)</sup> that accompanied the reader for his basic reading material. A word picture dictionary was made of the most difficult words by this child. Most of the pictures and words used in making the dictionary were cut out of a workbook that had been used. This dictionary helped Case D to identify the names of words and to grasp the meaning of the words.

When Case D had completed the primer material a first reader<sup>(3)</sup> and the preparatory workbook<sup>(4)</sup> that accompanied it were used for his basic reading material. During the last month of instruction more attention was called to word analysis. Pre-primers, primers, and first readers were used as the supplementary reading material.

At the end of two months of individual reading instruction for Case D standard reading achievement tests were given to him again. Table X includes the names of the tests, the reading grade scores made before the training began, the scores made at the end of the training period, and the standard reading grade score for his mental age.

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(2)

Ibid., Preparatory Book, "Peter and Peggy".

(3)

Ibid., First Reader, Round the Year.

(4)

Ibid., Preparatory Book, Round the Year.

TABLE X

## PROGRESS CHART OF CASE D ON STANDARD READING TESTS

Tests	March	May	Standard for Mental Age
1. Gates Primary Reading Test:	Form I	Form II	
Word Recognition	0.0	2.0	2.3
Sentence Reading	0.0	9.9	2.3
Paragraph Reading	0.0	1.8	2.3
2. Metropolitan Primary Reading Test:			
Word Picture	0.0	1.9	2.4
Word Recognition	0.0	2.1	2.4
Word Meaning	0.0	2.2	2.4
Reading Completion	0.0	1.8	2.4
Paragraph Reading	0.0	1.8	2.4
Vocabulary	0.0	2.1	2.4
3. Gray's Oral Reading Test:	0.0	1.8	2.3

## 4. Results:

The reading grade scores made at the end of the training period indicated that Case D had made marked progress in all phases of reading but that he was still retarded in reading for his mental age. His teacher reported that he had also made rapid improvement in the rest of his school work.

Case E. A Second Grade Boy Who Had Difficulty  
in Rate of Reading

1. Case History:

Case E was a boy in the first half of the second grade when the study of this case began. The records showed that he was retained in the second half of grade one because of his reading difficulty and that he was now repeating the first half of the second grade for the third time. The records also showed that he had attended school regularly. His teacher reported that he was still doing unsatisfactory work in reading and that spelling was the only thing in which he seemed interested.

Case E was the oldest child in a family of six children. His brother, who was in grade one, was doing excellent work in both silent and oral reading. This boy came from a home where social and economic conditions were quite unfavorable. There was no reading material in the home. The parents were not interested in school work. The father was a day laborer.

2. Diagnosis:

Case E's C. A. was 8.8 years. On the Stanford Binet Test his I. Q. was 100, which gave him a M. A. of 8.8 and a M. G. of 3.3.

The results of the Betts Ready to Read Tests showed that his visual and auditory acuity were normal. The handedness and eyedness tests given showed that he



had right-eye and right-hand dominance. There was no physical defect to cause his reading difficulty.

Table XI gives the names of the reading tests, the reading grade scores made at the beginning of the diagnosis, and the standard reading grade scores for his mental grade.

TABLE XI

CASE E'S READING GRADE SCORES  
ON FOUR TESTS, FIRST SET

Tests	Febru- ary	Standard for Mental Age
1. Gates Primary Reading	Form I	
Test:		
Word Recognition	1.7	3.3
Sentence Reading	1.5	3.3
Paragraph Reading	1.4	3.3
2. Metropolitan Reading		
Test:		
Word Meaning	1.8	3.5
Word Recognition	1.5	3.5
Word Meaning	1.4	3.5
Reading Completion	1.4	3.5
Paragraph Reading	1.7	3.5
Vocabulary	1.7	3.5
3. Gray's Oral Reading		
Test:	0.0	3.3
4. Gates Graded Word Pronunciation Test	1.8	3.3

The grade scores made on the tests indicated that Case E was retarded almost two years below both his chronological and mental age.

A careful study of his papers and observation of his reading showed that his major difficulty was rate of reading which was due to excessive articulation and to an inadequate method of word recognition. He became

so absorbed in pronouncing the words that he lost the thought of the sentence. He whispered every word to himself as he read silently and spelled the words that he was unable to recognize. On the Gates Word Pronunciation Test he pronounced ten words correctly but spelled each word before he attempted to pronounce it.

### 3. Remedial Instruction:

Since Case E's only method of word recognition was spelling his words, it was necessary to begin the instruction with devices that would develop a more accurate and independent method of word recognition.

The first step taken was to require Case E to try to read silently and orally in primers without repeating or spelling words. He was allowed to read orally in order to select the words with which he was unfamiliar. When he came to words that he could not pronounce, the instructor explained the use of context clues and configuration. After he had formed the habit of using context clues and noticing similarities and differences in words, word analysis was emphasized. The elements of the new words were taught by calling his attention to them in words that he already knew as sight words.

The new words learned each day were printed on cards in groups according to the initial, middle, or ending sound, thus stressing phonetic elements of words.

The words that were printed on the cards were reviewed for a few minutes at the beginning of each period. Emphasis here was on auditory as well as on visual training.

A game called, "A Game of Sounds", in which these new words were used, proved to be very interesting and helpful to Case E. He was given a number of cards with one of the words on each card. The instructor asked the pupil to listen carefully for one sound, such as, the initial, middle, or ending sound, in each word that she pronounced. A star was stamped on the card under the word each time that he pronounced it correctly. Flash card drills stressing phrases as well as words were also used in order to develop speed in recognition of words and increase his eye-span.

Gradually more difficult reading material was given Case E. Timing the exercises helped to stop his repeating and increased his rate of reading. Comprehension was checked by selecting the right word or phrase from a group of words or phrases, by selecting a word to complete a sentence, and by checking statements with yes or no.

After Case E had received five weeks of individual instruction, he was given the Gates Primary Reading Tests, Form II. Table XII contains the reading grade scores made before the remedial work began, the scores

made five weeks later, and the standard reading scores for his mental age.

TABLE XII

CASE E'S REPEATED READING GRADE SCORES  
SHOWING PROGRESS

Tests	Febru- ary	March	Standard for Mental Age
Gates Primary Reading Test:			
Word Recognition	1.7	2.2	3.4
Sentence Reading	1.5	2.3	3.4
Paragraph Reading	1.4	2.4	3.4

The reading grade scores made showed improvement in all phases of reading although he had not improved as much as the instructor had expected.

The remedial instruction was continued six weeks longer. The material was changed often as to type and difficulty so as to hold his interest and to meet his increasing ability in reading skills. At the end of the eleven weeks period of training the standard reading tests were given again. The reading grade scores made before the remedial work began, the score made after five weeks of training, the reading grade scores made at the end of the training period, and the scores for his mental age are included in Table XIII.

TABLE XIII  
 PROGRESS CHART OF CASE E ON  
 STANDARD READING TESTS

Tests	Febru- ary	March	May	Standard for Mental Age
1. Gates Primary Reading				
Test:	Form I	Form II	Form III	
Word Recognition	1.7	2.2	2.9	3.5
Sentence Reading	1.5	2.3	2.9	3.5
Paragraph Reading	1.4	2.4	2.7	3.5
2. Metropolitan Primary				
Reading Test:	Form I		Form II	
Word Picture	1.8		2.9	3.6
Word Recognition	1.5		2.7	3.6
Word Meaning	1.4		3.1	3.6
Reading Completion	1.4		3.3	3.6
Paragraph Reading	1.7		2.9	3.6
Vocabulary	1.7		3.0	3.6
3. Gray's Oral Reading				
Test:	0.0		2.6	3.5
4. Gates Graded Word				
Pronunciation Test:	1.8		2.9	3.5

The scores made showed progress in reading but Case E was still retarded below his mental age. The instructor suggested that remedial instruction be continued until his reading grade score equals or exceeds the standard for his mental age.

Case F. A Fourth Grade Boy Who Had  
Difficulty in Comprehension

1. Case History:

Case F was a boy struggling in the second half of grade four at the time the diagnosis of the case began. He had been promoted to the second half of the fourth grade on condition. At the end of the first term of the semester he was still failing in the subjects that required a great amount of reading. His arithmetic work was satisfactory.

He was the older in a family of two children. His sister in the second grade was doing satisfactory work. This boy was from a home of excellent social environment. The economic condition was average. His mother had always shown an interest in his school work.

2. Diagnosis:

At the time of the examination Case F's C. A. was 9.7 years. On the Stanford Binet Test his I. Q. was 108, which gave him a M. A. of 10.5 years and a M. G. of 4.6.

The results of the Betts Ready to Read Tests showed no defects in visual or auditory acuity. The finger sighting test and the handedness tests indicated right-hand and right-eye dominance. He had no physical defect which could have caused his reading difficulties.

A further study of this case was made through the use of standardized reading tests and informal reading

tests. The names of the standard reading achievement tests used in the diagnosis of this case, the reading grade scores made, and the standard reading grade scores for his mental age are included in Table XIV.

TABLE XIV  
CASE F'S READING GRADE SCORES ON  
FIVE TESTS, FIRST SET

Tests	March	Standard for Mental Age
1. Gates Silent Reading Test: Form I		
General Significance	3.2	4.6
Prediction of Outcomes	3.2	4.6
Precise Directions	2.9	4.6
Details	2.8	4.6
2. Monroe's Standardized Silent Reading Test:		
Comprehension	3.3	4.6
Rate	4.1	4.6
3. Pressey Diagnostic Reading Test:		
Vocabulary Meaning	3.3	4.3
Paragraph Meaning	3.3	4.3
Rate	4.3	4.3
4. Gray's Oral Reading Test:	3.5	4.6
5. Gates Graded Word Pronunciation Test:	3.2	4.6

The reading grade scores made on the tests indicated that Case F's major difficulty was comprehension in silent reading due to rapid and inaccurate reading and to his inadequate method of word recognition. He was retarded more than a year in oral reading and in comprehension of silent reading. He was retarded only a few months in rate of silent reading. During both the standard tests and the informal tests he read at a rapid

rate, skipping the unfamiliar words. He read orally at a moderate rate, but he was inaccurate in word pronunciation. He recognized words in context somewhat better than words in isolation. He attempted to use phonetic analysis in pronouncing the words but he was not familiar enough with the sounds of the elements to use a phonetic attack successfully. The first two tests of the Gates Silent Reading Tests showed that Case F was much better in reading to get a general impression of the material than he was in reading to note details. His rapid inaccurate, superficial reading was the cause of his inability to grasp the details as he read.

### 3. Remedial Instruction:

Remedial instruction was organized that would increase Case F's ability in comprehension, word recognition, and vocabulary meaning. The reading material (1) was based on the four types of reading, A, B, C, and D, on which he was tested with the Gates Silent Reading Test. This material consisted of four small books, one for each type of reading.

Case F was first given the material, type D, to read. This material was to improve his ability in reading to note the significant details in a paragraph. The material contained paragraphs which the pupil read silently to discover quickly and accurately the important

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(1)

A. I. Gates and C. C. Peardon, the Gates-Pearson Practice Exercises, Types, A, B, C, and D.



details. Comprehension was checked by selecting the correct phrase for the answer of each of five questions.

Example: 1. For what was the hay used?

(a) To feed cattle

(b) To fill carts

(c) To feed chickens

A record was kept of Case F's successes and errors. The exercises were not timed since his greatest difficulty was poor and inaccurate word recognition shown as rapid reading. Case F reread the material orally to correct the mistakes he made in comprehension and thus to secure from context and phonetics more accurate word study. During his oral reading the words which he failed to recognize quickly were selected for word study. He was trained to use configuration and word analysis as his method of recognizing the new words. He had already developed the ability to use context clues.

Case F asked if he might study the pronunciation of his spelling words during the period of individual instruction, which showed a development of appreciation and feeling of need for improved methods of word study. His request was granted. Each time he was given new words in spelling he brought them to his individual reading period. Studying the pronunciation and meaning of these words aided in developing his ability to use phonetic analysis.

The reading material, Type D, was alternated with material, Type C, which he read to understand precise directions; material, Type B, which he read to predict beyond given events; material, Type A, which he read to note significant details in a paragraph. The same methods were used in checking the comprehension of this material and in studying the new words that were used with the first material. A separate record was kept for each type of reading. The improvement shown by these records kept Case F interested in his reading.

At the end of four weeks of training Case F was given the second form of the Gates Silent Reading Tests and the Monroe's Standardized Reading Tests. The reading grade scores made before the remedial training began, the scores made four weeks later, and the reading grade scores for his mental age are included in Table XV.

TABLE XV

CASE F'S REPEATED READING GRADE SCORES,  
SHOWING PROGRESS

Tests			Standard for
	March	April	Mental Age
1. Gates Silent Reading Test:	Form I	Form II	
General Significance	3.2	3.8	4.7
Prediction of Outcomes	3.2	3.7	4.7
Precise Directions	2.9	3.5	4.7
Details	2.8	3.4	4.7
2. Monroe's Standardized			
Reading Test:			
Comprehension	3.3	3.6	4.7
Rate	4.1	4.5	4.7

The scores made during the four weeks showed an average of five months improvement in comprehension and four months in rate of silent reading. He was still somewhat better in reading to get the general impression of a passage than in grasping the details. The remedial instruction was continued four weeks longer. Reading to understand directions and to note details was stressed. Practice in word recognition and oral reading was also stressed during the second period of individual instruction.

At the end of the eight weeks training period the standard reading tests were given again. Table XVI includes the reading grade scores made before the training began, the scores made at the end of the first four weeks of training, the scores made at the end of the training period, and the standard reading grade scores for his mental age.

The scores made at the end of the training period indicated that Case F made considerable progress in silent reading during the eight weeks of training. He also improved in oral reading and word recognition. He was still retarded in reading about six months below the reading grade score for his mental age.

TABLE XVI  
 PROGRESS CHART OF CASE F ON  
 STANDARD READING TESTS

Tests	March	April	May	Standard for Mental Age
1. Gates Silent Reading Test:	Form I	Form II	Form III	
General Significance		3.8	4.5	4.8
Prediction of Outcomes		3.7	4.2	4.8
Precise Directions		3.5	4.0	4.8
Details	2.8	3.4	4.2	4.8
2. Monroe's Standard Silent Reading Test:				
Comprehension	3.3	3.6	4.1	4.8
Rate	4.1	4.5	4.9	4.8
3. Pressey Diagnostic Reading Test:	Form I		Form II	
Vocabulary Meaning	3.B		4B	4A
Paragraph Meaning	3.B		4B	4A
Rate	4B		4A	4A
4. Gray's Oral Reading Test:	3.5		4.2	4.8
5. Gates Graded Word Pronunciation Test	3.2		4.1	4.8

Case G. A Sixth Grade Boy Who Had  
Difficulty in Rate of Silent Reading

1. Case History:

Case G was a boy in grade six. His past records showed that he had experienced difficulties in reading since the beginning of the second grade. He entered school at the age of five years and seven months and was promoted to the second grade at the close of his first school year. He spent two years in the second grade and two years in the fourth grade. He was promoted from the fifth grade to the sixth grade last spring despite his weakness. During the time he had been in grade six he had made failing grades in reading, language, geography, and history.

Case G was an only child. His mother died when he was eight years old and since then he had lived with his grandmother. There are three older children in this family, whose records showed that they also encountered reading difficulties. The home in which this boy lives was of average social and economic circumstances.

2. Diagnosis:

Case G's C. A. was 12.11 years. On the Stanford Binet Test his I. Q. was 88, which gave him a M. A. of 11.2 years and a M. G. of 5.6.

Standard reading achievement tests were given to determine Case G's accomplishments in reading. Table XVII includes the names of the tests which were used, the

reading grade scores made, and the standard reading grade scores for his mental grade.

TABLE XVII

CASE G'S READING GRADE SCORES ON  
FIVE TESTS, FIRST SET

Tests	Febru- ary	Standard for Mental Age
1. Gates Silent Reading Test: Form I		
General Significance	3.2	5.6
Prediction of Outcomes	3.1	5.6
Precise Directions	3.5	5.6
Details	3.6	5.6
2. Monroe's Standardized Silent Reading Test:		
Comprehension	3.3	5.6
Rate	3.3	5.6
3. Pressey Diagnostic Reading Test:		
Vocabulary Meaning	4.B	5.B
Paragraph Meaning	3.A	5.B
Rate	3.B	5.B
4. Cray's Oral Reading Test	4.2	5.6
5. Gates Graded Word Pronunciation Test	4.0	5.6

The results of these tests indicated that Case G was retarded more than two years in silent reading in both rate and comprehension and about one year and a half in oral reading. He was somewhat better in oral reading than in isolated word recognition. After a careful examination of the tests it became apparent that Case G's specific difficulty was his slow rate of reading. The test material that he read was interpreted correctly but he read so slowly that his score equalled the standard for a third grade child. The cause of his slow reading was due to lack of skill in grouping words

and in word recognition. He read word by word orally and used no systematic method in attacking new words. There was no sign of excessive lip movement or finger pointing.

### 3. Remedial Instruction:

When Case C's difficulties were explained to him he was so anxious to receive the remedial aid that he came to school thirty minutes early in the mornings for the remedial work. Instruction that increased his speed in silent reading was given first. The material used was very easy to read and contained few, if any, new words. It was necessary to use easy material in order to promote rapid forward movements of the eyes which would aid in the grouping of words and increase the rate of reading. Short paragraphs were printed or written on the blackboard before the pupil came into the room. The sentences were divided into phrases by drawing a line under each phrase. Phrases were also marked in sentences in books and children's magazines for him to read. At first he read the sentences orally and grouped them as they were marked. Later, he read all sentences silently first. Comprehension was checked by completing sentences and answering questions with phrases. Flash cards containing phrases and sentences divided into phrases were also used to improve his ability in grouping words. The pupil practiced with this material until he was able to group his words without having them marked. Drill work in phrase reading was reviewed throughout the course.

The Gates-Pearson Practice Exercises in Reading,<sup>1</sup> Book III, the level most suitable for this pupil, was used next for the reading material because it consisted of short, interesting paragraphs with comprehension exercises. An individual record was made on which this pupil recorded the number of words read per minute. A record was also kept of his comprehension so as not to allow him to sacrifice comprehension for speed. He watched these records for improvement very closely.

In order to improve his ability in word recognition he was taught to use a left to right word attack, context clues, phonetic analysis, and word syllabication. To improve his oral reading, the material was read orally after it had been read silently. There was always a purpose for reading the passages orally such as, to verify a point or to read a description.

After Case G had received four weeks of remedial instruction he was given the second form of the Gates Silent Reading Tests and the Monroe's Reading Tests. Table XVIII contains the scores made before the remedial work began and the scores made four weeks later.

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<sup>1</sup>  
A. I. Gates and C. C. Pearson, The Gates-Pearson Exercises, Bureau of Publications, Teachers College, Columbia University.



TABLE XVIII  
CASE G'S REPEATED READING GRADE SCORES  
SHOWING PROGRESS

Tests	Febru- ary	March	Standard for Mental Age
1. Gates Silent Reading Test:	Form I	Form II	
General Significance	3.2	3.6	5.7
Prediction of Outcomes	3.1	3.5	5.7
—Presice Directions	3.5	3.8	5.7
Details	3.6	4.0	5.7
2. Monroe's Silent Reading Test:			
Comprehension	3.3	3.8	5.7
Rate	3.3	3.8	5.7

The reading grade scores made on these tests showed an improvement of four months in comprehension and five months in rate. The evidence of success in rate was very encouraging to this boy.

The instruction was continued four weeks longer using the same kind of material but supplementing it with library books and third and fourth grade texts that he had never used. Speech in silent reading and word recognition was stressed.

#### 4. Results:

The results of the remedial instruction for Case G are shown in Table XIX.

The records showed an improvement of about nine months in rate of reading and ten months in comprehension. Improvement was also made in oral reading and in isolated word recognition. Case G was still below the standard in all phases of reading. The instructor

suggested that remedial instruction be continued until he brought his reading grade up to standard.

TABLE XIX

PROGRESS CHART OF CASE G ON  
STANDARD READING TESTS

Tests	Febru- ary	March	April	Standard for Mental Age
1. Gates Silent Reading Test:	Form I	Form II	Form III	
General Significance	3.2	3.6	4.0	5.8
Prediction of Out-comes	3.1	3.5	3.9	5.8
Precise Directions	3.5	3.8	4.2	5.8
Details	3.6	4.0	4.5	5.8
2. Monroe's Standardized Silent Reading Test:				
Comprehension	3.3	3.8	4.6	5.8
Rate	3.3	3.8	4.2	5.8
3. Pressey Diagnostic Reading Test:	Form I		Form II	
Vocabulary Meaning	4B		4A	5A
Paragraph Meaning	3A		4A	5A
Rate	3.B		4B	5A
4. Gray's Oral Reading Test	4.2		4.7	5.8
5. Gates Graded Word Pronunciation Test	4.0		4.5	5.8

## CHAPTER IV

## CONCLUSION

As a result of the treatment of the reading disabilities of the elementary pupils included in this study, each pupil made marked progress in reading.

Motivation with stress on individual remedial instruction was found to be the most important factor in correcting the reading difficulties of these pupils. There were no particular methods or techniques found to be wholly responsible for the improvement which these pupils made in reading. Whenever there was sufficient motivation, the methods and techniques employed produced satisfactory results; without the motivation, there was no progress made in reading. Many of the devices, such as, re-telling of stories, dramatizations, and playing games, used in the remedial treatment were motivations within themselves. The individual instruction adapted to the individual needs of each pupil proved to be most valuable and effective in the remedial treatment. Through the individualized method each child's reading was motivated because the attention was directed to the specific difficulties, problems, and interests of the individual pupils. Explaining to the pupils the causes of their difficulties and ways of overcoming them motivated their reading.

The stress on word meaning, rate, and comprehension and the awareness of success also motivated their reading. It was the integration of the effects of the various motivations involved and including especially individual instruction that caused the improvement in reading.

The writer concludes from this study that motivation with stress on individual instruction is more important in the treatment of reading disabilities than the kind of methods or techniques employed.

The following list contains the techniques with which motivation was used in developing skill in reading.

- I. Techniques for developing ability in word recognition.
  - A. Games.
    1. Word and picture matching game.
    2. Phrase and picture matching game.
    3. Arranging words in groups.
    4. Selecting rhyming words.
    5. Adding endings (s, ed, ing) to words.
    6. Book Game.
    7. Game of Sounds.
    8. Flash card drills.
  - B. Word picture-dictionary.
  - C. Use of context clues, configuration and word analysis.

- II. Techniques for developing the ability to comprehend the material read silently.
  - A. Providing motives for reading.
  - B. Tests and other activities for checking comprehension.
  - C. Individual records of successes and errors with graphs for showing improvement.
  - D. Providing opportunities for reading in leisure time.
  - F. Special attention to reducing lip movement through a variety of devices.
- III. Techniques for developing the ability to read orally.
  - A. Providing incentives for reading orally.
  - B. Developing a method of word recognition.
  - C. Developing an adequate sight vocabulary.
  - D. Silent reading preceding oral reading.
- IV. Techniques for developing the ability to read at a normal rate.
  - A. Timing the exercises.
  - B. Practice in phrase reading.
- V. Miscellaneous techniques for developing the ability to read.
  - A. Sympathetic and individual attention and instruction.
  - B. Explaining to the pupil the causes of his difficulties and ways of overcoming them.

- C. Providing material on the level of each child's reading ability with exercises progressively graded in difficulty.
- D. Providing a sufficient amount of interesting material of various types and levels of difficulty.
- E. Arousing interest through activities such as dramatization, re-telling stories, illustrative drawings, and through the selection of attractive books and fascinating content.
- F. Integration of experiences. Discussions, conversations and other activities, to relate their experiences in life situations with which they are familiar to the reading context.
- G. Continued social relationships with the entire group in activities in the various subjects worked out around reading as a center.

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