ABSTRACT

Hamilton, Lottie Mae Tierce, The Development and Evaluation of an Experimental Reading Program (Readiness) for Visually Handicapped Children. August, 1949. pp. (No.)

Problem. This was the study of the development and evaluation of an experimental reading program for a group of visually handicapped elementary school pupils as contrasted and compared with a standard or regular reading program for a control group of similarly handicapped pupils. The problem was to explain the two programs, to note their method of application, and to determine their respective results.

Method. In a Southern urban negro school two groups of five visually handicapped first grade pupils with comparatively similar mental and chronological ages and degrees of visual deficiency were given reading programs of ten weeks' duration. For the control group the regular method of teaching reading was used. For the experimental group an experimental method emphasizing free play, muscular activity, auditory stimuli, and sight-ease material was employed. At the end of the period Pressey Reading Readiness Tests were administered to determine the comparative degree of progress toward reading readiness made by each group.

Findings. The results of the comparison as a whole show that of the children in the control or standard-method group,
four showed no improvement in reading readiness, whereas in
the experimental group four of the children showed improve-
ment ranging from slight to considerable in degree. The
number available for experiment was so small, however, and
external factors in some cases so significant that the only
definite conclusion which may be drawn from this study is
that, in this experiment at least, the standardized or ortho-
dox method of teaching reading to the visually handicapped
is unsuccessful.
THE DEVELOPMENT AND EVALUATION OF AN EXPERIMENTAL READING PROGRAM (READINESS) FOR VISUALLY HANDICAPPED CHILDREN

A Thesis
Presented to:
the Faculty of the Department of Special Education
Indiana State Teachers College

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Education

by
Lottie Mae Tierce Hamilton
August, 1949
The thesis of Lottie Mae Tierce Hamilton,
Contribution of the Graduate School, Indiana State Teachers College, Number 656, under the title
The Development and Evaluation of an Experimental Reading Program (Readiness) for Visually Handicapped Children
is hereby approved as counting toward the completion of the Master's degree in the amount of 8 hours' credit.

Committee on thesis:

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Edward T. Jordan, Chairman

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CHAPTER I

INTRODUCTION

The ability to read is one of man's more important acquisitions. Many educators consider it an almost fundamental prerequisite to the acquisition of knowledge. Greene and Gray have stated, "Reading and listening comprise the basic aspect of the receptive language arts."\(^1\) Bruckner and Melby have pointed out:

There has been a growing recognition of the importance of the role played by reading in the cultural, vocational and recreational life of the nation. Modern social, economic and political developments have forced the individual to depend more and more upon reading as a source of information and guidance.\(^2\)

Harrison notes, "Reading is and probably always will be the most fundamental skill taught and used in and out of school."\(^3\) Pennell and Cusack have said, "To give us the broad information needed in life we must depend to a great

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extent on the matter contained in books, magazines, newspapers and other printed materials." Cole points out, "Reading is the basic subject in elementary school," while Watkins contends, "There is probably no problem in which primary teachers are more interested today than in the problem of reading."

Inability to read, then, is usually the fixed boundary line which separates the illiterate from the literate, the uneducated from the educated, the whole citizen of a society from the incomplete citizen of a society. Auditory and verbal capacities may, in some instances, compensate for deficiencies in reading. The radio, recordings, television, and possibly even the telephone may and often do play an important part in the educational process. In the ultimate analysis, however, the child who cannot read usually suffers in the ease, skill, and rapidity of his academic progress. Particularly is this true in areas where financial inability or other reasons result in failure to provide the additional means of auditory educational approach.

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Visual deficiency, the inability to see well, is one of the primary factors in reading retardation.

It would appear, therefore, that any study and experimentation, however limited, which investigates the problem of fitting the visually handicapped to read more successfully might be of some interest and value.

Statement of the Problem

Since this is to be the study of the development and evaluation of an experimental reading program (readiness) for visually handicapped children, the problem of the study may be stated as follows: to determine the relative effectiveness of the orthodox approach to beginning reading as contrasted with an experimental approach (involving free play, muscular activity, and auditory stimuli) for two specific groups of visually handicapped children. In other words, two groups of children, both groups with comparatively equal visual handicaps, were presented each with a different approach to beginning reading, one approach, the usual one, the other approach, the experimental; and the relative efficacy of each approach was observed and evaluated.

Definition of Terms

For the purpose of clarity in this discussion, the
terms employed are briefly, perhaps arbitrarily, defined. No exact definition of the term "visually handicapped" exists in contemporary literature in this field. Normal vision is usually listed, without certain technical and scientific limitations, as 20/20 vision. That is, the child can see clearly at twenty feet objects which should be seen at twenty feet. Partially-seeing children are those classified as having less than 20/70 vision. That is, after all refractive aid has been secured, they can see only at twenty feet objects which they should see clearly at seventy or more feet. The area of defective vision included in this study is arbitrarily limited to those children with less than 20/20 vision but with better than 20/70 vision. This falls within the range as limited by Baker. In the use of the Snellen E Chart, which is, of course, an elementary method of eye inspection rather than eye examination, Baker says: "... when a child is unable to read the E's (In the Snellen E Chart) at the proper distance it is evident that...


8 Loc. cit.

there is probably some vision defect."\textsuperscript{10} Such limitation comprises a faulty and incomplete method of analysis, it is true. The Snellen test is by no means comprehensive. It, for example, makes no pretense of measuring astigmatism. The Betts Telebinocular measuring instrument is much more satisfactory. Examination of refraction by the skilled and careful ophthalmologist is still preferable. Unfortunately, however, elementary school teachers and administrators in areas of less advanced socio-economic development are confronted with reality, not with an ideal. They must, perforce, work with and experiment with available materials. The definition of visually handicapped, then, as used in this study, includes those children with less than 20/20 vision and better than 20/70 vision as revealed by the Snellen E test.

The term "readiness for reading" means the ability and desire to begin to read. Harrison says that reading requires that specific and accurate verbal responses be made to specific visual stimuli.

\textsuperscript{11} Certain well-developed psycho-physical organizations are required for the accurate reception of the specific visual stimuli and for co-ordinating impressions of these stimuli with learned patterns of verbal response. If these organizations for reception and

\textsuperscript{10} Ibid.

\textsuperscript{11} Harrison, \textit{op. cit.}, pp. 1-2.
co-ordination are undeveloped or are interfered with in any way, we cannot have reading. If patterns of verbal response are inadequate, or are impaired, reading cannot be adequately carried on. . . . There is a need of readiness for reading before adequate reading can result.

Summarizing these definitions, we ask, then, what is the better method, the regular or the experimental, for determining and developing the ability and desire of the visually handicapped, or those with vision between 20/20 and 20/70, to begin to read?

**Importance of the Problem**

As has been stated, the ability to read is the *sine qua non* of educational progress and an important, almost an imperative, requirement in the development of the educated man.12 Reading and understanding what has been read answer so many needs of the child--and the adult--that a cataloguing of such needs as answered by reading must almost reach the infinite. The child has to read, for example, to know what is happening in the world, to find his way about, to understand assignments and directions, to find answers for specific questions, to gather information, to learn how to act in new situations, to work complicated problems, to

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reach conclusions as to principles, values, causal and effectual relationships, to identify and weigh propaganda, and to search for and, if possible, discover the truth. 13

At the same time, the child who is visually handicapped has between him and the printed page a veil, a curtain ranging from the diaphanous to the opaque through which he must attempt to grope his way to understanding. Unfortunately and tragically enough, parents, despite repeated suggestions, instructions, and other efforts by teachers, sometimes refuse to recognize the necessity of lifting the veil through the media of trained and competent eye specialists, mechanical aids such as glasses, and other such necessary parental and extra-pedagogical attentions. Such refusal may spring from financial incapacity, ignorance, obduracy, procrastination, or other causes. The appalling evidence presented by the White House Conference on Special Education, 14 that one child in every five suffers from some form of visual deficiency, coupled with parental neglect of remedial efforts toward the elimination of such deficiency, makes it obligatory upon the sympathetic and conscientious teacher to experiment toward the alleviation or by-passing of such conditions.

13 Ibid.

Scope of the Study

The scope of this study, then, includes: (1) a survey of literature in the field of visual deficiency and experimental reading readiness approaches; (2) the isolation of two groups of five visually handicapped children in a Southern urban elementary school located in a population district with parents of middle-class to poor socio-economic backgrounds; (3) the conducting of an experiment for reading readiness with the two groups of visually handicapped children, the details of the experiment to be described under Procedure; (4) the considering of the case histories of the ten subjects; and (5) the formation of certain evaluations and conclusions.

Related Literature and Experimentation

Literature in the field of reading, its teaching, testing, determination of readiness for, and remedial experimentation is exhaustive. Of importance are the yearbooks of the National Society for the Study of Education, especially the Thirty-Sixty Yearbook, Part I, The Teaching of Reading; the Thirty-Eighth Yearbook, Part I, Child Development and the Curriculum; the Forty-Third Yearbook, Part II, Teaching Language in the Elementary Schools; the Forty-Fifth Yearbook, Part I, The Measurement of Understanding; and the
Forty-Sixth Yearbook, Part II, Early Childhood Education.

M. Lucille Harrison's small and readable volume, Reading Readiness, while not definitive, is a searching analysis of difficulties confronting and suggestions for reading advancement. The chapters in Introduction to Exceptional Children by Harry J. Baker which deal with the visually handicapped, the partially seeing, and the blind are useful, as are Baker's earlier books in the field. Frampton's and Rowell's Education of the Handicapped; the American Educational Research Association's "Education of Exceptional Children and Minority Groups," in the Review of Educational Research, 1941; the two White House Conference Reports; and the Journal of Exceptional Children all contain valuable and useful information, suggestions, and ideas.

In the field of methodology and techniques, The Improvement of Reading by Luella Cole, The Prevention and Correction of Reading Difficulties by E. A. Betts, Diagnostic and Remedial Teaching by Pennell and Cusack, and Reading Activities in the Primary Grades by Storm and Smith have material useful to the student and the experimenter. These and other works of some importance will be listed in the bibliography.

Experimentation in the fields of the visually handicapped and improved reading techniques, while not limitless,
has been of considerable importance. The Morphett and Washburne Winnetka study on the proper mental age of children as a prerequisite to reading readiness contains the conclusion that readiness for reading entails the attainment of a mental age of at least six years. Hinshelwood's experiments with aphasias and word-blindness, Head's investigation of cortical injuries, and Lashley's furtherance of such investigation all consider physical retardation or injury as an impediment to the development of reading readiness. Other investigations, notably those by Van Wagener and Betts, show that the memory span of ideas


16 Loc. cit.


19 K. S. Lashley, Brain Mechanisms and Intelligence (Chicago: The University of Chicago Press, 1929), page not given.

20 M. J. Van Wagener, Reading Readiness Test (Minneapolis: Educational Test Bureau, Inc., 1934), page not given.

or the auditory span has a high correlation with success in reading in the first grade.

Investigations have also been made (inconclusively) in the fields of eye and hand dominance by Dearborn, Gates and Bennett, Monroe, and Hildreth, and others. Specifically, however, the exact comparison of two methods of approaching readiness for the visually handicapped (with such handicaps not corrected) has not, as yet, received the benefit of complete and elaborate experimentation and investigation. The present study is but a beginning and incomplete step in what could prove to be an interesting and fruitful field of educational research.

Nature and Procedure of Developing the Experiment

(Outline of Procedure)

Two groups (five in each group) of visually defective

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children at Level One in a Southern urban elementary school, groups with relatively comparable chronological and mental ages, intelligence quotients, visual deficiency, and socio-economic backgrounds, were given reading programs of ten weeks' duration to determine readiness for reading. Group A, the control group, received a regular program of beginning reading to be described further in the third chapter of this study, but consisting primarily of an integration of the alphabetic, the phonetic, and the analytic methods of teaching. Group B, the experimental group, received a program with emphasis on free play, muscular activity, auditory stimuli, and the use of sight-ease materials (methods also to be described in the third chapter of this study).

At the beginning of the ten-weeks' period, the two groups were given standardized tests (specifically the Revised Stanford-Binet Test of Intelligence and the Betts Ready to Read Tests) to determine mental ages, intelligence quotients, and other necessary data. Upon the conclusion of the ten-weeks' experimental period, the groups were again tested under similar conditions and by similar testing devices. The tests were given, of course, for the purpose of determining readiness for reading. At the end of the experimental period, the relative progress of the
two groups was analyzed, contrasted, and evaluated. The methods, nature and results of the experiment form the major considerations of this study.
CHAPTER II

DESCRIPTION OF THE CONTROL AND THE EXPERIMENTAL GROUPS--STATISTICAL DATA

As was suggested in the first chapter of this study, two groups of visually handicapped children in Grade One were given two different programs of training, one orthdox, the other experimental, each program having as its objective the promotion of reading readiness. The purpose of the experiment was to determine, if possible, the preferred method for developing the readiness to read. It is proposed in this chapter to give the necessary, or at least the available, statistical data concerning the two groups. Individual case histories will be presented later in the study.

Determination of the readiness to read may be measured (in summary and somewhat elementary fashion, but with a considerable degree of validity) from the following three criteria: (1) mental maturation or intellectual development; (2) physical readiness; (3) personal background--which includes social and other factors.\(^1\)

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1 Harrison, op. cit., p. 5.
As Harrison has pointed out:

Reading is primarily an intellectual process, but in order to carry out that process in the normal way certain physical factors are necessary, so we may say that in reality reading is dependent upon certain psycho-physical co-ordination or is fundamentally a psycho-physical process.2

It was decided, therefore, in the beginning of this experiment to isolate in an urban elementary school two small groups of visually handicapped children and to test them both mentally and physically to discover, if possible, their readiness to read. The two groups, after a ten-weeks' period of application of two different methods of preparation for reading readiness, were again tested to discover which of two methods was the superior in assisting each member of the group to begin to read. The general statistical data at the beginning of the testing follows.3 More individual information will be presented later in the study under the chapter heading, "Case Histories."

Statistical Data for Group A--the Control4 Group

1. Number - Five
   This (the same number of subjects as was

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2 Ibid., p. 17.
3 See Table I, p. 20.
4 By "control" is meant that these pupils received standard, orthodox primary reading training, the method to be described in Chapter III.
employed subsequently in Group B) is, of course, unsatisfactory because of its quantitative limitation. Since this was to be a test, however, in reading readiness for the visually deficient, the experimentation was limited to visually deficient and to those visually deficient whose parents for various reasons manifested little or no interest in correcting such handicaps. Only ten beginning primary students in the relatively large urban school, which was the locale of this experiment, qualified completely under the above conditions. Five of these were placed in Group A, the other five in Group B.

2. **Names**

   a. Doris
   b. Patricia
   c. Eugene
   d. Dan
   e. Phyllis

3. **Chronological Ages**

   a. 6-1
   b. 6-2
   c. 6-9

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5 All of the statistical information below is summarized in Table I, p. 20.
Chronological ages range from 6-1 to 7-4. The average chronological age was 6-7 plus.

4. Mental Ages
   a. 5-9
   b. 6-0
   c. 6-1
   d. 6-9
   e. 6-11

The mental ages ranged from 5-9 to 6-11. The average mental age was 6-3 plus. It will be noted that only two of the students were well above the 6-6 limit, which is often considered necessary for the successful exhibition of readiness to read.

5. Primary Classification Test (Pressey) (Form A)
   Raw scores and mental ages
   a. 25 (M.A. 5-9)
   b. 29 (M.A. 6-0)
   c. 30 (M.A. 6-1)
   d. 38 (M.A. 6-9)
   e. 40 (M.A. 6-11)

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6 L. C. Pressey, Primary Classification Test (Form A) (For grades 1-2)
These raw scores ranging from 25 to 40 and revealing mental ages of from 5-9 to 6-11 show a marked degree of correlation with the Stanford-Binet Intelligence Measurements to be given next.

6. Intelligence Quotients (Revised Stanford-Binet)
   a. 83
   b. 89
   c. 93
   d. 101
   e. 111

The intelligence quotients ranged from 83 to 111. The average was 95 plus. Two of the subjects, those with IQ's of 83 and 89, fell into the dull classification, two into the average classification of 90-110, and the fifth narrowly into the classification of superior with an IQ of 111.

7. School experience

Three of the children had just entered school for the first time when these tests were administered. One child had been in school four months. The fifth child was beginning a second year of school attendance. He had failed the first grade previously.

8. Socio-economic background

The socio-economic background of the subjects
was poor. Individual backgrounds will be considered in the case histories. Generalizing, the school which was the locale of the experiment is a Negro school located in a congested urban district in a Southern city. The school board members, superintendent, and other administrators are vitally and energetically interested in improving conditions and are achieving some measure of success, but they are handicapped by lack of finances and by public indifference. The school is located in a section infested by taverns and "honky-tonks." Playground facilities and space are limited. The children who form the subject of this experiment come almost completely from homes which are below the average in cultural background and economic support. Though the great majority of the patrons of the district are conscientiously desirous of improving their children's environment and increasing their opportunities in every possible way, the parents of the children who form the two groups surveyed in this study, either through lack of financial ability and interest or because of poor educational background or domestic or other troubles, were unable to participate in the experiment as much as might have been desirable. Two of the children come from broken homes, the mothers supporting them by working in a laundry. Two are from the homes of itinerent farm labor and have
**TABLE I**

**GENERAL STATISTICAL DATA FOR GROUP A--THE CONTROL GROUP**

<table>
<thead>
<tr>
<th>Name</th>
<th>C. A.</th>
<th>M. A.</th>
<th>I. Q.</th>
<th>Pressey Raw Score</th>
<th>Vision Snellen E Chart</th>
<th>School Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doris</td>
<td>6-2</td>
<td>5-9</td>
<td>93</td>
<td>25</td>
<td>20/40 R. 20/20 L.</td>
<td>None</td>
</tr>
<tr>
<td>Patricia</td>
<td>6-9</td>
<td>6-0</td>
<td>89</td>
<td>29</td>
<td>20/20 R. 20/40 L.</td>
<td>None</td>
</tr>
<tr>
<td>Phyllis</td>
<td>6-10</td>
<td>6-11</td>
<td>101</td>
<td>40</td>
<td>20/20 R. 20/40 L.</td>
<td>Four months</td>
</tr>
<tr>
<td>Eugene</td>
<td>6-1</td>
<td>6-9</td>
<td>111</td>
<td>38</td>
<td>20/20 R. 20/40 L.</td>
<td>None</td>
</tr>
<tr>
<td>Dan</td>
<td>7-4</td>
<td>6-1</td>
<td>83</td>
<td>30</td>
<td>20/40 R. 20/60 L.</td>
<td>One year</td>
</tr>
</tbody>
</table>
spent much school time, even at this early age, picking cotton. The fifth child is the son of a barber. Three of the children come from homes with a very low standard of literacy. Only one of the parents has had as much as a high school education.

9. Visual deficiency

With testing by means of the Snellen E Chart, it was found that four of the children had 20/40 vision, three in the left eye, two in the right eye. One child’s vision was further impaired by some difficulty with both far-point and near-point fusion. One child had 20/60 vision in the left eye and 20/40 in the right eye. Individual disabilities, as revealed by continual observation by the teacher, included inability to see likenesses and differences and indications of reversal tendencies, together with individual physical visual handicaps such as no binocular vision, poor fusion, poor acuity, imbalance, and ametropia. These will be pointed out in the case histories.

Statistical Data for Group B—the Experimental Group

1. Number— Five

7 E. A. Betts Ready to Read Tests and Snellen E Charts.

8 The statistical data below is contained in tabular form in Table II, p. 25.
2. **Names**
   a. Vivian
   b. Leslie
   c. Samuel
   d. Ernestine
   e. Mary Nell

3. **Chronological Ages**
   a. 6-1
   b. 6-8
   c. 6-10
   d. 6-11
   e. 7-2

Chronological ages range from 6-1 to 7-2. These are comparable to the chronological age range in Group A, 6-1 to 7-4. The chronological ages of this group are slightly higher than that of Group A. The average age of Group A is 6-7 plus, while that of Group B is 6-8 plus.

4. **Mental Ages**
   a. 5-7
   b. 6-1
   c. 6-2
   d. 7-1
   e. 7-4
The mental ages of this group range from 5-7 to 7-4. Again, this is almost the range of Group A which is 5-9 to 6-11. The average mental age of Group A is 6-3 plus, that of Group B, 6-5 plus. Thus, Group B, which has the slightly higher chronological age, also has the slightly higher mental age. It will be noted that both averages are below the norm. This, of course, is to be expected since the members of both groups are visually handicapped.

5. **Primary Classification Test (Pressey)**

Raw scores and mental ages

- a. 23 (M.A. 5-7)
- b. 30 (M.A. 6-1)
- c. 31 (M.A. 6-2)
- d. 42 (M.A. 7-1)
- e. 45 (M.A. 7-4)

Again, the raw scores, ranging from 23 to 48 and showing a mental age range of from 5-7 to 7-4, revealed a marked degree of correlation with the group's intelligence quotients, as shown by the Stanford-Binet tests.

6. **Intelligence Quotients (Revised Stanford-Binet)**

- a. 86
- b. 89
- c. 92
These intelligence quotients range from 86 to 110. As in Group A, two of the subjects fall into the dull classification. Three of the subjects fit into the average classification, with one of those three verging closely on the superior. The average of these IQ's is almost 95 $\frac{4}{5}$, while the average of Group A is 95 $\frac{2}{5}$. Thus the average of the IQ's of the two groups is almost identical, with both groups fitting into the low average classification of intelligence.

7. **School experience**

One of the children was repeating Grade One. The other four were beginning pupils.

8. **Socio-economic background**

The background of the members of Group B was analogous to that of Group A. One child came from a broken home. Of the ten parents of the five children, two of the parents were illiterate; six had only an elementary school education; one had graduated from high school; data on one was unavailable. Two of the wage earners were common laborers in the stockyards; one was a domestic servant. The other two families were agricultural workers.
### TABLE II

**GENERAL STATISTICAL DATA FOR GROUP B--**

**THE EXPERIMENTAL GROUP**

<table>
<thead>
<tr>
<th>Name</th>
<th>C. A.</th>
<th>M. A.</th>
<th>I. Q.</th>
<th>Pressey Raw Score</th>
<th>Vision Snellen E Chart</th>
<th>School Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vivian</td>
<td>6-1</td>
<td>5-7</td>
<td>92</td>
<td>23</td>
<td>20/40 R. 20/20 L.</td>
<td>None</td>
</tr>
<tr>
<td>Leslie</td>
<td>6-10</td>
<td>6-1</td>
<td>89</td>
<td>30</td>
<td>20/20 R. 20/40 L.</td>
<td>None</td>
</tr>
<tr>
<td>Samuel</td>
<td>6-11</td>
<td>7-1</td>
<td>102</td>
<td>42</td>
<td>20/20 R. 20/40 L.</td>
<td>None</td>
</tr>
<tr>
<td>Ernestine</td>
<td>6-8</td>
<td>7-4</td>
<td>110</td>
<td>45</td>
<td>20/20 R. 20/20 L.</td>
<td>None</td>
</tr>
<tr>
<td>Mary Nell</td>
<td>7-2</td>
<td>6-2</td>
<td>86</td>
<td>31</td>
<td>20/40 R. 20/40 L.</td>
<td>One year</td>
</tr>
</tbody>
</table>
9. **Visual deficiency**

Again using the Snellen E Chart, it was found that three of the children had 20/40 vision in one eye. In each instance vision in the other eye was normal. One child had 20/20 vision in both eyes but suffered from astigmatism. The fifth child had 20/40 vision in both eyes. All showed defects ranging from poor fusion and muscular imbalance to the absence of binocular vision.

**Summary**

In this statistical study of two groups of five children each, it was found that both groups had: (1) an average chronological age for their grade level; (2) a slightly below average mental age; (3) a slightly below average Pressey classification; (4) a low average IQ; (5) little school experience; (6) a faulty socio-economic background; and (7) a number of visual defects.
CHAPTER III

THE READING PROGRAMS

In this chapter are described two separate reading programs, the one the regularly employed or standard method of teaching reading, the other an experimental approach. The objective of both reading programs was to promote reading readiness. The reason for using two programs was to determine which was preferable.

Description of the Standard Program for Group A -- the Control Group

Orthodox methods of teaching reading have received many descriptions and designations. As Baker has stated, "Many methods of teaching have been devised." Each author has his own terminology for denoting the various standardized approaches to the pedagogy of reading. Patterson summarizes them as follows: (1) the synthetic method, (2) the analytic method, and (3) the analytic-synthetic method. By "synthetic" he means the employing of such devices as the memorization of the alphabet

1 Baker, op. cit., p. 445.
2 Samuel W. Patterson, Teaching the Child to Read (Garden City, New York: Doubleday, Doran and Company, 1930), p. 30.
and the discrimination of word sounds, or the study of phonics. In the analytic method the teacher tells a story, discusses it, and supervises the study of significant words. The analytic-synthetic is, according to Patterson, eclectic, incorporating the best features of both the analytic and the synthetic methods with a continually shifting emphasis on each.  

Cole labels the methods as: (1) the alphabetic-oral; (2) the phonetic; (3) the look-and-say; and (4) the phrase-reading method. By the alphabetic-oral method, each child is taught to spell out each word, usually orally, as the first step toward learning it. By the phonetic method, the child is taught through pronouncing words. By the look-and-say method, the teacher writes a word, pronounces it, uses it, and has the children repeat it. In the phrase-reading method, the look-and-say idea is expanded to include whole phrases or short sentences instead of words.

Storm and Smith classify the methods as: (1) the alphabetic; (2) the sound; and (3) the word. These are

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3 Patterson, op. cit., pp. 31-38.
4 Cole, op. cit., pp. 4-14.
5 Loc. cit.
but variations of the above classifications as are Brueckner's and Melby's similar divisions into (a) oral reading and (b) silent reading; and (a) work type reading and (b) recreational type reading. 7

The standardized type of reading instruction as employed in this experiment for the control Group A was in a sense a composite or an integration of the above methods. Many authorities contend that children with a mental age of less than 6-6 or with visual handicaps are not ready to read and will not be ready to read until a further maturation and a correction of the visual defects. 8 Still other authorities disagree at least on the score of mental age. Storm and Smith contend:

The majority of first grade children are prepared to begin reading either at the beginning of the first grade or very early in the year and are able to complete satisfactorily all the requirements of this period by the end of that grade. 9

Though the weight of authority leans perhaps toward the Cole school of thought and suggests delay or refusal to teach reading until sufficient maturity has been reached, and visual defects corrected, many primary teachers are

7 Brueckner and Melby, op. cit., p. 248.
8 Cole, op. cit., pp. 258-263.
9 Storm and Smith, op. cit., p. 149.
confronted with a condition, not a theory. The children are present. Parents, patrons, and others expect, or even demand, that they be taught, maturity or no, visual defects or no. In answer to that expectation or demand, the primary teachers in the school which is the locale of this experiment developed for Group A regular, orthodox, standardized procedures of teaching in an attempt to prepare them for reading. This regular program was, in a sense, a combination of the four common approaches as listed by Cole, reference to which has been made above.

The look-and-say method was employed for the first two weeks of the ten-weeks' period with common words of one syllable. That is, the teacher wrote a word on the board, pronounced it, asked the children to look at it and to repeat it aloud. She would then use it in a sentence or a story or by action or otherwise demonstrate its meaning, the meaning of the entire word, not its letters or syllables.10 This is a simpler variation of the Watkins method.11

After employing the look-and-say technique for two weeks, resort was made to the phonic method. That is, the children were taught to pronounce words of one syllable as

those words were written on the blackboard. The words were then developed into the phonograms or "word families" such as "at," "rat," "sat," "cat," and other similar words. This method was primarily oral and was used for three weeks. It was succeeded by the phrase-reading method which is an extension of the look-and-say method. In the phrase-reading method the teacher told a story, using very short, very simple sentences and, when possible, illustrating the phrases and sentences with appropriate actions. The phrases and sentences of the story were written on the board and repeated by teacher and children. This method was employed for three weeks. The final two weeks of the program were spent in a reversion to the ancient alphabetic-oral method. The children were shown the word, its constituent letters were spelled out and pronounced by the teacher, and then the children were required to go through the same process.

As will be suggested in the final chapter of this study, none of the methods were completely satisfactory in realizing the objectives of good primary reading instruction. Those objectives are, of course, as varied and multifold as are the authors who have written concerning the subject of reading, but the objectives may be summarized,

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as they are listed in the Twenty-Fourth Yearbook of the National Society for the Study of Education, namely:

(1) Rich and varied experience through reading.
(2) Strong motives for a permanent interest in reading.
(3) Desirable attitudes and economical and effective habits and skills. 13

**Description of the Experimental Program for Group B, the Experimental Group**

Baker states, "No one method is the proper and only way to teach all children."14 Especially is this conclusion true of the visually handicapped. Nor can any one method apply to an entire group. The handicapped child benefits, perhaps, from individual instruction as much as from group instruction. Though the size of this experimental group, five pupils, had its disadvantages in that the group was too small for the results to be widely indicative, yet the numerical limitation of the group permitted more individual attention and instruction than would otherwise have been practicable.

A great number of methods have been suggested for

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13 Quoted in Brueckner and Melby, *op. cit.*, p. 257.
the instillation of reading readiness in those visually handicapped. Some of these will be suggested briefly below. The simplest and most obvious help for the visually handicapped, artificial aid, was not available to the members of this experimental group. These were children without glasses.

Remedial measure for visual deficiency as suggested by Harrison include seating the pupil near the center of activity, insuring adequate lighting, correcting faulty visual habits, and using sight-saving materials such as sight-ease type.\textsuperscript{15} Pennell and Cusack advance a number of techniques such as the identification of phonetic elements in word syllables, the use of sound charts, making phonetic booklets, comparing words for similarities and differences, classifying words by phonetic similarities, using phonograms, counting the words on a page that begin with a certain sound, finding the words belonging to a certain "family," arranging words of different families under proper headings, completing sentences with words of a different "family," playing card games with phonetic elements, learning to write consonants and "families," noting relations between phonetics and spelling, giving tests that require an intrinsic use of phonetics, and using activities,

\textsuperscript{15} Harrison, \textit{op. cit.}, p. 123.
The use of action and direction sentences (the child's doing what the teacher writes on the blackboard), short-exposure drills (cards flashed rapidly before the student who writes what he sees), the use of sight-ease typed selections (the preparation and submission of interesting typed material or printed material in which the lines are much farther apart than is ordinary), picture-dictionary word cards, matching games, different word games, and picture-checking tests.

Baker and Leland like good lighting, large printed type, the use of chalk which makes a clear, distinct line, the use of large script by the teacher, a soft pencil which makes a dark heavy line for the pupil, kinaesthetic exercises such as writing the words on the board in large script or tracing over such words, phonograms and consonant sounds, exercises in the correct muscular use of the eyes, the use of phonics, flash cards, blackboard stories, providing attractive books, a variety of such books, compliments for efforts, play periods, and the like. Cole says...

17 Storm and Smith, op. cit., pp. 358-366.
flatly that if the child is mentally deficient, he should be put into a class for the mentally deficient; if visually defective, all instruction should be suspended until the defect is remedied.\textsuperscript{19} If, as was the case in this particular experiment, neither of the above solutions was possible, Cole urged teacher adaptation. The child with defective vision must compensate, that is, be taught to use his ears and speech to the greatest possible extent. Emotional blocks should be treated by complete ignoring of reading. Free play is good. Personal consultations are advised. Small assignments, the cultivation of visual memory, kin-aesthetic tracing, and the use of the old-fashioned alphabet-oral method should be employed.\textsuperscript{20} Brueckner and Melby advocate a great number of remedial devices and practices, among them the use of phonics, including consonant blends, vowel sounds, the study of words in "families," finding words in books with blends, finding blends in blackboard work, comparing likenesses and differences, substituting words, inserting words, omitting words, and increasing the child's eye span. Increase of the eye span, Brueckner and Melby suggest, may be achieved by flash cards, the silent reading of simple material, plus the

\textsuperscript{19} Cole, op. cit., pp. 263-269.

\textsuperscript{20} Loc. cit.
pupil's looking up and telling what was read, using cards for phrases and sentences, work in phrasing with a strict attention to the requirement of slow and easy work, and the refusal to hurry the child. 21

The methods used for Experimental Group B, as surveyed in this study, include a combination of a number of the above suggestions. For the purpose of convenience in discussion, the methods employed may be designated arbitrarily as: (1) the use of sight-ease type; (2) the resort to auditory stimuli; (3) the use of large muscle activities; and (4) the continual use of the free play period.

In all flash cards, blackboard exercises, and printed material, various forms of sight-ease type or script were used. By "sight-ease" is meant that the writing was larger and more widely spaced than is customarily employed for those with normal vision. Gray suggests one variation of this method:

The child read interesting selections in three forms. In Form I the words were typed five letter-spaces apart; in Form II they were grouped together in thought units, with the units themselves five spaces apart; in Form III the words were typewritten one-letter space apart as in ordinary print. In Form I the child was instructed to read the words in order without looking to the right or left of a given word until it was recognized. In all three forms

close attention was given to seeing the words in order. 22

Auditory stimuli were employed as a method of compensation as suggested by Cole. 23 Since none of the children were able to read aloud, other methods of auditory stimuli were employed. For example, a simple Mother Goose rhyme would be printed in large type on the blackboard. The teacher would sing it. Then the teacher and children would sing it, the teacher pointing out the words on the blackboard as they sang. Phonograph records of songs and stories were used in the same manner, following the technique suggested by Patterson. 24 The phonic method was also employed.

Muscle activities were varied. Exercises were given in moving the eyes across the page of print. These were soon abandoned as it was quickly discovered that these exercises were beyond the pupils' mental understanding.

Much more satisfactory were kinaesthetics. The pupil with full arm movements traced over words the teacher had written on the blackboard, at the same time saying the word at the end of each tracing. This was repeated until no errors were made. This is a remedy proposed by Baker.

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23 Cole, op. cit., p. 263.

24 Patterson, op. cit., pp. 199-200.
and Leland. Curiously enough, some satisfactory experience was obtained from a large muscle exercise which suggests the charlatan. The pupils were taught and practiced the so-called "long swing" as advanced by Harold M. Peppard. The child in this exercise stood with his feet about six inches apart; then he turned the body slowly to the right in an arc of one hundred eighty degrees, at the same time turning the heel of the left foot and letting the eyes, arms, and head follow the body freely. The arc was then reversed to the left. This exercise was taken for five minutes twice a day. The pupils maintained that the exercise was relaxing or, as one of them put it, "makes meh eyes feel steady."

Free play was exactly what the name implies. No child in this group was forced to continue his reading lesson when he showed the slightest symptoms of fatigue or loss of interest. Instead, the reading was stopped while he was allowed to play, either in the room with available play material or on the playground.

Summary

This chapter has included: (1) a description of the orthodox program for the teaching of reading for


Group A--the control group, which employed the methods of: (a) the synthetic approach; (b) the analytic approach; and (c) the analytic-synthetic approach through the teaching of the alphabet, the sound, and the word itself; and (2) a description of the program for the teaching of reading employed for Group B--the experimental group, which employed the methods of: (a) the use of sight-ease type; (b) the resort to auditory stimuli; and (c) the use of large muscle activities, together with the continual resort to the free play period. The results of these individual and non-regulated methods will be suggested in the chapter of this study which considers evaluations. Some mention of them will also be made in the case studies immediately to follow.
CHAPTER IV

CASE STUDIES

In this chapter ten students forming the control and the experimental groups will be considered individually in order to determine the specific handicaps under which they labored and to discover what progress, if any, toward reading readiness they made during the ten-weeks' period of observation and analysis.

Case Records of Group A--the Control Group

Case Number 1

Statistical Data

Doris. Female. Chronological age, 6-2. Mental

The chronological age for this student and for all others whose case histories are included in this study was as of September 6, 1948. The mental ages of the students are based on the Flessey classification tests and the intelligence quotients on the Stanford-Binet revised intelligence test. (Both the Flessey and the Stanford-Binet data are given in order to allow for a wider basis of judgment. Ordinarily, of course, the I. Q. would be determined simply by dividing the mental age by the chronological age). Vision was measured by the Snellen E chart. The amount of school experience was found in the school records. Symptomatic behavior and socio-economic background were determined by teacher observation, interviews with the children, and visits and interviews with parents and neighbors.
Vision, right eye, 20/40; left eye, 20/20.

Symptomatic Behavior

1. Social
   b. Nervous. Continually chewed one of her long pigtails.
   c. As far as could be observed, never quarrelsome or bickering.
   d. Very silent in class.

2. Educational
   a. This was her first educational experience.
   b. She could read no words.
   c. She could interpret no-pictures, or, at least, refused to explain what could be seen in simple pictures.

3. Physical visual symptoms
   a. Said she could not see words or pictures.
   b. Was color blind.
   c. Was underweight and underheight.
   d. Sighted with left eye.

4. Other information

   Doris was the only child of an itinerant farm worker. Both father and mother were almost illiterate. They were apparently good-natured, claiming that they
had never struck the child and that they were undergoing some sacrifices to keep her in school. "I could be picking over in the East part of the state where it's two bits more a hundred," the father explained, "if t'wann't for wantin' Doris in school."

The parents failed, however, despite urgings, to recognize the necessity of having the eyes of Doris examined by an eye specialist.

5. Remedy

None except consultation with the parents and exposure to the standardized reading instructional program in Chapter III.

6. Results

a. No examination by an eye specialist has been made. No glasses have been obtained.

b. At the end of the ten-weeks' program, Doris was again given the Pressey Classification test and the Revised Stanford-Binet test. Despite the fact that she had taken these tests only shortly before, her scores were lower. Her Pressey raw score was 22; her Stanford-Binet I. Q. 91.

c. Social behavior showed neither improvement nor retrogression.

Case Number 2

Statistical Data

Patricia. Female. Chronological age, 6-9. Mental
age, 6-0. I. Q., 89. School experience, none.
Vision, right eye, 20/20; left eye, 20/40.

Symptomatic Behavior

1. Social
   a. Forward, aggressive and pushing. Attempted
to dominate the other little girls. Avoided
boys, saying that they were silly.
   b. Inattentive in class.
   c. Rude. Interrupted the conversation of others.
   d. Belligerent, pugilistic.

2. Educational
   a. Could read no words.
   b. Could not draw a line even resembling a
straight line.
   c. Called picture of apple on blackboard a
"hole."
   d. Tried to look at right rather than left side
of page.

3. Physical
   a. Had normal weight and height.
   b. Had some muscular disbalance in one eye
which occasionally turned inward.
   c. Refused to cooperate in sighting experiment.
   d. Said that words on the board or on a printed
page were not there.

4. Other information
   Patricia's mother was a divorced, illiterate
laundry worker. The whereabouts of the father were
unknown. The mother was uncooperative in discussing the child and termed eye examination and treatment "foolishness." The mother said that Patricia ran away from home often and frequently had to be whipped severely.

Patricia was a frequent absentee, and was twice discovered playing on the streets when her mother thought she was in school. She was inattentive in school and was a discipline problem.

5. Remedy
   a. The orthodox reading approach.

6. Results
   a. Patricia's Pressey Classification and Stanford-Binet tests at the end of the ten-weeks' period showed no improvement.
   b. Her social behavior was worse.

Case Number 3

Statistical Data

Symptomatic Behavior
1. Social
   a. Pleasant and cooperative.
b. Popular with the other children.

c. Truthful.

d. Glib in presenting excuses for absences, minor disciplinary infractions, small accidents such as spilling crayons on the floor, and other trivial classroom disturbances.

2. Educational

a. Had about four months in school the preceding term but could recognize only about five words of one syllable.

b. Pointed in labored fashion toward the word which she was attempting to read, and then pronounced it incorrectly.

c. Inserted and substituted incorrect simple words.

d. Could describe pictures on blackboard with minor inaccuracy if she were permitted to stand with her nose almost against the blackboard.

3. Physical

a. Had average height and weight.

b. Was absent often because, she said, of bad colds.

c. Was astigmatic as shown by the wheel test.

d. Occasionally stumbled and tripped.

4. Other information

The mother of Phyllis was a laundry employee, divorced. She was pleasant and cooperative, but attributed the failure of Phyllis in school the preceding year to illness and laziness rather than to poor eyesight. She promised to have her daughter's
eyes examined and fitted with glasses if necessary, but did nothing toward keeping her promise.

5. Remedy
   a. The orthodox reading approach.

6. Results
   a. At the end of ten weeks Phyllis could recognize and correctly pronounce about ten words with labored effort. This was a five-word increase in comprehension.
   
   b. A repetition of the Pressey test showed an improvement of three points in the raw score—from 40 to 43. Stanford-Binet tests showed the mental age and the intelligence quotient constant with the first test.
   
   c. The social behavior was about the same.

Case Number 4

Statistical Data

Vision, right eye, 20/20; left eye, 20/40.

Symptomatic Behavior

1. Social
   a. Loud and aggressive or
   b. Whining and complaining. Tendency a and tendency b alternated.
   c. Social—in that he liked to play with older boys.


d. Inattentive or disputatious in class.

e. Militant--in that Eugene had two playground fights in ten weeks.

2. Educational

a. Eugene could read no words at the beginning of school.

b. His I. Q. and Pressey Classification tests showed above average intelligence and mental age, but he did not seem to "live up" to these superior ratings in classroom activities.

c. He blended phonic unions well.

d. He could repeat all of nursery rhymes heard on phonograph after one hearing, but often refused to do so, saying "I don' wanna listen to that silly ole stuff."

e. He showed occasional interest in his work, but only for short periods.

3. Physical

a. Average height and weight.

b. Vision defective in that there was both far and near-point failures in fusion and possible ametropia or erroneous refraction.

c. Place often lost in his primer.

d. Eyes often red and apparently sore.

4. Other information

Eugene's father was a share-cropper on a farm outside the city limits. His mother helped to work the farm. Eugene was some distance from bus service and usually walked to school. He did not come when the weather was inclement. Both father and mother were marginal literates but apparently were intelligent. The
father promised to have Eugene's eyes examined and, if necessary, fitted with glasses, "soon as I can get out of debt." That financial goal was not reached during the ten weeks of this program.

5. Remedy
   a. Parental conversation and the exaction of the unfulfilled promise to purchase glasses for the child.
   b. The standard reading approach.

6. Results
   a. No improvement in social behavior.
   b. No perceptible improvement in readiness for reading. It is hoped that Eugene will soon have his eye difficulties corrected. He is capable of doing good work.

Case Number 5

Statistical Data

Symptomatic Behavior
1. Social
   a. Sullen
   b. Uncooperative. Sat in apparent stupor or day-dreaming continually.
   c. Anti-social--in that he sat alone in corner of playground at recess and dug his bare toes into the sand.
d. Ignored teacher as if she did not exist.

2. Educational
   a. Had failed the first grade the preceding year.
   b. Could identify no words.
   c. Did not know the alphabet.
   d. Refused to sound words with the rest of the class.
   e. Refused to go to the board, mumbling that his feet hurt him.

3. Physical
   a. He was underweight and underheight.
   b. He was caught chewing tobacco.
   c. He refused to approach phonograph, saying, "That thing might bite me."
   d. He stumbled. Ran into objects. Wore clothes carelessly and clumsily adjusted.

4. Other information
   Father was a barber and asserted that he was a high school graduate. The man dressed flashily and was obviously the "sporting" type. He refused to believe that his boy might have defective vision, saying, "I can knock a squirrel outa tree every shot, n' that boy gits his eyes from me. He can see all right. He just don' wanna work. Whip him!" The mother worked and was never available for consultation.
5. Remedy
   a. Orthodox reading approach.

6. Results
   a. None. The child refused to take the tests upon completion of the ten-weeks' program. Reason, cajolery and threats drove him only to attempt to run like a hunted animal.

Case Records of Group B--the Experimental Group

Case Number 1

Statistical Data


Symptomatic Behavior

1. Social
   a. Said she didn't want to go to school and "I hate my teacher."
   b. Cried each morning upon coming to school, but usually brightened during the day.
   c. Played cheerfully enough with the other children, but always awkwardly and as a laggard.
   d. Appropriated the other children's pencils, which she could use ineffectively.

2. Educational
   a. Had had no previous school experience.
b. Could recognize no words.

c. Called picture of sparrow (a common bird in her environment) a mouse and screamed at it.

d. Showed complete lack of interest in her school work early in the morning, but tried half-heartedly as the day progressed.

3. Physical

a. Vivian was underweight and underheight.

b. She was moderately far-sighted.

c. She apparently used only the left eye in looking at pictures. When hand was placed over left eye, she said that she could not see the blackboard.

d. She complained frequently of earache.

4. Other information

Vivian's mother was divorced. She worked as a chambermaid in a hotel of ill repute. She refused to talk of Vivian's visual handicaps, seeming to think the condition a reflection upon her as a parent. She made no response to the suggestion of an eye examination by a specialist.

5. Remedy

a. The experimental approach to reading readiness. Vivian was allowed a great amount of free play time. She liked to put together very large jig-saw puzzles and became more cheerful when allowed to do this. She also liked to sing the words printed in large type on the blackboard with the other children.

6. Results

a. At the end of the ten-weeks' program, Vivian
still could recognize no words, but on a Pressey re-testing, her raw score increased from 23 to 27, a gain of 4 points. She was not given a Stanford-Binet re-test, since she was absent upon the three occasions set aside for her testing.

b. Socially Vivian's behavior improved. She cried, for example, only twice during the last two weeks of the experimental program, while tears were a daily occurrence earlier.

**Case Number 2**

**Statistical Data**


Vision, right eye, 20/20; left eye, 20/140.

**Symptomatic Behavior**

1. Social

   a. Did not talk.

   b. Played with only one other little boy who seemed to control him.

   c. Told the teacher that his older brothers and sisters (two brothers, three sisters) "are mean to me."

   d. Created no disturbance in the classroom.

   e. Was dressed in shabby fashion.

2. Educational

   a. Could read no words.

   b. Tried to guess at words but never guessed correctly.

   c. Pronounced poorly.
d. Could not repeat simple lines immediately after hearing them, but could repeat single words, though often with faulty pronunciation.

e. Could not blend words.

3. Physical

a. Average weight and height.

b. Blurred images in addition to visual deficiency, as revealed by the Snellen E Chart.

c. Slow movements. Other children could move much faster in putting on wraps and in running playground races.

d. Bad teeth.

4. Other information

Leslie's father worked in the stockyard as a common laborer. He had completed the fourth grade. He said, "Leslie's a good boy. Don't cause me no trouble at home. Just slow. He'll come out of it ok." The father said he would have Leslie's eyes examined. "I got money to buy that boy anything he need." During the ten-weeks' program, however, the examination was never made. Leslie's mother was illiterate, friendly, uncommunicative, and apparently uncomprehending.

5. Remedy

a. The experimental approach to reading readiness. Leslie liked to trace over words written in large script on the blackboard. He would make no effort to trace small words, but would work assiduously for ten minutes at a time on large words. His tracing was inaccurate and blurred, but improved slightly toward the end of the period. He liked praise
for his effort and would smile warmly upon being congratulated for his good work.

6. Results

a. Leslie showed no improvement or retrogression upon retaking the Pressey and Revised Stanford-Binet tests at the end of the ten-weeks' period. He did, however, show more interest in his work.

b. Socially Leslie was no problem from the beginning to the conclusion of the experiment.

Case Number 3

Statistical Data

Vision, right eye, 20/20; left eye, 20/40.

Symptomatic Behavior

1. Social

a. Samuel was a talker, mumbling steadily and continually in the classroom and on the playground. Much of his talk consisted of poorly articulated nonsense syllables.

b. He wriggled continually and thumped on his desk.

c. He giggled often and without apparent reason.

d. He said that he did not like reading because it interfered with his talking.

2. Educational

a. Could recognize no words.

b. Was poor at recognizing pictures.
c. Called picture of basket of fruit "a box of straw."

d. Mispronounced words which he heard.

e. Often refused to try to pronounce or to trace words.

3. Physical

a. Height and weight average.

b. Mouth open all the time. Probably had adenoids or infected tonsils.

c. Breath bad.

d. Words and pictures reversed for inspection.

e. Evidence of lateral and vertical imbalance.

4. Other information

Samuel's father was another stockyard worker. He said, "I had five years of schooling. Didn't do me no good." He contributed the information that Samuel talked too much at home, but they stopped him after "his maw stuffed a rag in his mouth. If he talks too much at school, try that on him." The father admitted, "Yes, Samuel might have bad eyes, but he heard they outgrew 'em. Let's jus' wait and see." Samuel's mother was visiting elsewhere at the time the reading program was in progress.

5. Remedy

a. Experimental approach to reading readiness. Samuel was allowed to talk as much as he pleased. He was asked to lead in the word repetition. He liked to do that, but led inaccurately. Samuel was given much free period time and was given picture books over
which he pored, straining to see, and often holding the books upside down.

6. Results

a. Samuel's Pressey Classification re-test at the end of the ten-weeks' program showed only a one-point increase—from 42 to 43. There was no improvement in mental age. The child cannot do effective work until his visual difficulties are removed.

b. Socially Samuel seemed happy in school. Except for his talkativeness (which was stopped with a picture and not with a rag stuffed in the mouth) he gave no trouble.

Case Number 4

Statistical Data

Ernestine. Female. Chronological age, 6-8.

Symptomatic Behavior

1. Social

a. Ernestine, large for her age, attempted to dominate the other children. She often succeeded.

b. She was a leader in games and in playground activities.

c. She was "bossy" in class. Often attempted to tell the teacher how to conduct the class.

d. She was popular with the other children.

e. She boasted prodigiously of her accomplishments, many of which were imaginary.
f. Ernestine engaged in one school yard fight.

2. Educational
   a. The child professed a knowledge of comic books and could recognize four words when she first entered school.
   b. She brought comic books to school often, and, when she thought she was unobserved, would slip them over the edge of her desk and bend over them squinting and straining in an effort to decipher them.
   c. She was very eager to learn. Tried more than any of the other children.
   d. She misread and mispronounced many words and argued that she was right when corrected.
   e. She could describe pictures accurately, but had to get very close to them to see them.

3. Physical
   a. She was above average in weight and height.
   b. She had 20/20 vision but squinted and frowned when she examined any material.
   c. Her left eye crossed frequently.
   d. Her myopia, which may have been mental, since the Snellen E Chart did not reveal it, seemed to increase as the weeks passed.
   e. Apparently she had some lack of pigmentation.

4. Other information
   Ernestine's father and mother were farm laborers. The mother had completed the fourth grade; the father had completed the third grade. They seemed to feel that Ernestine's visual difficulties were the result
of poor teaching and said that at home she could see
as well as any one. They said that she was smart,
which was true enough, and that glasses would destroy
her great beauty, which would have been impossible
since Ernestine was by no stretch of the imagination
beautiful. The parents said that "them eye-doctors
are quacks and we ain't gonna waste money thataway."

5. Remedy

a. The experimental reading approach. Ernestine
liked to work. She had little resort to the
free play period. She liked to listen to the
radio, to phonograph records and to repeat
what she had heard. She liked to engage in
kinaesthetic exercises. She led the others
in the "long swing" described in Chapter III.
She liked to look at books and work jig-saw
puzzles. Ernestine had more energy than any
of the other children in the group.

6. Results

a. The Pressey Classification re-test at the
end of the testing period showed an increase
in raw score from 45 to 55. Her achievement
test showed a comparable increase. By the
end of the ten-weeks' period, Ernestine could
recognize and pronounce twenty-seven words.
Occasionally she would mispronounce or mistake
them, calling "cat" "car" and "dog" "bag."
How much of Ernestine's progress was attrib-
utable to the experimental method and how
much to her amazing energy is a problem here
impossible of determination.

Case Number 5

Statistical Data

Mary Nell. Female. Chronological age, 7-2.
Mental age, 6-2. I. Q., 86. School experience, none. Vision, right eye, 20/40; left eye, 20/40.

Symptomatic Behavior

1. Social
   a. Mary Nell, larger and older than most of the other children, attempted to dominate them, but was not successful.
   b. In her quest for mastery of the group, Mary Nell became involved in a physical conflict with Ernestine. Defeated, she retired from all play activities with the other children.
   c. She was nervous and fidgety in the classroom, biting her nails and making rhythmic drumming sounds on the desk.
   d. She liked to attract attention by stepping heavily, dropping books with a bang, and falling over the other children.
   e. After one sharp oral reprimand, she was polite and courteous to the teacher.

2. Educational
   a. Mary Nell had failed in the first grade the previous year and was repeating.
   b. She could read three words but often confused those three and read them incorrectly.
   c. She could not repeat words.
   d. She was inattentive in class. Said "ma'am" vacantly every time she was addressed.
   e. She could not describe pictures accurately.

3. Physical
   a. She was larger than most of the other children
because she was older, but was average for her age in weight and height.

b. Her eyes were often sore and inflamed.
c. She stammered often, especially when excited.
d. Her eyes often watered.
e. She scowled when she tried to read.
f. She said she saw spots.

4. Other information

Mary Nell's parents were agricultural workers. The father had finished the tenth grade in high school, the mother the eighth grade. They were interested in Mary Nell, saying that she was the only one of their children who had failed. They said they had had her eyes examined in another town, but had no record of the examination and did not even remember the name of the doctor. They said they intended having another examination and that they intended to buy some spectacles for Mary Nell if she needed them, but had not "gotten around to it."

5. Remedy

a. The experimental approach to reading readiness. After Mary Nell's conflict with Ernestine, Mary Nell was allowed much free play time. She spent this time on the playground or looking aimlessly at books or playing with dolls. She was not good at phonics or at repeating phonograph records. She traced slowly, laboriously and inaccurately. The last, or tenth, week of the program, she appeared at school wearing
glasses. She complained that they hurt her eyes until she was told that they made her "look pretty." The last two days of the program Mary Nell learned and recognized correctly three words, or as many as she had the entire preceding year and the first nine weeks of this school year.

6. Results

a. Recognition of three new words.

b. An increase of five points on the Pressey Classification re-test, that is, from a raw score of 31 to a raw score of 36.

c. No improvement shown on the Revised Stanford-Binet test.

d. No change other than that noted above in social behavior.
CHAPTER V

RESULTS, EVALUATION AND CONCLUSIONS

A brief enumeration of the general results of the experimental program surveyed in this study will be presented in this chapter together with certain conclusions concerning the findings of the survey and a summary of the study as a whole.

The General Results

In the experiment described in this study, ten visually handicapped first grade pupils were tested and divided into two groups of five pupils each. Group A was given a standardized ten-weeks' program of preparation for reading readiness, including the alphabetic-oral method, phonic method, the look-and-say method, and the phrase-reading method, together with an integration of the four methods. Group B was given an experimental program of preparation for reading readiness including resort to sight-ease type, the use of auditory stimuli, and large muscle activities, with the employment of frequent free play periods.

At the conclusion of the ten-weeks' period, the pupils of the two groups were given again the Pressey Classification test and the Revised Stanford-Binet intelligence
quotient test. The results were as follows:

In Group A, the control or orthodox group, one child showed a two-point retrogression both on the Pressey Classification test and on the Revised Stanford-Binet test. Two children showed no improvement on either test, which was, of course, a retrogression, since they had advanced chronologically two and one-half months during the program. The fourth child refused to take the second series of tests, but otherwise evinced no degree of improvement. None of these four children could read one word either at the beginning or upon the conclusion of the program. The fifth child showed a three-point increase in the Pressey raw score, no improvement on the Stanford-Binet test, and a five-word increase in word recognition. On the whole, therefore, it may be concluded that in this experiment the standardized approach to reading readiness was a failure.

In Group B, which was taught by the same teacher who taught the A group, the experimental approach was used. One child showed no improvement on either the Pressey or the Stanford-Binet tests. One child showed a one-point improvement on the Pressey raw score and no improvement on the Stanford-Binet test. The other children made advances of four, five and ten points, respectively, on the Pressey
raw score, but only one showed even slight evidence of improvement on the Stanford-Binet test. Three of the children could read no words either at the beginning or at the end of the program. Two of the children showed marked improvement in word recognition. One child showed a three-word increase, the other child a twenty-three word increase. The three-word increase was considered a marked improvement because the pupil had learned to recognize only three words during the preceding year of school work.

Thus, it may be concluded that on the whole the program of approach to reading readiness employed with Group B was more satisfactory than that used with Group A, for four of the children in Group A showed either no improvement or retrogression, whereas four of the children in Group B showed improvement from slight to considerable degree. It must be pointed out, however, that two of the most demonstrable improvements in the B Group may possibly be attributed not to the experimental program but to the facts that in one instance the child had one week's use of glasses and that in the second instance the child displayed unusual application and energy which may have been rewarded with improvement had she been placed in Group A instead of Group B.

It may also be noted that these results are at
variance in details, but not in general trend, with some other general experiments in remedial instruction. In a 1925 experiment in educational retardation lasting not ten weeks but one semester, Baker found that 36.7 per cent, or eight of twenty-two cases, made satisfactory restorations. In an experiment conducted by Cole, twenty-seven college freshmen were given remedial reading exercises and drills for one semester. The average rate of reading for the group increased from 213 words a minute to 367 words a minute. The number and percentage increase was not given. An experiment dealing with eye movement and vocalization with twenty-four grade pupils for two months showed an average decrease of fixations per line from eleven to four and regressions per line from 2.5 to 0.5. The same experiment showed an increase in speed of reading from 128 to 175 words per minute and a comprehension increase from 9.2 to 11.0. MacCallister discusses a remedial program in junior high school with twenty-seven students. The test lasted from eight to twenty-four weeks. Of the twenty-seven pupils, twenty-three made gains in drills adjusted to

1 Baker, op. cit., p. 261.
individual differences.  

None of these experiments, however, dealt with irremediable visual defects solely; none was limited to the first grade; none lasted for so short a period as this experiment; and all showed more significant improvement.

It would be of some interest and possibly of some value to extend such a program of experimentation as has here been suggested over the period of a year if organization, time, and finance permitted, for while this short ten-weeks' period of experimentation revealed no conclusive results, it at least indicated a possibility, the possibility that the standardized, orthodox programs of preparing for reading readiness may not be as effective as the less stereotyped, more individualistic approaches.

Summary

In this study a survey has been made of: (1) literature and experimentation in the field of readiness for reading among the visually handicapped; (2) two procedures of teaching for reading readiness, one standard, the other one experimental; (3) case histories of the subjects of the experiments; and (4) results; to wit, that an experimental

approach in this experiment revealed slightly more satisfactory progress toward reading readiness than did an orthodox approach. The visually handicapped child, unless he receives aid, may become a burden upon society. If properly taught he may become a distinct asset to that society. It is one of the duties of the schools to convert that potential burden into a positive factor for good both to the individual and to the community. The American schools must accept that challenge and that responsibility.
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