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A Study of the Individual Reading Problems of a  
Selected Group of Third Grade Pupils of Average  
and Above-Average Intelligence

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A STUDY OF THE INDIVIDUAL READING PROBLEMS  
OF A SELECTED GROUP OF THIRD GRADE  
PUPILS OF AVERAGE AND ABOVE-  
AVERAGE INTELLIGENCE

by  
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TABLE OF CONTENTS

CHAPTER	Page
I. THE PROBLEM . . . . .	1
II. THE BASIC PRINCIPLES BELIEVED TO UNDERLIE THIS STUDY . . . . .	3
III. AN EXAMINATION OF CURRENT LITERATURE IN THE FIELD OF READING . . . . .	7
IV. METHODS AND CLASSROOM PROCEDURES OF THE CONTROLLED EXPERIMENTATION . . . . .	15
V. TABULATION OF THE FINDINGS AND INTER- PRETATION OF THE RESULTS . . . . .	31
VI. SUMMARY AND CONCLUSIONS . . . . .	60
RECOMMENDATIONS . . . . .	64
BIBLIOGRAPHY . . . . .	65

## CHAPTER I

### THE PROBLEM

A sense of reading achievement contributes to security, social approval, and the self-confidence of the elementary school child. Reading failure may result in the child's loss of social status and self-respect. Consequently, more credence is being placed upon the close association between reading failure and emotional disturbance. Recent studies in reading difficulties support the theory that emotional difficulties are frequently reported among children who have experienced failure or extreme retardation in reading.

The problem in this particular study is to discover what can be done about the individual reading problems of a group of 18 selected third grade children of average and above-average intelligence. The first hypothesis to be presented is that children with average and above-average intelligence do have individual but similar reading problems. The second hypothesis is that perhaps with the removal of these individual but similar problems observable behavior changes may take place.

This study is an attempt to note or indicate within controlled conditions what effect the elimination

of some individual reading difficulties may have upon the behavior of a selected group of children within the group.

In order to test the hypotheses the following topics are presented for consideration:

1. A presentation of the basic principles believed to underlie this study.

2. An examination and analysis of current literature in the field of reading to discover the most effective procedures of handling specific reading problems of a group and of individuals.

3. A detailed explanation of (a) the methods and procedures of controlled experimentation pertinent to this study, (b) the development of the program, (c) a description of class personnel, and (d) a description of classroom procedures.

4. A tabulation of the findings and an interpretation of the results, both the direct results of reading improvement through the elimination of individual reading problems, and indirect results of behavior changes within the selected group, as illustrated by four representative case studies.

5. A statement concerning the substantiation or rejection of the given hypotheses and a presentation of any new facts or principles brought to light by this study.

## CHAPTER II

### THE BASIC PRINCIPLES BELIEVED TO UNDERLIE THIS STUDY

Education today is concerned with the development of the whole child in terms of all children. Although the total school program may set the pattern for recognition of individual differences, it is within the classroom that the pattern is actually fulfilled. In the classroom the pupil learns to play changing roles, now as a follower, now as a leader, but always as a member of a group. In the classroom he learns to work with people and tries to contribute to the group according to his abilities. A classroom function, through subject matter instruction, is to bring about growth in all pupils in the areas of personal mobility, social responsibility, and emotional maturity.

Assuming that all needs in terms of all children have not been successfully met within the classroom, can specifically named needs, such as those in reading, be better treated by placing together a group of children with at least two basic elements in common: an average or above-average intelligence and individual but similar reading problems? Assuming that some

measures of growth in personal and social maturity can be discovered by this arrangement, it is proposed that these pupils do not differ in nature or interests from their other classmates. They differ in degree. Accepting the concept of difference in degree, then the greater number of learning experiences presented to this group of pupils might lead to a higher level of attainment within a given period of time.

To accomplish the removal of individual reading problems and to bring about behavior change implies the construction of a learning situation in which developmental growth can occur. Looking in retrospect at reading instruction, it appears that teachers have failed to implement reading experiences for optimum growth. One reason is perhaps that the concept of reading readiness has too often been confined to the kindergarten pre-reading stage. Why not institute a readiness program at the level of the child's present achievement? To do so effectively, the teacher must make a thorough exploration of the many areas of a child's personality to obtain understanding of the individual. Teacher awareness of conditions of the existing social order which interfere with, or retard, the development of many personal and social characteristics of the growing child is also vitally important.



In the highly competitive world in which children live, they may acquire a somewhat distorted sense of values. Their preconceptions, biases, and prejudices can and do influence their reading understandings. Not only may they misunderstand what they read, but they may interpret an author's statements in harmony with the attitudes and biases they bring to their reading.

To promote desirable reading growth in child development, teachers have four responsibilities: (1) to discover children's attitudes and preconceptions, (2) to check on pupils' understandings and interpretations of what is read, (3) to aid pupils in a critical evaluation of their present set of values and lead them to make such changes as may be desirable, and (4) to provide opportunity for the repeated use in practical situations of the new understandings and values adopted.

Organizing a program in reading to provide for the personal and social needs of the individual would imply three essential elements: (1) a clear definition of what these needs are, both as to personal growth of the individual and as to his adjustment to, and participation in, the society of which he is a part, (2) the provision of a wealth of books, pamphlets, and periodicals in the classroom, adequate in breadth and in range of reading difficulty for the

wide variety of interests, purposes, and capacities of the group concerned, and (3) planned instruction for guiding, evaluating, and recording the individual reading of each pupil in the selected group.

An examination and analysis of representative current literature in the field of reading is advisable in order to translate these implications into a feasible plan of study for a specified group of pupils.

## CHAPTER III

### AN EXAMINATION OF CURRENT LITERATURE IN THE FIELD OF READING

All areas of reading, particularly those concerned with discovering causes for poor reading, techniques for teaching reading, and readiness for reading, have become of vital concern for educator and layman alike.

Last year the Citizens School Council of Fairfield, Connecticut,<sup>2</sup> asked two reading experts the relatively simple question of what causes some children's retardation in reading. Both experts disagreed diametrically. One stated that, in the main, physical disabilities and poor instruction were to blame. The other expert stated emphatically that emotional troubles were primary causes. The Council agreed that more should be known about reading. The truth of the causes for poor reading lay somewhere between the two extremes as reported by the experts. Reading difficulties are both minor as well as serious and arise regardless of progressive or traditional techniques of instruction.

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<sup>2</sup> John Hersey, "How Well Are We Teaching Reading?" Senior Scholastic, LXVI (April, 1955), 22T.

The important factor is not the methods of how to teach reading, but rather it is the quality of the teacher.

As a body of laymen, the Council offers no panacea for the reading ills of the present day, but warning is given to administrators to lighten the load of quality teachers and to reading parents to foster in the home the motivation and interest for reading by making materials readily available. To non-reading parents the Council suggests that they should not be surprised that they have non-reading children, because no pattern for reading is set in the home.

If laymen state their views, what do teachers say regarding the reading status of children? In 1953 a study by Ralph C. Preston was made "to show that there is a tendency among teachers to classify as retarded in reading certain children who actually are reading up to the level of capacity."<sup>3</sup> Using 82 third to fifth grade children from 2 schools, Mr. Preston computed reading indices by dividing the reading grade of each child by the mental age. In School A, 43 per cent of the 15 per cent of the total enrollment in grades three to five that teachers considered retarded were found to be normal readers. In School B, 60 per

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<sup>3</sup>R. C. Preston, "The Reading Status of Children Classified by Teachers as Retarded Readers," Elementary English, XXX (April, 1955), 225.

cent of the 25 per cent of the total enrollment in the same grades the teachers considered retarded were found to be normal readers. Mr. Preston concludes that teachers indicate a tendency to classify too many children as retarded. The percentage of teacher over-estimation is higher in primary than in intermediate grades. Teachers consider children retarded if they fail to read materials at grade level and to achieve grades irrespective of mental capacity. Mr. Preston implies that teachers should give more credence to mental capacity as a possible retardation factor.

From Mr. Preston's study, the inference is that teachers themselves are not always definitive in their approach to a child's retardation in reading.

Teachers are inclined to blame poor reading on slow learning processes, physical difficulties, and personality maladjustment. More specifically, teachers generalize children's skill weaknesses in word-recognition which produces word-by-word reading, poor phrasing, and meager comprehension. Poor readers are characterized by "little or no acquaintance with letter sounds and have a limited sight vocabulary."<sup>4</sup>

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<sup>4</sup>W. D. Sheldon and Shirley Hatch, "Strengths and Weaknesses in Reading," Elementary School Journal, L (April, 1950), 450.

In order to uncover some of the underlying causative factors for poor reading, an appraisal of representative literature in the area of methodology of reading techniques (group and individual) seems expedient. Studies of methodology tend to reveal the serious implications of the hard-to-measure behavior changes and attitudinal factors in child development.

In 1952 Arthur E. Traxler<sup>5</sup> reported findings of a committee of the National Association of Remedial Teachers. This committee was set up by William Gray in 1951 to find current practices used in developmental programs in the area of remedial teaching. In general, the conclusions were: (1) developmental reading is an important area, (2) nine-tenths of the developmental programs are preceded by a reading readiness program, (3) the most useful single measuring technique is a standardized reading test, and (4) intelligence tests are needed to determine the potential of an individual's reading. Few schools maintain a follow-up of their remedial cases. Mr. Traxler states that studies in the field of follow-up of remedial cases are meager. His study stresses that "fertile field for research is what role personality maladjustment plays in reading disability."<sup>6</sup>

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<sup>5</sup>Arthur E. Traxler, "Current Organization and Procedures in Remedial Teaching," Journal of Experimental Education, XX (March, 1952), 305-312.

<sup>6</sup>Ibid., 309.

In a 1953 article on remedial reading, Mr. Traxler<sup>7</sup> re-emphasizes the need for research in the conceptual considerations of the whole child, of reading as an educative process, and of the interrelatedness of reading disability with emotional, physiological, and neurological factors.

Another recent study prompted by "increased interest in the stress laid upon remedial education and the value of an integrated bio-psychosocio approach to reading difficulties"<sup>8</sup> was made by James E. Coleman. Working at the Clinical School of the University of California in Los Angeles, Mr. Coleman selected 10 boys and girls between the ages of 8 and 16. These boys and girls had intelligence quotients over 90, no apparent physical or emotional handicaps, but reading retardation of 1 1/2 years. With individualization the keynote in all procedures and using the "whole child approach", data revealed that the total mean improvement in achievement test scores was eight-tenths of a grade. Important too were Mr. Coleman's indirect findings in the behavior area of increased self-confidence, growth of favorable

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<sup>7</sup> Arthur E. Traxler, "Remedial Reading Today," School Review, LXI (January, 1953), 17-24.

<sup>8</sup> James E. Coleman, "Results of a 'Total-Push' Approach to Remedial Education," Elementary School Journal, LIII (April, 1953), 454.

attitudes, and reduction of hostility to learning. In this highly selective and clinical study, the "whole child" approach to bring about intellectual and emotional change apparently proved successful.

That emotional strain and reading disability do inter-act was found to be true by Helena H. Zolkos, who reviews studies made by Phyllis Blanchard in 1928 and by Donald D. Durrell in 1932. Miss Zolkos' data show that frustrations tend to exist in children due to their sense of inadequacy in reading. Miss Zolkos claims that the teacher must study the total development of the child and concludes that the emotional and personality problem "cannot be met adequately until more studies of the emotional and physiological factors associated with the learning process have been made."<sup>9</sup>

Motivational factors in reading are substantiated by Albert J. Harris, who says that the teacher's role in remedial teaching is to motivate the child and "to guide the learning situation in such a way that the motivation is sustained."<sup>10</sup> This implies a way to change

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<sup>9</sup>Helena H. Zolkos, "What Research Says About Emotional Factors in Retardation in Reading," Elementary School Journal, VI (May, 1951), 517.

<sup>10</sup>Albert J. Harris, "Motivating the Poor Reader," Education, LXXIII (May, 1953), 566.



the child's attitude toward reading. Proper motivation, according to Mr. Harris, is based on 4 simple principles: (1) the learner must feel accepted, (2) the learner must see success, (3) the learner's interest must be kept high, and (4) the learner must feel his problem is his own.

The philosophy of the proponents of the individualized reading technique stresses that children assume self-direction and self-control as they mature. This technique advocates a wide variety of books, wide range of levels in reading materials, and each child with a "book of his own" plan. A common "word basket" is shared by those who need it, and personal records are kept of all reading. A general "sharing time" gives opportunity for both group and individual growth. The individualized approach claims to eliminate those pressures and tensions that are needed to meet standards of group or grade levels. Results of individualization show the psychological effect as good, reading speed individually accelerated, children favoring this method, and the reading of more materials. Under this type of instruction, "forty to eighty pages were read a day as compared to eight or ten pages read under group teaching."<sup>11</sup>

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<sup>11</sup> Francis Maib, "Individualizing Reading," Elementary English, XXIX (February, 1952), 89.

Actually meeting the needs of the individual pupil challenges the teacher to give more than lip service to the expression "total child development."

## CHAPTER IV

### METHODS AND CLASSROOM PROCEDURES OF THE CONTROLLED EXPERIMENTATION

Planning a reading program in which each pupil could grow and develop presented the problem of providing the kind of situation in which this growth could be observed and recorded. Under the premise that each pupil would indicate some kind of change during the year, it seemed advisable that some controls be established. This would hold constant a few factors about the pupil in order to record the movement desired -- namely reading growth and behavior change. The most feasible technique for this type of study seemed to be that of controlled experimentation.

Controlled experimentation in education is recent in origin. Early attempts to use the experimental method were hindered by inadequate control of the educative factors involved and by the lack of instruments for measuring pupil capacity and achievement. Investigations between 1894 and 1897 marked the development of the concept of control of experimental conditions. The work of Galton, Cattell, Binet, Terman, and Otis provided measures of pupil ability for use in

securing groups equivalent in terms of intelligence. Later Thorndike and Stone pioneered the movement toward development of instruments for measuring pupil achievement.

Educational experimentation can be defined more specifically:

"Experimentation" is the name given to the type of educational research in which the investigator controls the educative factors to which a child or group of children is subjected during the resulting achievement. . . . In the simplest type of educational experiment the investigator seeks to evaluate the influence of some one educative or "experimental" factor on a single group of children. He must start the experiment with some measurement of the initial attainment of the children in the trait of ability to be influenced. He then subjects the group to the experimental factor, such as a particular type of drill material in arithmetic, for the duration of the experiment. At the end the investigator applies the final test for the purpose of determining the gain in achievement that has resulted from the application of the experimental factor.<sup>12</sup>

This experimental method represents John Stuart Mill's principle of research known as the method of difference, which notes the effect of a single variable applied to one situation or group but not applied to a comparable situation or equivalent group. However, this principle must be kept in mind as an assumption which probably is never actually fulfilled in concrete situ-

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<sup>12</sup>C. V. Good, A. S. Barr, and D. E. Scates, The Methodology of Educational Research (New York: Appleton-Century-Crofts, Inc., 1941), IX, 485.

ations. Certainly, when dealing with human beings, many uncontrollable variable factors are involved. It must be recognized that the so-called law of the single variable is a theory and not an accomplished fact in any educational investigation of the experimental type.

This study views the definition of the experimental method more broadly. The principles of controlled observation considers the many repeated observational testings and growth investigations as types of experimentation. Many educational experiments are conducted in the classroom where it is possible to work with a group of children as individuals. One of these group methods of experimentation is the one-group technique:

In the one-group experiment a single identifiable factor is added to or subtracted from a group (or, occasionally, an individual) and the resulting change, if any, is measured.<sup>13</sup>

One-group experimentation is the simplest of all experimental methods and the most feasible for classroom use, but one has to be aware of possibilities for error.

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<sup>13</sup> Tyrus Hillway, Introduction to Research (Boston: Houghton, Mifflin Co., 1956), XI, 166.

With the factors of pupils, teacher, and the school setting as constant, the only variable present is the experimental procedure, and, of course, such change as takes place in the group or teacher with the passage of time with maturation.<sup>14</sup>

Extreme care must be exercised in making certain that no other factor, such as the teacher's enthusiasm and desire for good results or the added hours of instruction, affects the result.

The essentials of the one-group method are:

1. An initial test, the application of an experimental factor, and a check on the results.
2. A second preliminary test, the application of another experimental factor, and a check on the results.
3. As many other cycles of preliminary testing, experimental procedure, and end testing as are desired.<sup>15</sup>

#### Development of the Program

In the spring of 1955, 4 second grade teachers of the Main Street School of the Shelbyville (Illinois) Community Unit Schools, District Number 4, presented to the administration the following question: What pertinent information, if any, could be found concerning some of Main Street School's primary reading problems by

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<sup>14</sup>Good, Barr, and Scates, op. cit., p. 492.

<sup>15</sup>Ibid., p. 593.

establishing an experimental class of teacher-selected children of average and above-average intelligence and with individual reading problems? Administrative approval was granted. With the administrative appointment of one of the second grade teachers as the instructor, the planning for this class began.

Each of the 4 second grade teachers selected from her class those candidates who met the requirements. Initial selection was made on the basis of results from the Lorge-Thorndike Intelligence Test, Form A, Non-verbal, and through teacher evaluation as to individual reading problems, with physical and emotional aspects of each pupil considered. No special designation was given to this class. To all, it was to be simply one of the 4 third grade classes at Main Street School.

On the opening day of school in September, 1955, of the 20 children previously selected for this program, 18 were enrolled, 2 having moved out of the district. One girl, recently moved into the district, was assigned to this class, although her record indicated no reading deficiency. This study does not include this pupil.

Thirteen members of the class were boys whose ages ranged at the time from 7 years 11 months to 10 years. Five were girls with ages ranging from 8 years

1 month to 8 years 8 months.

#### Home and Socio-Economic Data

Eight boys and 3 girls have brothers and/or sisters older than they; five boys and 2 girls have brothers and/or sisters younger. Six children, 4 boys and 1 girl, live on farms, while 9 boys and 4 girls live in town. Of the 13 town children, 6 have mothers who work and whose fathers are employed as furniture salesmen, school janitors, insurance salesmen, or day laborers. Of the remaining 7 town children whose mothers are not employed, 2 have fathers who own their own business establishments -- a tavern and a nationally-known hair pin and hair net factory. The remaining 5 fathers who support their families in town are employed as weekly wage earners at the farm machinery plant, hair pin factory, or with a local contractor.

A socio-economic breakdown of the 13 town children (purely subjective on the part of the author) could be: 1 - upper class, 6 - middle class, and 6 lower-class. Of the farm children, 3 families own their own land, and 2 are tenant farmers.



### Intelligence Range of Class Personnel

To substantiate the results of the Lorge-Thorndike Intelligence Test given the preceding year and to check the previous teachers' selection of pupils, each child was tested with the Wechsler Intelligence Scale for Children. The results were as follows:

1. Average (90-107) - 10 pupils (6 boys, 4 girls)
2. Bright Normal (110-115) - 4 pupils (3 boys, 1 girl)
3. Superior (123-125) - 4 pupils (4 boys)

### Reading Range of Class Personnel

The second grade teachers reported that the range in reading of their respective candidates was 1.0 to 2.9. This was based on grade levels.

### Description of the Classroom

The room to which this class was assigned had 13 new-type movable desks and chairs, 2 round work tables, seating 3 to 4 pupils, 1 rectangular work table, a book cart with 2 double shelves, 3 efficient ceiling lights, 2 wall-length chalkboards, adjusted to the height of the average third grade pupil, and 2 large bulletin boards. One hundred and twenty-five library books were purchased, chosen on the basis of the pupils' individual reading interests, as well as for the levels

of reading difficulty. These were supplemented by borrowing, for several weeks at a time, library books from other primary classes. Supplementary readers were available and accessible to the pupils at all times.

### Classroom Procedures

#### Pupils' standards for reading achievement. --

The opening week's orientation acquainted the pupils with their classroom, its equipment and materials, especially the library, and with the daily routine of classwork. In order to establish acceptable classroom behavior and primarily to promote and develop independent individual work, standards were suggested, discussed, and eventually accepted by the children. A primary requisite for acceptable behavior was that each person would be constructively busy.

Daily instruction in regular third grade subjects -- reading, arithmetic, spelling, writing, language arts, dictation, social studies, health and safety, art, and music (2 times a week) -- served as a framework for carefully planned reading activities. These activities were utilized to stimulate each pupil to apply to the best of his ability techniques learned in one subject area to another subject area.

As an outgrowth of a language arts unit on

"What We Want to Get Out of Our Reading," general standards of reading achievement were developed by the pupils. These standards were posted on the bulletin board to serve as an evaluative guide for growth in independent reading:

1. Read for details.
2. Read to know yes or no or to prove or not prove a statement.
3. Read to know familiar words and groups of words quickly and accurately.
4. Read to work out words by ourselves.
5. Read to know the order of events in a story or book.
6. Read more rapidly silently than orally.

Reading test administration. -- To help the pupils achieve the above standards in reading, the following tests were administered to determine each pupil's level of achievement:

The Gray Oral Reading Check Tests, Set II, were administered to reveal what particular and specific difficulties all the pupils had in the area of oral reading. Since these tests indicate progress of individual pupils in rate and accuracy in the oral reading of three increasingly difficult paragraphs at 5 intervals, these tests were given on September 28, 1955, November 15, 1955, January 10, 1956, March 1, 1956, and

May 10, 1956. Accurate timing was made of each pupil's reading. Planning made it possible for each pupil to be administered each test by the same teacher under the same conditions.

The Gates Advanced Primary Reading Test, Type 2, Paragraph Reading, was given for its over-all value in showing a pupil's ability to do independent reading of a rather rigorous sort. This test was administered twice during the year, once on September 20, 1955, and again on April 19, 1956. The identical test was given for 2 reasons: (1) an identical test could serve as a control, and (2) this test provided a diagnosis of the needs of individual pupils.

The Durrell Analysis of Reading Difficulty was used with some individual cases because it presented the opportunity to observe in detail various aspects of a pupil's reading. Its primary purpose was to find the faulty habits in reading which might be corrected by remediation.

Teacher-observed test behavior. -- A carefully written record was made of each pupil's behavior during the initial administration of oral and silent reading tests. Behaviorisms noted were: (1) asking for help from the teacher, (2) wasting time, (3) trying to copy, (4) and giving up. A similar record was made during each subsequent test administration.

Areas of reading difficulty. -- A careful diagnosis was made of the oral and silent reading test results of each of the 18 pupils, following the first administration of the tests. Diagnosis was based on the most frequent kind of errors in oral reading and on close scrutiny of the individual but similar errors made in silent reading. These tabulated results were considered in relation with the observational data made of each pupil's behavior during initial testing period. A list of individual but similar reading difficulties was established as follows:

1. Non-recognition of individual words in oral reading.
2. Substitutions of individual words in oral reading.
3. Omissions of individual words in oral reading.
4. Below-average rate in oral reading.
5. Difficulty in attacking new words independently in both oral and silent reading.
6. Difficulty in comprehension of paragraphs in silent reading.
7. Lack of confidence in both oral and silent reading, particularly in silent reading.

Specific reading techniques. -- The following specific reading techniques were utilized throughout the year. These techniques resulted from diagnosis of the

areas of reading difficulty:

1. Since it was desired to have a common reading vocabulary, the basic third grade reader was used by the majority of pupils. A two-week period was devoted to reviewing some of the selections in the second grade basic reader. Lists of review vocabulary words were made. Word endings, root words, and word meanings were studied. With the use of the third grade reader, a silent reading period was preceded daily by a 10 to 15 minute class introduction to the story through a discussion of new words and pictures. Written exercises in root words, endings, opposites, and later syllabication, dictionary work, true and false questions, and complete sentence answers to questions based on the daily story were required of the faster-moving pupils. At the close of the silent reading period, the story was discussed for new ideas and humorous elements. Paragraphs of interest were read aloud. Statements of fact were verified by oral reading. The written exercises were checked for errors. Whenever a pupil completed the silent reading and the written exercises, free time or independent work dealing with correlated reading activities was suggested.

2. Two boys indicated little recognition of the alphabet and its sounds. The Durrell Analysis tachisto-

scope, word cards, oral and silent reading tests and materials were used. This was done to build vocabulary for each to read comfortably in first and second grade books. Alphabetizing words led to instruction in dictionary use.

3. Ten to 15-minute reading sessions for groups of 2 or 3 or possibly 1 pupil gave an opportunity for each child to maintain an individual word list for daily study.

4. A 10-minute conference was held once each week with each pupil to check on outside or free reading of library books and to go over his list of individual words. This led to instruction in written book reports, which were kept in folders. After the teacher had checked the book report, the pupil was required to re-check it, correcting errors in spelling, word usage, and grammar. Pupils frequently requested that they might read their book reports at "sharing time."

5. One day each week, Weekly Reader issues of various levels provided opportunity for a discussion with 2 or 3 pupils to determine progress in oral and silent reading from uncontrolled vocabulary sources.

6. Pupils selected reading partners, and with the teacher's help, they selected reading material of

mutual interest. Several days later, they requested an oral reading period, which was followed by an evaluation by the teacher on comprehension through written or oral questions.

The specific techniques were utilized in terms of the needs of the individual pupils. A check on group participation was made after individual work was completed in the reading workbook. Evaluative drill lessons gave each pupil opportunity to check his errors in the written lesson, correct these errors, and participate in a discussion of the work accomplished.

Correlated reading activities. -- To motivate individual reading, stories were selected from basic readers of various levels of difficulty, enclosed in attractive covers, and placed in the classroom library. After discovering each child's interests and hobbies, poems and stories were read aloud to him and his classmates. Each week the pupils were guided toward making an individual newspaper which included such articles as "What I Have Read, Heard, Done, or Seen." Occasionally, 2 or 3 pupils were chosen to dramatize a story they had read together. This led later to small groups, particularly boys, acting out original playlets. In art classes pupils were urged to make covers for written book reports and original book jackets for stories and books they had



read or had had read to them. Health and safety stories motivated some pupils to make "film strips" with appropriate words and pictures. A planned book-sharing time allowed pupils to explain orally what they were reading. During the second semester, this was followed for the majority by written book reports. One of the bulletin boards was reserved for any pupil who desired to post questions or statements regarding a story or book. This bulletin board also displayed pupils' chalk drawings, paintings, and original sketches. An easel was available at all times to any pupil who felt the desire to express graphically what he had read. Instruction in how to do word problems in arithmetic was correlated with how to be aware of words that tell or imply the arithmetical method to be used. This activity created in some of the pupils a when awareness for this kind of reading.

Observational Record to Check Behavior Change  
in the Area of Self-Confidence

To keep as accurate a record as possible of pupil change in the area of self-confidence necessitated limiting the observational data to (1) pupil behavior during the daily silent reading period and to (2) the daily "sharing time". A weekly silent reading chart served as the basis for recording the number of times a pupil

asked for help with words. The planned "sharing time" afforded pupils the opportunity to demonstrate a new toy, talk about a trip, relate an experience, and speak on an original topic. This time also gave the teacher the opportunity to record on a weekly check sheet, as objectively as possible, brief anecdotal tabulations of the number of times a pupil volunteered to share, what he shared, and how he shared.

In order to check the validity and reliability of this experimental program, particularly the reading techniques used, 2 criteria were set up: It was assumed that (1) continuous planning for individual differences and (2) flexibility of classroom procedure would allow for growth and development through motivational learning experiences.

## CHAPTER V

### TABULATION OF THE FINDINGS AND INTERPRETATION OF THE RESULTS

One of the main problems confronting the experimenter of the one-group technique is the interpretation of the degree of difference in gain or change in the group or in the individuals. It is possible to analyze critically the conditions of the experiment which are to effect the gain or change. It is necessary to estimate the allowances that should be made for imperfections in the data. It follows that the interpretation of a relatively small difference in gain must be somewhat uncertain. "When the difference is relatively large, definite conclusions may be justified, but even in this case they must be restricted to the conditions of the experiment."<sup>16</sup>

The hypotheses of this experimental study are: (1) that children of average and above-average intelligence do have individual but similar reading problems, and (2) that with the removal of these problems observable behavior change may take place. The

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<sup>16</sup> Ibid., 513.

areas in which the problems were to be eliminated were: (1) in silent reading in order to increase growth in independent reading, (2) in oral reading in order to increase rate in reading and promote accuracy in reading, specifically through remediation of non-recognitions of words, substitutions of words, and omissions of words, and (3) indirectly in pupils' behavior change through the increase in the individual's self-confidence.

To determine a possible difference in gain in the area of silent reading, a correlation was computed on two measurable units: reading ages and intelligence quotients. The former were derived from the September and April results of the Gates Advanced Primary Reading Tests, Type 2, Paragraph Reading, and the latter were taken from the scores of the individually administered Wechsler Intelligence Scale for Children. Correlations, computed by the rank-order method, indicate the September relationship between ~~reading age and intelligence~~ quotients of the 18 pupils to be .38. The April relationship between the same measurable units is .62. The improved correlation appears to be the result of a gain of 2 years 1 month in the reading age mean of the group. Therefore, it may seem reasonable to state that this particular group of 18 pupils of average and

above-average intelligence tended to manifest in one school year, when exposed to individualized remedial reading techniques, reading improvement compatible with their mental abilities.

Results in the area of oral reading are taken from the five Gray Oral Reading Check Tests, Set II. The standardized scores at mid-year indicate that an average third grade pupil reads at 63 seconds with no more than 3 errors. Table I tabulates for each of the 18 pupils the rate of reading and the number of errors in the five tests. Figure 1, using individual lines for each pupil, shows that in rate of reading the majority of the 18 pupils read orally at a slower rate than the established standardized scores. One factor partially responsible may be that during the year in all individual instruction emphasis was placed on accuracy of comprehension, rather than upon speed. Figure 2, again using individual lines, substantiates this possibility by indicating that the majority of the 18 cases read with 3 or less errors at mid-year.

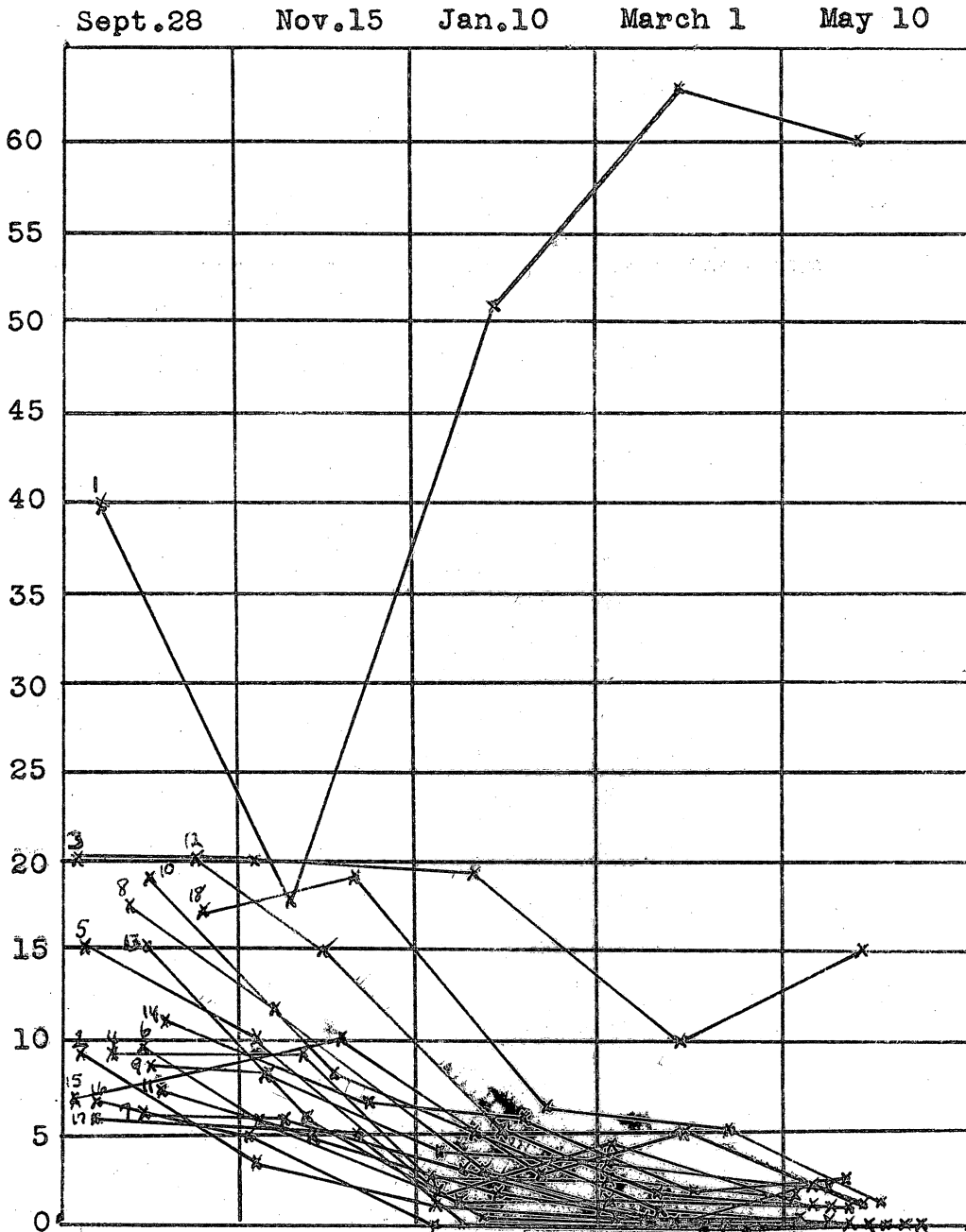
Determining by correlation group gain in silent reading and picturing individual progress in terms of rate and accuracy in oral reading do not reveal what personality or behavior change has occurred within the individual. Since this study is much concerned with

TABLE I

Individual Performance on Gray Oral Reading Check Tests,  
Set II

<u>Pupil</u>	<u>Sept. 28</u>		<u>Nov. 15</u>		<u>Jan. 10</u>		<u>March 1</u>		<u>May 10</u>	
1. Larry A.	240	40	205	17	210	51	225	63	215	60
2. Virginia	180	8	100	3	150	1	100	0	70	0
3. Stevie	360	20	225	20	185	19	190	10	115	15
4. Wayne	90	9	80	9	75	3	95	3	80	2
5. Lois	90	15	100	10	70	1	80	4	80	1
6. Perry	170	9	70	6	110	2	100	1	85	1
7. Linda	180	6	80	6	110	3	90	0	80	0
8. Stephen	180	17	110	13	160	3	115	0	83	3
9. Charles	90	9	85	8	153	4	140	3	70	2
10. David	180	18	125	8	115	5	95	1	65	0
11. George	90	7	95	5	95	3	65	0	60	0
12. Larry P.	180	20	185	15	180	6	130	2	95	1
13. Richard	180	15	190	6	195	1	130	0	125	0
14. Dennis	190	11	80	7	155	6	160	2	80	3
15. Sally	90	7	55	10	70	3	75	5	34	2
16. Jimmie	150	7	70	5	105	0	95	0	42	0
17. Darrell	180	7	175	5	130	0	115	0	65	0
18. Pat	240	17	225	19	165	7	130	5	75	2
	<u>R</u>	<u>E</u>	<u>R</u>	<u>E</u>	<u>R</u>	<u>E</u>	<u>R</u>	<u>E</u>	<u>R</u>	<u>E</u>

Mid-Term Standard Scores: Rate (R) - 63" Errors (E) - 3



Errors

Figure 1. Individual Performance on Gray Oral Reading Check Tests, Set II. Mid-term Standard Score: Errors = 3. Line numbers correspond to names of pupils listed in Table I.

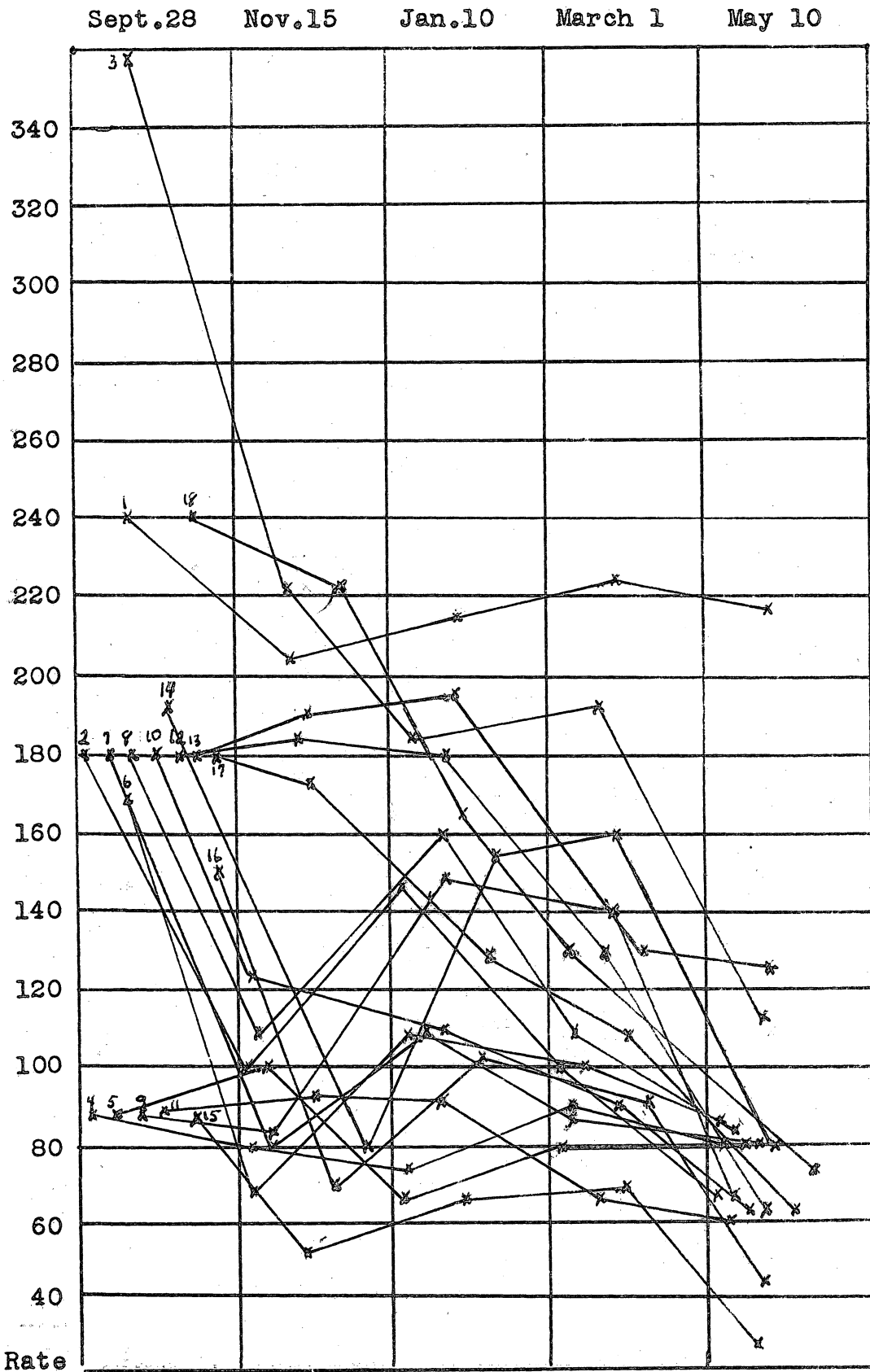


Figure 2. Individual Performance on Gray Oral Reading Check Tests, Set II. Mid-term Standard Score: Rate - 63". Line numbers correspond to names of pupils listed in Table I.



the latter aspect, the four representative case studies which follow may reveal some significant data in the light of the hypothesis pertaining to behavior changes in individuals. These case studies are chosen arbitrarily for two reasons: (1) to represent two cases which indicate no growth, and two which do show growth, and (2) to point out specifically what happens in each case.

## Four Representative Case Studies

### The Case of Stephen

A. Home Background. -- Stephen has 2 older brothers and 2 older sisters. One brother is serving in the air force, and the other is a junior in high school. His 2 sisters are in junior high school. Although the father owns his own farm, Stephen's winter clothing was inadequate. Apparently there is a conflict between the parents concerning what is best for the boy. This conflict was demonstrated when the writer attempted to arrange for a conference with the parents. A letter sent to both parents brought only the father to the school. At this conference he stated frankly that the mother "spoiled" the boy, neglected his clothing, and maintained no discipline over him in personal habits. The father wanted Stephen to have specific farm chores, do homework at night, and go to bed at a regular time. The mother never visited the classroom, although she did write 2 letters indicating her desire to cooperate in dealing with Stephen's reading problems.

### B. Personal Data. --

1. CA: 8 years 5 months, September, 1955
2. Weight: 64 pounds, September, 1955  
70 pounds, May, 1956
3. Height: 4 ft. 4 in., September, 1955  
4 ft. 8 in., May, 1956

4. Vision: Normal

5. Hearing: Stephen's health record indicated bad tonsils. On September 12, 1955, the school nurse checked his hearing and found a high degree of hearing loss, especially in the left ear. A letter sent to both parents reporting the matter brought no response. Three tests thereafter, each showing a progressive loss of hearing in both ears, were reported to the parents. A telephone call from the nurse to the mother in January brought a promise that "something would be done." Stephen was out of school during the last week of April because of his tonsils. On his return, he was found to be almost totally deaf in his left ear and still suffering from an earache. This condition continued until the close of school.

6. Absences: Bad tonsils caused Stephen to be absent 5 1/2 days out of a total of 185. (In first grade, he was absent 19 days; in second grade, 10 1/2 days).

C. Intelligence Test Data. -- The Wechsler

Intelligence Scale for Children was given in September, 1955. Following are the results:

Verbal Scale:	92 (low) average
Performance Scale:	97 average
Full Scale:	94

This scale showed the verbal test age equivalent in general comprehension to be 5 years 2 months. Another weakness in the verbal scale was seen in the area of arithmetic with a test age equivalent of 7 years 6 months.

D. Reading Test Data. --

1. The Gates Advanced Primary Reading Tests, Paragraph Meaning, indicated the following:

a. September 20, 1955

CA: 8 years 5 months  
 Reading Grade: 2 years 2 months  
 Reading Age: 7 years 6 months

b. April 19, 1956

CA: 9 years 0 months  
 Reading Grade: 3 years 2 months  
 Reading Age: 8 years 8 months

2. The Gray Oral Reading Check Tests, Set II, indicated rate and errors as follows:

a. September 25, 1955: R--180 E--17

b. November 15, 1955: R--110 E--13

c. January 10, 1956: R--160 E--3

d. March 1, 1956: R--115 E--0

e. May 10, 1956: R--83 E--3

3. First grade basic reading test indicated average achievement.

E. Teacher Observations. -- The second grade teacher noted interchange of manuscript letters b and d. This carried over into cursive writing. She also indicated confusion with the wh words, the inability to work out words independently, and the complete overlooking of endings of ed in oral reading.

F. Observations of Behavior. -- Stephens's low voice and almost inaudible answers to questions improved by the middle of the year. In the silent reading period, he worked diligently and at times too quickly. A check on comprehension by asking him specific questions indicated a vague idea of what he had read. He was handicapped in explaining concepts of what he had read by his lack of vocabulary. The Wechsler Scale had indicated a slight weakness in vocabulary which persisted as the year progressed. On checking oral reading it was found that Stephen had no conception of the sounds of endings of ed, d, and ing. Remediation throughout the year failed to remove the problem completely, probably due to his inability to hear sounds. He was anxious to write book reports and completed 7 in a creditable manner by the end of the year. He would not share his reports by reading them aloud. In re-checking his corrections through oral reading, it was found that he still overlooked endings of words.

In December, Stephen began to participate actively in the reading of written exercises after silent reading and volunteered often to take the lead in board work for word drills. However, from April on, he preferred to remain at his seat and to busy himself with

written work in preference to oral work.

During his more active participation in reading activities, his classroom voice was loud and clear. He took pride in spelling words aloud after a formal spelling test. Toward the close of the year, however, he was withdrawn but kept actively busy with dictionary work, book reports, writing descriptive paragraphs, working arithmetic problems, and practicing penmanship.

Stephen volunteered 2 times during "sharing time" and spoke briefly about experiences he had had on the farm. otive para

To some degree, Stephen's work and its quality was influenced somewhat by his physical condition. Had his tonsils been removed, and had he sensed more security in his home, perhaps he might have shown more progress. It was surprising the commendable work he did, not only in reading but also in the other subjects, despite his handicap.

## The Case of Larry A.

A. Home Background. -- Larry, whose parents are tenant farmers, has 2 older brothers and 1 younger sister. Only slight cooperation existed between the parents and the school on Larry's behalf. This pattern of behavior was consistent with the other children as observed by the parents' attitude toward Larry's brother in fourth grade. This older boy wore leg braces because of polio. The braces needed to be adjusted periodically by a doctor in Springfield. Only through the repeated urging of the school nurse did the parents take the boy for the necessary adjustment. Those trips, paid for by the school, became for Larry and his brothers and sister pleasure outings which meant absence from school. Requests by the teacher brought little cooperation for face-to-face conferences with the mother, whose attitude was usually that there was nothing wrong with Larry's reading. Larry took reading and spelling home but always reported the next day that he watched TV until he had to go to bed.

## B. Personal Data. --

1. CA: 8 years 4 months, September, 1955
2. Weight: 49 pounds, September, 1955  
51 pounds, May, 1956
3. Height: 4 ft. 1 in., September, 1955  
4 ft. 3 in., May, 1956

4. Vision: Normal
5. Hearing: Larry was greatly handicapped by bad tonsils, which became progressively worse until his parents, after much urging, consented to have his tonsils removed on May 28, 1956. Four hearing tests administered by the school nurse showed increasing high degrees of hearing loss in both ears at normal speaking range.
6. Absences: Continued colds and sore throat caused 18 1/2 days of absence from September to February and 17 days from February to May 30, 1956. Total absence was 35 1/2 days out of 185 school days. (In first grade he was absent 24 days, in second grade, 17 days.)

C. Intelligence Test Data. -- The Wechsler

Intelligence Scale for Children was given in September, 1955. Following are the results:

Verbal Scale:	94 (low) average
Performance Scale;	118 (high) bright normal
Full Scale:	106

This scale showed the performance test age equivalents of 15 years 6 months, 11 years 6 months, and 11 years 6 months, respectively, in the areas dealing with the assembly of objects, telling stories with pictures, and pointing out missing parts in pictures. Weaknesses are indicated in verbal areas of general information and arithmetic reasoning with test age equivalents of 7 years 0 months and 6 years 11 months, respectively.



D. Reading Test Data. --

1. The Gray Oral Reading Check Tests, Set II, indicated rate and errors as follows:

- a. September 24, 1955: R--240 E--40
- b. November 15, 1955: R--205 E--17
- c. January 10, 1956: R--210 E--51
- d. March 1, 1956: R--225 E--63
- e. May 10, 1956: R--215 E--60

2. The Gates Advanced Primary Reading Tests, Paragraph Meaning, indicated the following:

a. September 20, 1955

CA: 8 years 4 months  
 Reading Grade: 1 year 9 months  
 Reading Age: 7 years 2 months

b. April 19, 1956

CA: 8 years 11 months  
 Reading Grade: 2 years 0 months  
 Reading Age: 7 years 3 months

3. The Durrell Analysis showed him to be unfamiliar with the alphabet and sounds, placed him in pre-primer level in oral reading, primer level in silent reading, and below first grade in word recognition.

4. First grade basic reading test indicated low achievement.

E. Teacher Observations. -- The second grade teacher noted a lack of knowledge of consonant sounds, confusion of look-alike letters such as b for h or d, total inability in oral reading, total inability to apply and use spelling words in written work.

F. Observations of Behavior. -- At the beginning of the year, Larry showed deep emotional reaction toward reading periods. His pretense at reading ceased abruptly in October when one of his classmates inadvertently commented that Larry was reading with his book upside down. From that time on, he requested permission to "paint some pictures" of what some of his classmates were reading. He wanted to do this during the silent reading period. With few exceptions, his pictures dealt with the story in the basic reader. From the prefatory discussion of the story, he gathered enough information, apparently, to paint his conception of the characters and their actions. Near the end of the year, he somewhat reluctantly accepted the repeated proffered help of some of his classmates in writing on his picture the title of his illustrated story and the names of the characters. He permitted some of his pictures to be posted on the bulletin board, whereas at the beginning of the year he allowed few people to see his work, always taking the pictures home.

Three times during the year Larry asked to speak at "sharing time". Each time he presented a puzzle, a game of guessing the number of kernels of corn he had put in a jar. This idea was not original with him.

Regardless of average intelligence, Larry remained static in virtually all subject areas. He made very little progress in spelling, written composition, and social studies. He continued to write in manuscript most of the time. He made the most noticeable advance in arithmetic but only in those problems that appeared out of reading context. He had trouble with directions. He is retained in third grade, and, at his parents' request, he will be placed in the same class.

## The Case of Virginia

A. Home Background. -- Virginia has one sister in second grade and one brother pre-school age. Virginia's father, who is general manager of the local hair pin factory, is a member of one of the old line families in this community. The family's interests not only own this local factory, but extend to one of the two banks, farms, and town real estate. Virginia's mother, also from this community, made what local oldsters call "an excellent marriage". The family lives unostentatiously in a modest but comfortable home which reflects keen interest in the three children. Within a democratic home environment, Virginia's interests are stimulated and her leisure time well channelled. Planned trips to Chicago and St. Louis for pleasure became toward the close of the year more educational in purpose. Virginia's mother, serving as president of the PTA, always found time to visit school and was always greeted gleefully by her daughter. The father, too, made periodic calls to the classroom. Doting grandparents apparently have not "spoiled" Virginia; she is friendly and outgoing toward all her peers. She invited all her classmates to her birthday in August and to ascertain they would all come, she had each write his name and address and telephone number so she could follow her verbal

invitation with a written one. At the beginning of school at conferences with the parents, it was noted that they recognized Virginia's reading problems, and they were concerned over what they called her "apathy" toward school and learning. They were particularly concerned about her lack of vocabulary.

B. Personal Data. --

1. CA: 8 years 1 month, September, 1955
2. Weight: 64 pounds, September, 1955  
68 pounds, May, 1956
3. Height: 4 ft. 3 in. September, 1955  
4 ft. 5 in. May, 1956
4. Vision: Normal
5. Hearing: Good
6. Absences: Absences were infrequent because of illness. The majority of the 11 1/2 days absence was due to trips or extended vacations.

C. Intelligence Test Data. -- The Wechsler

Intelligence Scale for Children was given in September, 1955. Following are the results:

Verbal Scale:	106	(average)
Performance Scale:	107	(average)
Full Scale:	107	

According to this scale, strength in general information, in the concept of similarities, and in object assembly is seen by age equivalents of 11 years 10 months, 9 years 10 months, and 10 years 6 months respectively. A weakness was noted in vocabulary with a test age equivalent of 7 years 6 months.

D. Reading Test Data. --

1. The Gray Oral Reading Check Tests, Set II, indicated rate and errors as follows:

- a. September 25, 1955: R--180 E--8
- b. November 15, 1955: R--100 E--3
- c. January 10, 1956: R--150 E--1
- d. March 1, 1956: R--100 E--0
- e. May 10, 1956: R--70 E--0

2. The Gates Advanced Primary Reading Tests, Paragraph Meaning, indicated the following:

a. September 20, 1955

CA: 8 years 1 month  
 Reading Grade: 2 years 5 months  
 Reading Age: 7 years 10 months

b. April 19, 1956

CA: 8 years 8 months  
 Reading Grade: 6 years 0 months  
 Reading Age: 11 years 10 months

E. Teacher Observations. -- The second grade teacher indicated that Virginia's manuscript writing was laborious, her oral reading hesitating and word-by-word, her silent reading negligible and spasmodic. Little or no independent attack upon new words was seen because of the pupil's "complete disinterest". The non-recognition of simple basic sight words was observable.

F. Observations of Behavior. -- Virginia's lethargy and apathy, which appeared to be dullness, persisted until the middle of November. During this time, she dutifully and laboriously read word-by-word daily from the basic reader, skipped many words in silent reading, and showed slight resentment in keeping an individual word list. Help in making her own tachistoscope for word drill, and being chosen by the best reader in the class as a reading partner brought about a noticeable change in attitude toward reading which carried over into other subjects. Thumb sucking, which had occurred when pressure became too strong, gradually disappeared.

Virginia became extremely active in sharing time, especially the second semester, with her interests running to puzzles or guessing the dates of important events. An improvement was noted in her art work, particularly in colored chalks and wire work with original designs emerging in both media. Reports from home, at this time, indicated more frequent use of the local library upon the acquisition of her own library card.

By April Virginia was reading such books as Diana and the China Shop, Miss Pickerell Goes to Mars, and The Amiable Giant. Words began to hold a fascination for her, and in sharing time she presented for her classmates'

discussion such words as "avacado" because she had just had the experience of tasting one. She responded well to the "big word game" by figuring out such words as "boomerang", "hydrogen", and "philosopher". She utilized these words and others for dictionary work. She insisted upon knowing what they meant. The greatest improvement was noted in Virginia's oral reading. She requested almost every day to read to the teacher or to a classmate. Oral reading was one medium she had shunned at the beginning of the year.

Virginia's case history is an example of how home environment can help immeasurably in a pupil's progress toward maturity.



## The Case of Richard

A. Home Background. -- Richard's older brother is in sixth grade, his younger brother in first grade. His parents, who own their farm, Richard, and his brothers are apparently a happy compatible family. Richard's mother takes an active interest in the PTA, the Cub Scouts, serving as a den mother, and in her sons' educational life. She served as a room mother this year and offered her services for classroom picnics and excursions. Richard and his older brother have their particular farm chores, and each takes pride in his individual project of a garden or the raising of a farm animal. This spring when Richard broke his left wrist in a fall at home, his accident was treated calmly and with such little confusion that he did not miss a day of school. The succeeding trips to the doctor were arranged during recess time so he would miss no school work. Family interest in basketball permitted Richard to remain after school to practice "shots" on the school playground. This meant a special trip to pick him up. A wholesome attitude toward "what is best for Richard" without indulgence appeared to be the philosophy in this home. Periodic conferences with the parents substantiated their desire to help with Richard's reading problems. But there was no desperation to make

Richard "read as well as his older brother". Toward the close of this year, the father's comment "Richard sure likes to read to me from one of my farm journals, and he does pretty well" sums up the parents' viewpoint toward reading.

B. Personal Data. --

1. CA: 8 years 7 months, September, 1955
2. Weight: 66 pounds, September, 1955  
73 pounds, May, 1956
3. Height: 4 ft. 4 in. September, 1955  
4 ft. 6 in. May, 1956
4. Vision: Normal
5. Hearing: Richard had had his tonsils removed in 1953. On January 25, 1954, he was given a hearing test by the school nurse. At this time, a slight degree of hearing loss was indicated in the left ear. Another audiometer test on January 16, 1956, showed the left ear somewhat improved.
6. Absences: Richard had a perfect attendance for third grade. (He was absent four days in first grade and 1/2 day in second grade).

C. Intelligence Test Data. -- The Wechsler

Intelligence Scale for Children was given in September, 1955. Following are the results:

Verbal Scale:	121	(Superior)
Performance Scale:	125	(Superior)
Full Scale:	125	

This scale indicated above average abilities in all the tests administered.

D. Reading Test Data. --

1. The Gray Oral Reading Check Tests, Set II, indicated rate and errors as follows:

- a. September 25, 1955: R--180 E--15
- b. November 15, 1955: R--190 E--6
- c. January 10, 1956: R--195 E--1
- d. March 1, 1956: R--130 E--0
- e. May 10, 1956: R--125 E--0

2. The Gates Advanced Primary Reading Tests, Paragraph Meaning, indicated the following:

a. September 20, 1955

CA: 8 years 7 months  
 Reading Grade: 2 years 0 months  
 Reading Age: 7 years 3 months

b. April 19, 1956

CA: 9 years 2 months  
 Reading Grade: 4 years 4 months  
 Reading Age: 10 years 1 month

3. First grade basic reading test indicated average achievement.

E. Teacher Observations. -- Richard's second grade teacher observed that he had read one library book during the second grade. His knowledge of basic sight words was negligible, he confused the wh words. The relationship words such as from, with, of, at were skipped even in oral reading. He confused b with d and ignored endings of words, particularly the s, es, and ies.

F. Observations of Behavior. -- At one of his first weekly conferences with the teacher, Richard discussed openly his reading problems. He seemed primarily concerned with his slow rate in reading. In planning the initial approach to the solution of his problems, it was agreed that basic sight words should be mastered. The following weeks saw a slight improvement in word-recognition and word endings, but it was mainly routine improvement.

It had been noted that of all the new library books in which Richard had shown interest, How to Play Baseball, about a fourth grade book, had attracted him. His choice of reading partner became Darrell, a baseball fan, and a boy who enjoyed figuring new words through phonics remediation. "Baseball" words were added to both boys' individual word lists.

On the January Gray Oral Reading Test, when Richard fully realized that his speed had not improved, he asked what he could do to help himself. Plans were made for him to read every night from books and stories (first grade level) and answer in writing the questions given him. Gradually this reading was done at school from books of about second grade level.

By this time Richard's reading partner was Karen, the girl with no reading problems. Their table partner was Darrell. These three had worked together putting on

original plays. Both Karen and Darrell enjoyed writing book reports. Richard discovered these reports to be "sort of fun". By the close of the year, he had commendably written about 10 short reports on books varying between second and third grade levels. His report on How to Play Baseball did not cover the entire book, but what he did read was accurately and intelligently read. It was observed, at this time, Richard's speed during silent reading in the basic third grade reader improved. His comprehension, checked now through oral questions because of his broken wrist (his writing hand), was good.

Although Richard's speed in reading did not improve as perhaps it should have, he may have eliminated enough of his reading problems to permit him to do creditable work somewhat compatible with his intelligence.

The four representative case studies indicate that with some individual's reading problems, no one type or amount of remedial treatment produced either the removal of the problem or caused a behavior change. Home environment and/or poor health appear to be underlying factors that block the solution to the problem in the case of both Stephen and Larry. In the case of Virginia, with an intelligence quotient approximately the same as Larry's, evidence seemingly points to the home atmosphere as an aiding factor in the removal of Virginia's problems in reading.

Writing case studies in the light of the above evidence of the remaining 14 third grade pupils might show indications that other factors than poor health or home conditions hinder remediation of these reading problems. Dennis, like Richard, is the middle child and endowed with above-average intelligence. Dennis stutters badly. He still reads slowly. Fitting him with needed glasses in February did not produce the "immediate" improvement in reading his family "demanded" of him. Although he did not show the degree of progress Richard indicated, Dennis did evidence some change.

It seems advisable when discussing suppositions concerning a certain individual's reading problems and

his possible change in behavior, to place these assumptions about this particular pupil within the proper frame of reference that individually characterizes this pupil. In theory, it might now be safe to surmise in the case of Virginia that a pleasant home atmosphere plus the proper degree of home motivation combined with individualized classroom remediation did effect a behavior change. But it might be rather unwise to apply this same assumption to all 18 pupils in this study.

## CHAPTER VI

### SUMMARY AND CONCLUSIONS

The two hypotheses stated at the beginning of this study were: (1) that a group of 18 selected third grade pupils with average and above-average intelligence have individual but similar reading problems, and (2) that perhaps with the removal of these reading problems observable behavior change may take place. The process by which these hypotheses were to be tested was through controlled experimentation using the one-group technique.

Through this experimental process the first hypothesis appears to be verified. In Chapter IV, under the discussion of classroom procedures, the reading problems common to all 18 pupils were identified and diagnosed. This was done through the administration of oral and silent reading tests and through teacher observation of the pupils' behavior during the tests.

Verification of the second hypothesis is partially impeded by three general limitations. The first limitation is implied in the results in reading gain determined by the use of the specific reading techniques. These techniques, defined and explained in



Chapter IV under classroom procedures, assume that properly used they would remove individual but similar reading problems and in so doing bring about a behavior change. In Chapter V corroboration of reading improvement is found. But was this improvement in reading responsible for the implied observed behavior change? And, if it were responsible, where did the change take place? In the group? In the individual?

The second limitation is found in the results of group data in the area of silent reading. These data as substantiated in Chapter V show a difference in reading gain of approximately two years. But they do not identify the individual's gain nor do they spell out the over-all behavior change within the group. Can one be certain that the elimination of these individual reading problems brought about a marked improvement in group self-confidence or group maturity?

The third limitation restricts the effect of possible behavior change, for this particular group of pupils, to a review of the four representative case studies as found in Chapter V. Two studies, those of Larry and Stephen, show that under the conditions established by the controlled experimentation little improvement in reading was made by these two boys and little or no behavior change was noted. This appeared

to be due to variable factors over which the experimenter had no control. On the other hand, two other case studies, those of Virginia and Richard, show under like conditions and with the application of similar remedial measures definite movement toward self-confidence and maturity by this girl and boy. Nevertheless, even in these cases, variable factors such as home environment, health conditions, response to motivation, allowances for time change, and maturation of the particular pupil, may have been influencing elements in the individual's progress.

A general conclusion with regard to the second hypothesis that might be drawn from this study is that within this particular group of 18 pupils of average and above-average intelligence, the removal of individual reading problems in some individuals probably contribute to behavior change.

This writer is of the opinion that the objective data from the Gates Paragraph Reading tests pointing to the gain in silent reading is valid in the degree that they measure the individual gain of each pupil. Through observation and periodic check of each of the 18 pupils during the year, the individual's degree of reading gain was substantiated by the particular individual's improvement in related subject areas such as spelling, vocabulary

growth, and independent writing. Creditable independent work in other subject areas, particularly arithmetic, served as criteria for reading improvement.

In addition, this study may point to the fact that another program in reading remediation with selected pupils may show similar results.

This writer has listed some recommendations for further research that might validate to a greater degree the two hypotheses of this study.

## RECOMMENDATIONS RESULTING FROM THIS STUDY

1. Data secured through equating groups or pairing individuals might give more valid and significant results. The parallel-group technique rather than the one-group technique might prove more feasible.

2. The experiment should be continued for a period of time sufficient to reveal the effect of an extended application of the method.

3. A follow-up of the selected 18 third grade pupils would be desirable. These pupils are to be dispersed throughout 4 fourth grades.

4. Measurement of reading improvement and pupil behavior change during the experimental period was made through standard scores and brief statistical approximations. Attention should be given to the control of non-experimental factors, especially those relating to the teacher.

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