A Study of the Causes of the Reading Difficulties of Thirty Children in the Butler Reading Clinic the Summer of 1939

Evelyn Townsend

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A STUDY OF THE CAUSES OF THE READING DIFFICULTIES
OF THIRTY CHILDREN IN THE BUTLER READING CLINIC
THE SUMMER OF 1939
A STUDY OF THE CAUSES OF THE READING DIFFICULTIES
OF THIRTY CHILDREN IN THE BUTLER READING CLINIC
THE SUMMER OF 1939

By
Evelyn Townsend

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree
Master of Science

COLLEGE OF EDUCATION
BUTLER UNIVERSITY
1940
FOREWORD

Having worked for two years in the Butler Reading Clinic with children who had reading difficulties, it seemed that some generalizations and helpful conclusions might be drawn.

Since a successful remedial program must be based upon a sound diagnosis, it was decided to confine this study to the field of diagnosis and analyze the causes of the reading difficulties present in the children in this clinic.

In examining the case records on file, it was found that some were not so complete as others, therefore, it seemed best to make a study of those children enrolled in the clinic, the summer of 1939.

The writer wishes to thank Dean W. L. Richardson for permitting her to serve as an assistant in the Reading Clinic, thus making this study possible, and also for his guidance and help in the initial stages of the project.

She wishes to thank Dr. Amos Carlile for his general supervision of the study and his help in compiling the data. She appreciated also the encouragement given by Professor Albert Hock, Professor George Leonard, and Professor Henry Whisler.

To the following teachers, who assisted in gathering the data, must go part of the credit for any contribution which has been made, as the study could not have been made without their help: Mrs. Martha Guilford, Miss Elizabeth Peterson, Miss Evelyn Christopher, Miss Ruby Ertel, and Mrs. Roxie Day.

E. T. T.

Indianapolis, 1940
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INTRODUCTION

The problem presented by these children of normal or superior intelligence who are failing to read sufficiently well to carry on the activities expected of them in their school and out-of-school experiences is one which deeply concerns and definitely challenges educators.

During the last few years, a great deal of time has been spent in trying to find out just how serious the problem is, and surveys have been made in many school systems. These indicate that at least 25 per cent of the children in certain schools are unable to participate profitably in those classroom activities which involve reading.1


Elizabeth Hawkins, A Survey of the Reading Achievement of the Students in the Connersville Public Schools. An Unpublished Study, Butler University, 1939.

Dr. Emmett A. Betts\(^2\) reports that from 8 to 25 per cent of the school population are retarded in reading, that from 10 to 40 per cent of first grade children fail to be promoted, and that approximately 80 per cent of the retarded readers have normal or superior intelligence.

Miss Marion Monroe\(^3\) says that an estimate has been made that 12 per cent of the school population are decidedly retarded in reading, which means that in a school of four hundred children, from forty-five to fifty of them present definite reading problems.

Dr. Arthur Gates\(^4\) states that at the end of Grade III at least 40 per cent of all pupils have not enough reading ability to handle the fourth grade reading curriculum without experiencing difficulty. He also claims that failure in school is a major catastrophe to many children, and that recent experiments and the experiences of child clinics indicate that serious disability in reading usually resulting in such failures, causes serious personal and social maladjustments.

As they grow older, the poorer readers tend to drop out of


school, but in spite of this, from 20 to 30 per cent of high school
students have a definite reading handicap. Both the native and de-
veloped reading tastes of most high school pupils are at a rela-
tively low level. According to one study, only 5 per cent of such
pupils read magazines; and the better magazines are absent from the
list of those read.\(^5\)

The same condition also exists in most colleges. More than
half of our college students do no optional reading of books, and
only sixteen per cent occasionally read newspapers and magazines.\(^6\)

Very recently, leaders in the field of teaching reading have
begun to stress the importance of a program, the objective of which
is to prevent reading difficulties, rather than to provide remedial
measures. The correction of poor reading habits is, in itself, a
wasteful procedure, requiring an excessive amount of time and the
efforts of expertly trained teachers in an attempt to overcome those
difficulties which need never to have developed.

This point of view is basically sound, but before any such pro-
gram can be developed it is necessary to have in mind very clearly
just what the causes of reading failure are. Only when these
causes are defined in such a manner can a preventive program be

\(^5\)Anna Peterson, "Leisure Reading of High-School Pupils."
Education 54 (January, 1934), pp. 296-300.

\(^6\)J. R. Bergerich and Charles Jones, "The Optional and Re-
quired Reading of College Students," School and Society,
XXXVIII (July 16, 1933), pp. 93-96.
planned intelligently and effectively.

That literature in this field which has been read in preparation for this study indicates that there is very little agreement among writers concerning what are the most common and the most significant causes of reading failures. At the close of her study entitled "Children Who Cannot Read", Miss Monroe\(^7\) says that each factor which she investigated showed an overlap between good and poor readers, and that no one factor was present in all cases. Therefore, since the causes of reading failures appear not, as yet, to have been defined satisfactorily, it seemed that it might be worthwhile to make a detailed study of a group of children in the Butler Reading Clinic who have reading problems for the purpose of attempting to determine first, which factors might be the cause of their difficulty, and second, whether certain factors were more prevalent than others. The data provided by such a study might possibly suggest measures which would be helpful in the formulation of a preventive program which would enable children to acquire the necessary reading skills without experiencing failure.

**Statement of the Problem.**—The problem for this study is to find which causes of reading difficulty were most common and most significant among those children who came to the Butler Reading Clinic the summer of 1939. While not an integral part of the study, recommendations for a preventive program, based upon the

\(^7\)Marion Monroe, *op. cit.*, p. 110.
Method of Attack.—First, literature related to the subject of reading disabilities was reviewed in an effort to see if there was any agreement among the authorities in this field concerning: (1) the causes of reading failure, (2) those causes which are most common, and (3) those which are most significant.

The next step was to go over the case records which had been made over a period of two years at the clinic to see whether the data which they contained was complete enough for use in this study. Since some records were not as complete as others, it was decided to gather new data by making a study of the children who should enroll in the clinic during the summer of 1939.

In order to make sure that the data would be complete, and at the same time comparable, a case study outline was prepared for the use of the teachers who were to assist in this project.

The fourth step was to supervise the work of the teachers who were making the case studies to see that the data which was collected would be as reliable as possible and to give such tests as they were not able to give.

Finally, a study of the thirty case records was made in order to evaluate the data to see whether any conclusions could be drawn.

Limitations of the Study.—It is regretted that only thirty cases could be used in making this study, but the enrollment in

8See page 108 of the appendix.
the post-session class was smaller than usual. A much larger number of cases would have been very desirable.

While it may not be possible to say, with any degree of certainty, that such and such a factor causes reading disability in any one child, it is usually possible to show that specific disabilities are present. If certain of these which are usually significant are in evidence, this information can be used to an advantage in the formulating of a preventive program.

Summary.—Since there are large numbers of children in our schools who have not developed adequate reading skills, a feeling has developed that something should be done about it. Leaders in the field maintain that it is more economical to develop a preventive program than to spend so much energy on remedial activities. Before a preventive program can be set up, it is necessary to define the causes of reading disabilities. Since these causes may vary in different localities, it was thought that it might be helpful to make a study of children from Indianapolis and its environs. In this study, an attempt was made to find: (1) what deviations from the normal are likely to cause reading disabilities; (2) which of these are most common; and (3) which are most significant.
In order to benefit by the experience of others who have worked in this field, magazine articles, research bulletins and pamphlets, and books written during the last fifteen years have been reviewed. The Readers' Guide to Periodical Literature and Education Index were used as sources of reference.

Pertinent material was classified under the following divisions:

(1) developmental history and physical adjustment, (2) mental development, (3) social and emotional adjustment, (4) specific reading abilities.

A. Developmental History and Physical Adjustment

Although reading is primarily an intellectual process, an important factor in determining a child's ability to learn to read is his general physical maturation. Reading in reality is dependent upon a psycho-physical process, and each phase bears a very significant part in the reading progress of a child.

Physical factors, according to Jennie Lloyd Thomson, most

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important to the achievement of reading ability are those having to do with the normalcy of speech organs, hearing, vision, general health, handedness, and the chronological age. The last factor seems to be of little importance in determining reading readiness except as it is considered in obtaining the mental age of the first grade entrant. To a slight degree it is indicative of the amount of experience the child has had, but this is in terms of time only, not quality or extent. A survey made by Margaret Ladd in the St. Louis schools showed that the relation between reading achievement and chronological age, within a limited range, is insignificant.

Of real importance in influencing the quantity and quality of reading achievement is the general health status of a child. The child with low general health is likely to be listless, to be readily fatigued, and to have a much shortened attention span. He usually does not retain what he learns so well as he would if he were in good health. Since reading is dependent upon an efficient nervous system, the child who is well nourished will have a better chance to learn to read than the malnourished child. These are the conclusions of N. Lucile Harrison.  

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Children who have experienced some debilitating physical condition may find learning to read difficult. Lack of physical stamina prevents active participation with more robust companions, so that the weaker children frequently fall behind in their school subjects. Regular attendance at school is necessary to progress in the learning process; but, if the child who is in school regularly is fatigued, this might easily prevent his making an enthusiastic and energetic attack upon his school work. That good health is a vital factor in achievement is too obvious a fact to require further data for its verification.

The difficulties in motor control which affect reading arise from many different causes. Birth injuries and those illnesses which affect the child's motor control. Poor readers often display poor motor control in many types of activities. Jastak\(^4\) reports the studies of Marus, Kolitor and Wawrik, who compared nonreaders and good readers on various tests of motor precision; on these the latter achieved superior scores. These investigators, therefore, believe that motor deficiencies are related causally to reading disabilities.

Glandular disorders often result in a slow rate of reaction

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and in general lack of muscular coordination. "Case studies conducted at Northwestern University Psycho-Educational Clinic and elsewhere have shown that children whose thyroid glands function abnormally sometimes display not only aberrations in physical development but also mental and educational retardation." Since reading is an activity involving finely coordinated muscular movements, any factors which affect the child's general muscular control might readily result in possible contributory causes of reading disability.

Visual Efficiency

More research in this field has been carried out by school people during the last decade than during the preceding twenty-five or fifty years. As a result, there is a great amount of material which could be included in this chapter. Only the most pertinent will be used; but since lack of visual efficiency is perhaps the most important single cause of reading difficulty, it is important that this be emphasized in this study.

Since the work of E. A. Betts was that catalytic agent which stimulated interest in this field, he will be quoted first. It is interesting to know that his interest in this field was developed because he was not satisfied with the treatment given his own daughter who had acute discomfort due to inability to maintain binocular vision.

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Children read with their eyes; faultless sensation must precede accurate perception. The mind can interpret only the impressions it receives. This truism has been too frequently overlooked in our educational-research meanderings. Maturation is the chief factor contributing to reading ability; normal visual sensation and perception are also prime requisites. Before entrance to the first grade, every child should be thoroughly examined by a competent eye-specialist. A certificate of visual readiness to read should be required. The number of visual aberrations among both able and disabled readers makes this a mandatory policy for adoption by all school administrators.

The need for these tests was determined by an analysis of doctors' reports on disabled readers referred through the medical department. Approximately 90 per cent of the non-readers and severely retarded readers have been found to require medical attention before receiving pedagogical help. This conclusion has not been reached by other investigators because convenient tests of binocular coordination have not been available for the researches. Refractive errors have been the chief consideration. One can only speculate on the number of clinical reading cases which might have been saved the embarrassment of failure; however, the need for preventive measures probably cannot be overemphasized. Our own and other researches have made us sensitive to the necessity of exploring seven visual items: refractive errors, muscle balance, size and shape of ocular images, visual fusion, monocular and binocular eye-movements, interpupillary distance (P.D.) and visual imagery (after, eidetic, and memory). Unrefined indexes to refractive errors (hypermetropia, myopia, astigmatism), muscle imbalance, fusion, and visual acuity may be secured by means of the telebinocular tests in six to fifteen minutes time.

A second reference will emphasize still further Dr. Betts's findings in the field of visual efficiency:

A phase of anatomical maturation or growth meriting further research is the increase with age of the distance between the pupils of the eyes. This distance is measured

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from the center of the pupil of one eye to the center of the pupil of the other eye. In a recent study the writer found the greatest increase in inter-pupillary distance to occur during the sixth year (first grade). Undoubtedly this increase is brought about by the growth of the head. This factor, along with many others having to do with the development of the eyes, leads one to suspect that many children are not physically mature for the strain imposed upon the visual apparatus by the reading process. Such factors are not significant when children read at a distance greater than forty inches because the eye is constructed so that distance seeing is accomplished with a minimum of effort.

Young children are normally farsighted. There is some evidence for the belief that many children's eyes are not mature enough for close work, such as reading, until they are past seven years of age. A six-year-old child is probably under a greater strain while reading typical first-grade reading material than a seven or eight-year-old.

Far sightedness is usually caused by a short or immature eyeball. Various studies have showed that from 45 to 80 per cent of six-year-old children are normally farsighted. There is a gradual decrease in farsightedness as the eye matures so that by the age of nine only about 18 to 20 per cent of the children are farsighted.

In order to experience comfortable two-eyed vision (visual fusion) for small targets at reading distance, the action of the two eyes must be co-ordinated. Wells believes that "the full development of the fusion faculty is not attained until the fifth or sixth year with the normal child." Although this statement has not been entirely appraised under experimental conditions, the well-known existence of individual differences would lead one to conclude that at least 25 per cent of the children mature at a later age.

In a recent survey of 194 first-grade entrants 25 per cent exhibited difficulty in discriminating between common word forms; 38 per cent were unquestionably farsighted; 14 per cent lacked normal fusion; 38 per cent did not have the degree of eye co-ordination and the fusional desire that comes from experience with two-eyed vision to pass an easy test of depth perception and 10 per cent evidenced eye-muscle imbalance. All these items probably are related to reading disabilities, but in some instances they will become less significant with added age. To require some children to learn to read typical first-grade materials at six years of age is to establish undesirable mechanical reading habits.
Approximately 75 per cent of the six-year-old children are taught to read typical reading materials, but at what cost? Wagner using certain of the Betts Ready to Read Tests, found approximately 86 per cent of the kindergarten children possessed fairly normal co-ordination of the two eyes. He also found a definite decrease in eye co-ordination with an increase in grade level. At the sixth-grade level only 63 per cent possessed normal eye co-ordination. Wagner may have found one answer to the question "At what cost do we teach immature children to read?" Certainly no reading test can provide the tell-tale evidence.

In any one situation, the percentage of retarded readers who evidence visual disabilities varies with the extent to which other factors contribute to the general difficulty. The writer found 80 per cent of the reading clinic cases to have visual difficulties in one city where there were well-trained teachers, an abundance of reading materials, grouping within the room, and a policy of introducing first-rate entrants to reading on the basis of their general readiness for the activity. In another city where conditions were questionable, only 47 per cent of the retarded readers evidenced visual troubles. Investigators who attempt to determine the extent to which faulty vision contributes to reading deficiency are only wasting their time unless they control the other contributing factors.

In Dr. Fendrick's study of children taught by the look-and-say method, 50 per cent of the poor readers and 75 per cent of the good readers had normal vision. Dr. Thomas H. Eames has found that significant differences do exist between good and poor readers when certain two-eyed visual efficiency factors are measured. Dr. C. A. Selzer concluded that there is a relationship between lateral muscle imbalance and certain reading disabilities. 7

One of the early workers in the field of remedial reading was Marion Monroe. She has the following to say about visual efficiency and its relation to reading ability.

(1) Perceptual Disabilities. Quickness of perception is indicated in part by the number of diverse stimuli that can be perceived within a limited period of time under conditions of attention. It is obvious that, other things being equal, the more objects a child can apprehend in a moment of time, the more efficient he is likely to be. Although the richness of mental content bears some relation to quickness as well as to the range and accuracy of perception, differences in special native equipment seem to account mainly for the large differences found among children in regard to perceptual ability. This ability is affected by such factors as age, the physical and mental condition of the child, and diseases, e.g., epilepsy. It is probable that this function can be improved by specially constructed daily exercises. Differences that certainly exist in children in perceptual ability should be evaluated in relation to certain methods of teaching, such as the 'flash' method of teaching reading.

Poor vision is sometimes a cause of reading disability. About 23 per cent of poor readers are found to have visual defects that necessitate prescription of glasses. Of course, many good readers also need glasses. It is a commonsense procedure to correct visual defects for all children who need such correction. The prescribing of glasses does not, however, take the place of remedial instruction. After the child has been fitted with glasses his teacher sometimes expects him to catch up immediately with his class. Often such a child has fallen far below grade; he has developed habits of guessing and of faulty word perception before normal sight was established, so that he must have special help to eliminate these habits. If sight cannot be corrected suitably for normal reading the child should be referred to a sight-saving class where he will have the benefit of large print and other materials especially adapted for poor vision.

Defects in peripheral vision may be a cause of inability to read. Not only must a child be able to see distinctly in the center of the visual field, but he must also be able to see for some distance on either side of the point that he is fixating. Some people, in reading a line of text, can at one fixation grasp several words, while others may have to fixate each word, and, in rare cases, each letter. In some types of visual defects, peripheral vision is so affected that the child has great difficulty in developing a normal span of reading. A child that suffers from restricted or impaired visual fields usually finds reading extremely difficult, and if he has learned to read at all, does so very slowly, with much losing of the place,
line-skipping, and spelling of words. Between one and two per cent of the children that have reading disabilities and are brought for clinical study show this type of visual defect. Although this percentage is low, the necessity of a proper diagnosis is important.8

She lists the following symptoms as sufficient evidence that the child needs an eye examination.9

Visual defects should be suspected and tested by examination when a child’s reading shows the following characteristics:

(a) Excessive reversals.
(b) Excessive line skipping, word and letter omissions, and repetition.
(c) Extremely slow rate of reading.
(d) Errors in words of similar configuration, such as oat, cat, eat; band, hand, hard, etc.
(e) Evidences of eye strain during reading, such as blinking, frowning, squinting, watering eyes, complaining of eyes or headaches.
(f) Unusual positions of holding the book, very near, very far, or turning head or book sideways.

Lucile Harrison in her work with first grade children has found that visual efficiency is one of the most important elements of reading readiness.10


Reading demands that visual stimuli be received for interpretation. It is then quite necessary that the organs for their reception be normal before we shall say that a child is ready to read. It is only recently that school authorities have been adequately trained and equipped to determine visual readiness for reading. The school nurse has usually routinely examined eyes for acuity at twenty feet distance, but unless an eye defect at that distance was discovered and the child sent to a specialist, acuity at reading distance and other factors in visual sensation and perception were not tested. The usual nurse's examination was given with only one eye sighting during the testing, whereas the acuity of one eye when sighting independently is frequently very different from the acuity when both eyes are sighting simultaneously.

Defects in vision "may hinder a child in learning to read. If the retinal image is blurred, the child may not be able to distinguish the pattern of letters presented, and may confuse patterns which are similar, such as 'hand,' 'hand,' 'hand,' or 'eat,' 'eat,' 'eat,' etc." Faulty vision may also cause strain and discomfort for the child, making him nervous and unnecessarily fatigued. It is also certain to make quite impossible the rhythmic and regular eye-movements which are necessary for later rapid reading. After testing all the factors of visual sensation and perception, the tester should refer any child with defects to a specialist for correction of the difficulty.

Harry J. Baker, head of the psychological service of the Detroit City Schools has the following comment to make.

In some individuals there exists an imbalance or asymmetry of eye movement which is known as heterophoria, which is a more latent tendency toward asymmetry than actual strabismus, or heterotropia. Esophoria is a tendency to see parallel lines as if they were converging toward one another. Exophoria is seeing them tending outward or away from one another. In hyperphoria there is a tendency for one line to seem to be above the other. When lines seem to go in oblique directions there is hyperesophoria or hyperexophoria. These tendencies are concealed in the ordinary use of the eyes on account of the strong desire for binocular vision, but they feature deleteriously in the reading processes. Many reading problems could be diagnosed as having for their basic difficulty no other handicap than one of these tendencies. The pupil
therefore has trouble distinguishing between similar letters; n is m or u or v or even w; c is e; and t is l or f. Heterophoria in the vertical plane can be helped with glasses. In the lateral field, glasses are not very effective. Exercises or prisms can be tried here. This peculiarity is often caused by an infection in the ethmoid sinus. Therefore building up the general health and the general muscle tone may assist in correcting the defect.\textsuperscript{11}

Perhaps the most extensive research in types of eye training and treatment has been done by Miss Ilg at Evanston. In summarizing certain phases of her work, she says:

The child's eyes may be one cause of his trouble; for an efficiently functioning pair of eyes is most important to the mastery of skill in recognizing and reading words.

Keenness of vision is not all that is required. The process of learning to read, in particular, involves a number of eye functions, quite apart from the ability to name a letter of the alphabet at a normal reading distance. So important are these functions in the learning process that a necessary first step in dealing with nonlearners is to discover which of them meets the attention of an eye specialist. A study made by the authors of this article in the past two years showed that over 30 per cent of the children who were having difficulty with learning in school were handicapped because of various irregularities in the functioning of their eyes. Out of this study came an effort to improve diagnostic techniques and to refine methods of treatment, with the result that in the past year, corrective methods have been discovered which produce a definite improvement in a reasonable length of time.\textsuperscript{12}

In his annual summary for 1938, Dr. W. S. Gray says the


\textsuperscript{12}Vivienne Ilg and Louise Farwell Davis, of the National College of Education, Evanston, Illinois; and William S. Gray, University of Chicago, "Training Eyes to Read." Reprint from Parents Magazine.
Visual defects and reading disability.—Without doubt the relation of visual defects to reading disability has been studied more widely during the last few years than is true in the case of any other causal factor. Farris, for example, carried on a study among more than sixteen hundred seventh-grade pupils in the Oakland Public Schools to determine the influence, if any, of visual defects on achievement in reading. He found that 44 per cent of the pupils had visual defects of varying degree, and that both hyperopia and strabismus were associated with less than normal progress in reading, while myopia and myopic astigmatism were both associated with more than normal progress in reading. Of distinct significance is the fact that pupils whose visual perception is monocular make better progress in reading than those with poor coordination of the two eyes. The results of this study did not bear out the assumption "that children with defects in visual acuity regardless of type are always handicapped" in learning to read. When all types of eye defects were considered collectively those with defects made slightly greater gains in reading than those with normal eyes. After reviewing all the evidence secured Farris concluded that "classroom methods and procedures in teaching reading should be modified to meet the special needs of those pupils who have eye defects."

Dr. Paul Fendrick has summarized the results of his study in this field in the following:

An analysis of the characteristic differences obtained between the experimental cases (reading disability pupils), and the control cases (pupils normal in the reading function), offered the following results between the several groups constituting pupils matched for chronological age, amount of schooling, abstract non-verbal intelligence, sex, and school membership.

1. Differences favoring an indication of relatively inferior performance on measures of visual acuity for the

reading disability group were isolated. This difference was
accentuated when comparisons were effected with pupils taught
by look-and-say techniques. Although the balance was retained
in favor of the control cases whenever the phonetic groups
were considered alone, the contrast was not nearly so in­
cisive. The discrepancy in right-eye measurements was par­
ticularly significant.

2. Measures of lateral eye-muscle coordination did not
yield any evidence that reading disability cases manifested
a more pronounced aberrance in muscle-imbalance than the con­
trol cases. The reliability of this finding was established
through three distinct approaches which consistently failed
to produce any significant variation in the group comparison.

3. Particular dominance in eyedness or handedness, as
manifested by several indices, could not be attributed with
greater frequency to the poor readers than to the good
readers. This evidence was not particularly altered by an
analysis of mixed eye-and-hand conditions.

4. Telebinocular tests of reading readiness isolated
a significant difference between good and poor non-phonetic
readers that ascribed a higher frequency of astigmatic
anomalies to the reading disability cases. This variation
was particularly significant inasmuch as no differences
existed between the groups taught by the phonetic method.
These variations produced by astigmatic anomalies were,
however, undoubtedly reflected in the visual acuity mea­
surements.

5. As a result of the optometrical examinations con­
ducted by professional techniques, 70 per cent of all the
good readers examined gave evidence of normal vision while
only 56 per cent of all the poor readers examined manifested
this condition. Although the difference is not great enough
to be statistically reliable, it was consistent with the
trend of other measurements. When a comparison was ef­
fected with pupils taught by look-and-say techniques, how­
ever, 75 per cent of the good readers were reported as
having normal vision while only 50 per cent of the poor
readers were similarly reported.

6. Group differences were found that indicated a
more efficient performance on the part of good readers
in certain tests of visual perception. There was also
some evidence from an analysis based upon the inter­
correlations obtained from the perceptual testing of good
readers that a specific factor pattern was involved.
It is evident from this summary that, among the attributes associated with reading disability, the visual characteristics should receive definite attention. This consideration should be particularly pertinent in connection with symptoms of reading disability arising in schools where the look-end-say method of teaching reading is dominant. Although anastropia exists among pupils not manifesting reading disability, its existence cannot be condoned as its presence unnecessarily handicaps the child even though immediate effects may not be evident.\(^\text{14}\)

Witty and Kopel,\(^\text{15}\) however, do not agree with the viewpoints expressed above. They say that "muscle imbalance, fusion irregularities, and poor stereopsis, as well as deficient acuity and astigmatism, are found with approximately equal (but high) incidence in groups of poor and good readers. Moreover, the effect of these anomalies upon reading achievement in these groups has been shown to be relatively unimportant....."

It is true that the various visual irregularities which have been studied do not appear to cause or to contribute to that condition generally described as "reading disability." Nevertheless, before asserting that visual defects are not among the causes of poor reading, one should recognize this alternative: visual defects may impede the reading progress both of poor and of good readers. Correction of defects may improve the reading difficulties. Moreover, studies of individual cases, wherein marked visual defects or functional difficulties have been corrected or ameliorated (by the use of lenses or prisms, or by orthoptic training) and followed by appropriate remedial procedures, generally show definite improvement in reading attainment.


Auditory Efficiency

Defective hearing is also associated closely with reading disability. The hard of hearing child is at a distinct disadvantage because our "look and say" method of teaching reading depends upon auditory association as well as visual association.

Louella Cole\(^6\) summarizes this in the following paragraph:

Defective hearing interferes with learning to read because a pupil does not get a clear sound of the words as the teacher pronounces them. In fact, defective hearing has operated before he ever entered school to produce an abnormally small vocabulary. Consequently, many words that a child with normal ears recognizes as soon as they are pronounced, a child with defective hearing does not recognize at all, because they are not within his speaking vocabulary. Defective speech interferes with learning to read because the child's first reading efforts consist of pronouncing words either aloud or to himself. By his pronunciation he gets the feeling of the word in his vocal apparatus; in addition, he hears himself say it and thus obtains more oral drill. The child with defective speech gets the wrong muscular co-ordination; moreover, when he listens to himself he hears the wrong sounds.

Wendell W. Wright\(^7\), in his article "The Nature and Measurement of Reading Readiness," discusses at some length the physical factors influencing reading readiness; regarding the relation of hearing to reading, he states:


Normal hearing likewise is basic to the beginning of systematic reading instruction because some of the meaning attached to printed symbols comes from spoken words. While auditory acuity is significant, such factors as auditory span, auditory fusion, auditory perception, and auditory frequency range may also have a part in hearing-reading readiness.

However, in the "look-comprehend" method of teaching which is now being developed in the Chicago schools, acute hearing is not so important. As this method becomes more widely used, the child with hearing difficulties will not be so markedly handicapped.

There are various types of auditory defects. Some children cannot hear sounds at certain pitches. One child in the Special Education class at Butler University, June 1939, could hear only if the teacher spoke in a low tone of voice. Other children were partially or totally deaf, but in the case of each of these children defective in hearing, the problem of being a reading disability case was present.

Marion Monroe lists the auditory defects which interfere with reading, accompanying these with a list of the symptoms.

The auditory defects which interfere with reading are partial deafness in one or both ears and hearing losses at various ranges of pitch. Partial deafness may contribute to faulty discrimination of sounds both in reading and in speech. An audiometer test will determine the child's ability to hear sounds at various pitches. Children who

18Private conversation with Mrs. Lillian Lewis, Principal of Special Education Classes, Butler University, 1939.

19Marion Monroe, op. cit., p. 19.
are partially deaf or lack proper sound discrimination often show some of the following characteristics in reading:

(a) Excessive errors in the vowel and consonant sounds of words.
(b) Additions and omissions of sounds.
(c) Speech defects in conversation and in oral reading.
(d) Confusion of words which sound nearly alike.
(e) Inability to use phonics as an aid to word-recognition.
(f) Inattention while others read aloud.
(g) Misunderstanding oral directions.

Regarding hearing, Lewis M. Terman concluded that from 10 to 20 per cent of school children do not hear normally, and that because of this defect the learning of from 2 to 5 per cent is very seriously impaired. Sex and age differences are very slight, practically non-existent.

So, in conclusion, it may be said that research and practice have determined that defective hearing is a factor in reading disability. The methods generally employed today in teaching reading are such as to necessitate auditory image as well as visual; therefore, an inability to experience an auditory association satisfactorily is a distinct handicap to the learner.

Laterality, Mixed Dominance and Reversals

Largely through the clinical observations of Professor W. P. Dearborn of Harvard University and Dr. Samuel Orton, formerly of Columbia University, lateral dominance has been considered as a

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potent factor in the diagnosis of reading disability. In Marion Monroe's comparison of reading defect cases with control groups, practically no discriminatory differences were revealed in handedness, while significant differences were discovered in eyedness. The reading-defect cases offered a greater proportion of children who preferred the left eye in sighting and showed right-hand dominance associated with left-eye dominance. Miss Monroe reports:

Opposite hand-and-eye dominance may be an impediment in the coordination of directional response. The child who prefers his left eye may adjust more easily to objects on the left side of the visual field than on the right side, and may tend to move the eyes from a central point toward the left, the right field of vision becomes obstructed by the bridge of the nose, but the left field is free. In moving the eyes toward the right, the left field of vision becomes obstructed by the bridge of the nose, but the right field is free. The development of the progressively to-the-right movements demanded in reading may be more difficult for a left-eyed child than for a right-eyed child.

In a discussion of "reversed mental images," which Marjorie B. Greenbie classes as one of the less common causes of difficulties in learning to read, she states:

There are innumerable causes of difficulties in reading. Some of the less common causes are herewith noted. It is not likely that they will be encountered often, but they deserve mention. One of the less common causes of reading inability

21Marion Monroe, op. cit., p. 84.

is that of reversed mental images. According to Dr. Orton, Professor of Neurology in the College of Physicians and Surgeons at Columbia University, the body is composed of structures that duplicate each other, but which stand in mirrored position with each other. We have to halves of a brain which are placed in this mirrored position to each other. Usually one side of the body has the dominance in performing all skilled actions. In most people this is the right side of the body which is controlled by the left side of the brain. In left-handed people, who are also left-footed and left-eyed, the control is exercised by the right side of the brain. The dominant side of the brain controls speaking, writing and reading. When either side of the brain dominates, as in the two conditions noted above no trouble occurs.

If, however, there is no complete dominance, such persons may sometimes be controlled alternately by the left side or by the right side of the brain. A child who has this sort of difficulty, would at times see words as they are, and then again see them reversed. The word was would appear as was at one time and saw at another time. As can be readily seen, ordinary methods of teaching would be of no use in teaching this child. He requires special assistance with this difficulty. Fortunately, such cases are not common.

This reversal tendency in children has recently been studied very intensively as it is related to the reading process and to its predictive value in reading readiness. Outstanding among several of these investigations dealing with this problem is that of Lorene Teegarden, who believes that this tendency to reverse and confuse symbols is one of the prime causes of failure to learn to read, in a child whose intelligence is normal and whose vision is unimpaired. Confusion of symbols through failure to distinguish their exact position and sequence makes reading difficult, such

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difficulty without adequate appreciation and help in overcoming the
trouble produces failure; and failure produces dislike and an an-
tagonism toward reading. The result is the non-reader, the child
who, after several years of the usual school instruction, has not
learned to read, although he seems normal in alertness, interest,
and activity in other things.

From the result of her clinical study of children with varying
degrees of reversal tendency, Miss Teegarden concludes:24

1. The most potent factors in learning to read are in-
telligence and the degree of tendency to reverse and
confuse symbols.
2. These two factors are independent variables.
3. The very bright child is capable of overcoming a
strong tendency to reversals and learning to read in
spite of it.
4. Other things being equal, the child with the better
intelligence makes more rapid progress in reading.
5. Other things being equal, the child with less ten-
dency to reversal makes the better progress in
reading.
6. If two children vary in the same direction in both
intelligence and reversal tendency, the difference
in their progress is increased more than if the
variation occurs in one factor only.
9. The tendency to reversal is not abnormal or patho-
logical, but occurs in every degree from total ab-
sence to severity . . . .
10. Tendency to confuse symbols is characteristic of
mental ages below six years and is usually elimi-
nated in mental ages above seven.

The relation between reversal errors and mixed hand-eye domi-
nance has not been established.

24 Ibid., pp. 357-358.
Witty and Kopel, 25 and Hildreth 26 note a decline in frequency of the reversal tendency in higher as contrasted with lower grades indicating that the reversal propensity tends to diminish with maturation. Significant, too, was the observation that in both poor and good reading groups reversals occurred with no greater but with slightly smaller frequency in the children displaying mixed dominance than in those consistently left or right in their visual-manual behavior.

Baker and Traphagen 27 agree with the viewpoint that reading difficulties are sometimes caused by confusion in handedness. Kelly, 28 however, concluded "There is no known check on cerebral dominance which is sufficiently dependable to enable one to investigate the influence of that factor on the perception of the orientation of symbols."

**Word-Blindness**

Another unusual cause of inability to learn to read has been

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26 Hildreth, "Reversals in Reading and Writing", Journal of Educational Psychology, XXV (1934) pp. 1-20.


term "word-blindness." This condition is due to an injury to, or otherwise loss of the use of either the left or right gyrus, or to the cellular deficiency in this part of the brain. Annie D. Inskeep\textsuperscript{29} says that the child so afflicted can struggle through a sentence with help, but cannot remember the words when presented to him the next time. Occasionally the child can remember the spelling of the word, and the only way that he can read it is to spell it aloud first. Letters and sound associations appear to present no difficulties. When it is found that the word center in the brain is not functioning, it becomes necessary to make a new one on the opposite side of the brain. In order to do this, the child must be taught to write with the opposite hand from the one which he is using, and he should be given a greater amount of work in phonics.

The word-blind child can comprehend oral material and through auditory channels acquires speech and other mental functions. He may possess average and even superior intelligence, but because reading is so important for both the development and expression of the intellect, he usually appears to be retarded mentally. This theory of word-blindness has been declared invalid by Jastak\textsuperscript{30} and


\textsuperscript{30}J. Jastak, Interferences in Reading, Psychological Bulletin, XXXI (1934) pp. 244-272. Columbus, Ohio: The American Psychological Association.
Tinker and it receives little support from present-day authorities in the field of remedial reading.

Efficiency in Speech

Several writers claim that there is a close relationship between reading failures and speech difficulties. Marion Monroe says that children who have failed in reading are more likely to develop nervous speech than those who are good readers. Since any type of maladjustment is likely to cause enough emotional involvement to disrupt the child's progress in learning to read, it is especially important that fluent speech be insured.

In the teaching of reading, association between the printed symbol and the child's vocal articulation is commonly used. Thus organic or habitual articulatory disorders may influence the child's readiness for systematic reading instruction.

An interesting observation has been made by Guy Bond in his study of the speech characteristics of poor readers. He found that


when oral reading ability was taken into account in relation to silent reading proficiency, 35 per cent of those children that were retarded in oral reading but good in silent reading, had speech defects. On the contrary, those children that were not retarded in oral, but were retarded in silent reading showed no speech defect.

An opinion in variance with that of Marion Monroe is that of H. P. Davidson who, in working with a group of pre-school children, found that the presence of speech difficulties made no difference in their ability to learn to read.

A special disability which, according to Lee Edward Travis, may be an important factor in a child's inability to learn to read is aphasia which he describes in the following:

Aphasia is a defect in, or a loss of, the power of expression by speech, writing, or signs. It is usually due to injury or disease of the brain, but may be congenital. Its main manifestations are difficulty in pronouncing words, difficulty in finding the word or expression needed, errors in the grammatical structure of a phrase or phrases as a unit. If the defect is severe, all language functions (speech, reading, writing) may be affected. In young children an aphasia condition may express itself in markedly retarded speech development. Speech is slowly and laboriously established and rarely, if ever, reaches a stage of normal fluency.

34 H. P. Davidson, An Experimental Study of Bright, Average and Dull Children at the Four Year Mental Level, Genetic Psychology Monograph, Vol. IX, No. 34, Clark University, 1931, p. 79.

In summarizing the findings relating to articulatory defects and their relation to reading ability, Mr. Travis says:

Educationally the speech defective does not achieve at the level of his ability, and for three reasons: first, he is definitely handicapped in oral recitation, and the teacher unwittingly discriminates against him because of his poor showing in verbal expression; second, his speech defect is frequently associated with other defects, such as reading and writing disabilities; third, he is handicapped by bad emotional reactions caused by his speech handicap.

Careful surveys reveal that at least 5 per cent of the school population possess speech defects of sufficient severity to warrant remedial attention.

A summary of the material that has been presented in the consideration of developmental history and physical adjustment as it is related to reading disabilities is adequately given in the following paragraph:

A child's physical development may have been impaired or delayed in some aspects to such an extent that interferences occur in learning to read. The visual, auditory, and motor aspects of physical growth seem most closely allied with ability to profit by ordinary reading instruction at the initial stage. When these factors are impaired, reading achievement by ordinary teaching methods is often greatly delayed or quite impossible. If deficiencies of these types are noted, provision should be made for their correction. If they are too severe to be remedied, another approach to reading must be used which does not place too great demands upon these physical factors.

36 Ibid., p. 62.

B. Mental Development

The most fundamental factor in predicting a child's achievement in reading or in diagnosing the causes of his inability to read, is the determining of his intelligence quotient and mental age. Louella Cole makes the following conclusions on this point:

The first point in considering a given child is to make sure that he is not a general defective. If a child has an I.Q. of less than 75, he will not learn to read for some years after entering school, for the same reason that he will not learn arithmetic, spelling, or any other subject. Not only defectives but stupid children--those with I.Q.'s from 75 to 85--are not yet ready to read when they enter school. Since a mental age of at least 6 1/2 is needed before a child can begin to read, a child with an I.Q. of 80, for instance, must wait until he is about eight years old before he has the necessary mental age. Such a child must therefore remain in school about two years before there is any use in trying to teach him to read. The first step, then is to determine a nonreader's I.Q. and mental age. If these are low, the situation is adequately explained.

Sometimes children of good general intelligence show retardation in some of the specific skills which compose an intelligence test. Difficulties in verbal abilities are impediments to reading, since reading consists of an interpretation of visual-verbal symbols. Children who have an inadequate background of word-meanings can scarcely succeed in understanding what they read. Therefore, general intelligence should be measured by a test which is not too heavily weighted with any one type of ability. Tests requiring

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38Louella Cole, op. cit., p. 258.
considerable reading should not be used, as poor readers are naturally handicapped on such tests.

Findings seem, in general, to reveal that there is a tendency for the children whose reading achievements are above the expectations for children of the given age to have somewhat higher intelligence quotients than the children whose reading achievements are below expectation.

Those intellectual factors which affect reading most vitally may be divided into, first, general intelligence, which has just been discussed, and second, the presence of certain specific intellectual abilities. Of these specific abilities, two of the most important and most closely related are the ability to see likenesses and differences in words and the ability to remember these word forms. It is a well-known fact that this ability to see likenesses and differences is dependent upon mental maturity, however, it may be developed to the full capacity of the individual by definite training and by the forming of habits of accurate and precise observation.

Another specific ability necessary for carrying on the reading process successfully is the ability to carry in mind a fairly complex sentence and to be able to give it again orally without errors. W. J. Van Wegenen has investigated this "memory span of ideas" or "auditory span" and has made the following conclusion.

Between this ability and success in reading in the first grade there is a reasonably high correlation. This ability increases with mental maturity, but can be improved through training.

Concerning the ability to do abstract thinking and the ability to correlate abstractions with definite modes of response, Miss Harrison says that such abilities are necessary for adequate comprehension in reading. These abilities develop with mental maturity but may be increased through broad and extensive experiences.

Experience Background

The environment in which children live influences to a marked degree the type and quality of learning in the school. General community facilities and neighborhood characteristics affect all the children although in varying amounts. The general atmosphere of the immediate neighborhood influences the effectiveness of the school program. The degree of homogeneity of the people as to race, nationality, religion, occupation, and language prove to be real factors in influencing the child's school experiences and school progress. Still other factors that play equally important parts in affecting the child and his educational progress are, the frequency of crime, the uses made of leisure, the economic level of the homes, the existence of factories, and the presence of parks and playgrounds. The bearing of all these factors upon the work of the school is of sufficient importance to justify their being considered

40 Mrs. Lucile Harrison, op. cit., p. 11.
in the prediction of school success or the explanation of school failure.

More closely associated with the child and his experiences is his home environment with its characteristics so significant in the child's development. Those factors within the home which affect the child are legion; only those which bear especially upon the problem of determining causes of reading disabilities will be mentioned. The child whose home language is English has a distinct advantage over the child who hears a foreign language predominate in his home and hears English spoken occasionally and then only in a faltering and incorrect manner. Throughout his school life, the control of the English language is essential to satisfactory work in reading especially, and in his other subjects proportionately.

The economic status of the home is another factor most important to the learning process. Even though public education is free, there are many advantages which afford rich experiences which the parents who can afford to pay make available for their children. Ladd,41 in her study of the socio-economic status of the home, finds a slight tendency for inferior socio-economic status and foreignness in the home to be associated with poor reading. Bennett42 reports that he finds no characteristic type of home

41 Margaret Ladd, op. cit., p. 84.

background which is markedly prejudicial to reading progress. It is a limitation of these studies that each dealt with a fairly homogeneous population.

The child who comes from a normal home is much more likely to develop into a well-adjusted individual and to progress in his school work than is the child who comes from a broken home. A happy relation between the child and his parents and the presence of a normal family group, with judicious handling of the problems of the brothers and sisters within the group on the part of the parents are most conducive to normal intellectual growth on the part of the individual child. According to Margaret Ladd,

The child's home environment contributes its share of factors to the reading disability. Children reflect the attitudes and interests of their parents. Motivation toward reading is usually greater in a home where reading is a frequent activity than in a home where parents never engage in reading. The home also contributes most of the child's pre-school training. Attitudes which later favor or impede school progress have been determined to a large extent before the child comes to school. The home also contributes to the child's general feeling of security or insecurity. The child who is troubled about his personal relationships because he is unwanted, because he cannot compete with more favored siblings, or because he feels insecure for any reason may not have a desirable frame of mind for learning. Personal anxieties, doubts, or troubles of any kind offer a distraction to effective work both in adults and children.

Home conditions which contribute to the child's reading disability or to undesirable emotional attitudes affecting his

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43 Margaret Ladd, op. cit., pp. 84-85.
ability to learn, are given by Miss Monroe\textsuperscript{44} in the following:

(a) Lack of cooperation between home and school resulting in the child's antagonism to school or in anxiety and divided allegiance between home and school.

(b) Emotional insecurity at home because of broken home, instability of parents, conflicting and inconsistent disciplinary measures, sibling rivalry, etc.

(c) Economic insecurity of home so that life needs are inadequately supplied.

(d) Frequent moves from one neighborhood to another with no stability of social life.

(e) Illiteracy, foreign language, with inadequate reading interests or insufficient language background for reading.

In the careful examination of the child's experience background, a study of his school history is most helpful. The educational factors which contribute to a child's school history are so numerous that it is difficult to isolate all of them and to determine those affecting him most vitally. However, Miss Monroe\textsuperscript{45} has grouped into five large classes those which she considers to be of greatest importance to the child and to his reading progress. These are

(1) deficiencies in early preparation or readiness for reading at the time reading was initiated

(2) poor adjustment of reading materials to the child's present level of achievement

(3) poor adjustment of reading methods to individual differences

\textsuperscript{44}Marion Monroe, \textit{op. cit.}, pp. 31-32.

\textsuperscript{45}Ibid., pp. 28-29.
poor methods of motivation and interest
inadequate administrative arrangements for taking care of children who have reading disabilities

One writer, Edward William Dolch, makes the statement that probably more deficiency in reading can be traced to discouragement because of previous failures in reading than to any other cause. These failures he concedes may have been caused by certain of those factors which have been discussed previously in this chapter, but he adds that they have been caused in more cases than is at first realized by "mismanagement on the part of the teacher". In the first and second grades especially, though sometimes later, he says that a special deficiency is often caused by wrong methods which the children have acquired with or without the teacher's knowledge. In the upper grades, and in all of later life for that matter, marked deficiency in reading develops through sheer lack of correct reading experiences.

Witty and Kopel, in their recent book, state that "children exposed to typical first-grade reading class do not, in passive fashion, merely waste much of their time, but, as dynamic organisms in a monotonously sterile, abstract, and largely unintelligible situation, they frequently react with the development (learning) of


attitudes of indifference to or dislike for reading.

The teacher's personality easily may be an important factor in causing the emotional strain associated with some children's failures.

The tendency of emotionally unstable teachers to influence undesirably the mental health of their pupils was reported by Boynton, Dugger, and Turner. Their investigation revealed that the pupils of the teachers who had the best mental health were more stable on the average than were the pupils of the most unstable teachers, although the student-teacher relationships had existed only about two to two and a half months prior to the study. Facts such as these led Pressey to consider the teacher as the outstanding factor in the mental hygiene situation in the school.

In the Thirty-Fourth Yearbook we find a list of factors associated with learning difficulty which are found in the instructional situation itself. These are discussed under the following headings:

(1) Inadequacy and inefficiency of instructional materials.
(2) Faulty or unskillful instructional practices and procedures.
(3) Failure of instruction to provide for individual differences.
(4) Ineffective guidance by teachers during learning activities.
(5) Undesirable personal and social relationships between teacher and pupils.

(6) Ignorance of the factors contributing to learning difficulties and failure to correct them.

Interest

Using the children's individual interests as a means of motivating work in reading is of sufficient importance to merit consideration in a study of this kind. There are several essentials in the adaptation of reading to the interests of children. The question of kinds of materials that should be used is answered by Louella Cole when she says, "Use all conceivable kinds of materials, regardless of their literary merit." She states also that each child must be an individual case; his interests should guide the teacher in the selection of material suited for meeting his reading needs. Not all children can be expected to like "good" books from the very first. The appreciation for good literature with most persons is a matter of training and develops slowly. Books known as "good" books are too long and too hard for poor readers, and too dull and unattractive for dull and immature readers. She makes the following conclusion:

If a teacher is willing to keep a large supply of reading matter on hand, to study each child, and to let children react like children, she will have relatively little difficulty in using their interests to motivate their reading activities.

49Louella Cole, op. cit., p. 304.
The good reader is typically the child who utilizes reading as a means of attaining desired personal and desirable educational goals. He is a child who has acquired the ability to derive knowledge and information from the printed page which relate to his activities, questions, and problems: his interests. For poor readers, however, the reading process infrequently provides a complete, satisfying experience. Rarely has the poor reader completed a book, nor has he found in books information which is of vital concern to him. To remedy his condition the poor reader, therefore, must have a series of new reading experiences which are unmistakably successful. He should find success in reading wherever he meets it in the many areas of school endeavor. But this is not enough. Reading must become associated with experiences recognized by the child as being closely related to his needs and purposes. Thus it is important to identify children's interests, the development of which gives direction and purpose to their activity, and integrity to their experience. The utilization of interests, moreover, assures a condition in which learning may take place economically. These are the conclusions of Witty and Kopel who emphasize that the child's lack of interest in the materials provided is the outstanding cause of ineffective reading.

C. Social and Emotional Adjustment

Emotional factors must also be considered among the causes of

50 Paul Witty and David Kopel, op. cit., p. 55.
difficulties in reading. Any dislike for reading which the child may have, must first be overcome. He must want to correct his reading faults, for, unless his cooperation is obtained, little can be accomplished. Another emotional disturbance that results in reading failures is fear, fear of the teacher which results in inhibiting the child's responses, fear of punishment if he reveals his inability to read, and fear of the disapproval of his classmates. Such fears may easily result in anti-social tendencies, the unfortunate effects of which may, although they originally sprang from reading disabilities, extend into other fields of experience and cause almost tragic maladjustments.

There are no good and reliable measures of social and emotional maturity of children. The observation of a well-trained, intelligent teacher readily discovers the babyish child who depends upon adults, the child who has no curiosity about books and pictures, or the child who finds the reading lesson dull and uninteresting. Although any such means of measuring are necessarily subjective in nature, Marion Monroe51 suggests certain emotional factors which may cause reading disabilities and which are sufficiently objective to present a fair summary of our problem, which is the emotional development of the child and its effect upon his reading progress:

Emotional factors which are primarily causing reading disabilities are those which antedate the reading failure. Records from the kindergarten and first-grade teacher are helpful in making this determination. Examples of these impeding attitudes follow:

(a) General emotional immaturity. The child is dependent upon the mother or other adults; is unaccustomed to taking responsibility for any task; is infantile in manner and interests. If the child is comfortable and attached to this dependent relationship, reading may mean a step in growing up which he resists.

(b) Excessive timidity. The child has failed to make a social adjustment; is too shy and timid to speak or to attempt the activities of the group. Reading activities appear to him to belong to the group from which he withdraws.

(c) Predilection against reading. The child has heard others say that reading is "hard"; he identifies himself with someone who cannot read or who dislikes to read.

(d) Predilection against all school activities including reading. The child has overheard parents speak slightingly of school or teacher and imitates their attitude, rejecting the activities of the school.

Emotional factors which are the result of the reading disability and which in turn further retard the child's progress in reading have been listed in the first chapter. For completeness, they are briefly stated again here:

(a) Aggressive opposition. The child takes an aggressive dislike or hatred of reading.

(b) Withdrawal. The child attempts to escape from reading. The escape may be an actual truancy or a withdrawal of attention in day-dreaming.

(c) Compensatory mechanisms. The child turns from reading to satisfactions in other activities. These may be wholesome compensations, such as arithmetic, drawing or athletics, or a variety of less wholesome attention-getting mechanisms.

(d) Defeatism. The child gives up trying and regards himself as too "dumb" to learn and suffers from feeling of inadequacy.

(e) Hypertension. The child becomes tense, "on edge," and develops anxiety over reading. Nervous mannerisms in reading appear such as coughing, clearing throat or stammering.
(3) Associated or "conditioned" emotional responses occur when reading becomes linked in the child's mind with some unpleasant or emotional experience. These are various and differ as widely as the experiences. A few examples are listed.

(a) Reading associated with punishment. The child is scolded or shamed for a misdemeanor or for some error in word recognition during the reading period. Subsequent reading periods remind him of the painful experience.

(b) Reading associated with fear. The child may fear the teacher for some cause and dread any activity in which he is singled out by the teacher.

(c) Reading associated with negative reactions. A deliberate child who does everything slowly including reading may be prodded to "hurry" until tension and negativism develop.

Remedial methods which have been worked out according to successes and failures in treatment provide additional guidance toward areas for further study. Distinctive are the contributions of Blanchard52 who has worked for years in the clinical field with children who have been unable to make the usual progress in reading. In her diagnostic and therapeutic work, she gradually came to realize that her material "suggests very strongly that reading disability often arises from the same sources of difficulty in emotional development, and in much the same manner as the accompanying personality or behavior problems or neurotic symptoms, such as fears, illnesses without physical basis, infantile regressions, and the like..."

52Phyllis Blanchard, "Reading Disabilities in Relation to Difficulties of Personality and Emotional Development", Mental Hygiene XX (1938) pp. 384-418.
Blanchard does not claim that all reading problems are associated with difficulties in emotional development. Her discussion, quoted here only in part, is preceded by reports of work with several children.

We can at least state with some certainty that children burdened with conflicting feelings which they have been unable to integrate, and with an excessive amount of repressed hostility and aggressive impulses, are unable to enter into relationships with other people with real affection and positive feeling. This is clearly shown in treatment in the transference relationship to the therapist. It is equally characteristic, though less openly manifested, in the relationship to parents and teachers. We do things for people when we like them; children learn, at least at first, to please parents and teachers who are loved, in order to secure love and affection in return. If attitudes toward parents, which are transferred to teachers, are negative, rather than positive, interest in learning is decreased thereby, or refusal to learn results, in cases of extreme negative feelings. This resistance to learning may well become associated with reading because this subject is most stressed in the early grades by the curricula in most schools.

Bennett undertook an intensive study of individual children using fifty pairs of children, each pair consisting of a good reader and a poor reader equated as to sex and school grade, with I.Q. and C.A. as nearly the same as possible. Concerning social and emotional adjustment he has the following to say:

The data reported do not indicate that the poor readers were a markedly abnormal group of children with respect to the areas of adjustment under consideration. On the whole, they showed normal juvenile inclinations for the society of other people and seemed to enjoy fairly adequate social

55Chester C. Bennett, op. cit., p. 93.
acceptability. In the general impression which they registered on the adults who knew them, they were not greatly different from their classmates.

Against this background of normalcy, however, a few significant tendencies appear. The teachers thought of the poor readers as lacking in persistence. The absence of confirmation in the parents' statements suggests, as has been pointed out, that any such distractibility may be specific to the school situation and largely a result rather than a cause of the reading handicap.

A more arresting tendency was disclosed in the children's own statements. By a fairly reliable margin of difference the poor readers more often than their classmates expressed atypical feelings in answer to certain direct questions. Restlessness, indecision, loneliness, fearfulness, stuttering were characteristics to which they thought themselves susceptible. From the nature of these replies we may infer that they tended to respond to difficult situations in ways which are generally considered to be undesirable and to indicate lack of serenity, feelings of inadequacy, insecurity. Expressed in different terms, perhaps, these patterns of adjustment are not unlike those which other writers have observed as associated with reading retardation.

D. Specific Reading Abilities

Dr. Dorris Lee\textsuperscript{54} investigated the importance of reading ability for achievement in the intermediate grades. To be more than one-tenth of a grade below in reading ability seriously lowered the general achievement index, according to her report.

Betts\textsuperscript{55} finds that by the fourth grade, the child who is only slightly below grade on reading achievement has been found to have

\footnotesize{\textsuperscript{54}Dorris Lee, The Importance of Reading for Achievement in Grades 4, 5, and 6. New York: Teachers College, Columbia University, 1938.}

\footnotesize{\textsuperscript{55}Emmett A. Betts, op. cit., p. 6.}
very few chances for success in other school activities.

"Since reading difficulties are usually amenable to remedial instruction, many believe that disability cases are caused frequently by ineffectual instruction and by the accidental acquisition of inappropriate habits."56

In order to determine the child's specific reading abilities, Dolch57 would like answers to the following questions:

A. Grade level of the book he (child) reads easily?
B. Does he know common words easily by sight?
C. Does he miscall words and read right on, or does he correct his mistakes?
D. Does he try to sound out new words, and if so, with what success?
E. How well does he comprehend easy material?

Reading tests will be given to determine these facts. From a comparison of a pupil's scores on different types of silent reading, valuable clues about the nature of his difficulties can be obtained.

Some children depend almost entirely upon the guessing process when they come across a word that is unfamiliar to them. They are called context readers, because they depend on the context or general setting of a word when they cannot recognize it.

56Paul Witty and David Kopel, op. cit., p. 232.
Some children are word-by-word readers and find the reading of paragraphs a very difficult task. They can do fairly well on short sentences but cannot comprehend as soon as the material gets long and complex.

Some children's reading is slow but otherwise fairly satisfactory. They can be detected by comparing their scores on level of comprehension tests with scores on rate tests.

Many reading disability cases show equally poor work on all types of silent reading. In addition to meager vocabulary, slow speed, and poor comprehension which silent reading tests can disclose the word recognition techniques used by these children are usually discovered to be sadly deficient when their oral reading is examined.\(^58\)

Usually when the poor reader tries to pronounce, certain definite difficulties will appear. (1) He may be entirely unable to pronounce certain letters or digraphs. (2) He may get all the letters right, but be unable to blend them into a word. (3) He may sound the separate letters in digraphs. (4) He may pronounce all vowels long or all vowels short. (5) Or there may be certain definite mispronunciations of letters or syllables.\(^59\)

In most reading disability cases oral reading is at least as poor as silent reading and in most cases it is much worse. Deficiencies in fluency, phrasing, and expression are readily noted in oral reading. In many cases hesitations and repetitions are accompaniments of slowness in word recognition and are employed

\(^{58}\) Albert J. Harris, How to Increase Reading Ability, p. 100. New York: Longmans, Green and Company, 1940.

\(^{59}\) Edward Dolch, op. cit., p. 33.
to gain more time to decipher the next word.

Over-emphasis on certain methods of attack may have produced bad habits in reading. The child should recognize by sight, he should guess words from context, and he should use sounding. To do any of these to the exclusion of the other two makes a poor reader.

1. A most general handicap is lacking of all knowledge of sounding. It may almost be taken for granted that no poor reader is capable of sounding out words for himself.

2. Some children have a habit of trying to sound out all the words they meet.

3. Some children have the habit of word calling without attention to sense.

4. Some children have the habit of "making up" what they "read", either from picture reading or from context or from imagination.

5. Some children make no attempt to guess from context or to skip and go on.60

Poor readers in the middle and upper grades have certain typical difficulties:

"A. Inadequate sight vocabulary is common.

B. A slow laborious reading habit needs to be corrected.

C. Practically all poor readers need to be taught sounding.

D. Comprehension may be increased to some extent.

E. Interests for future reading should be developed.61

60 Edward Dolch, op. cit., p. 67 ff.

61 Edward Dolch, op. cit., p. 78 ff.
Witty and Kopeł\textsuperscript{62} list "phases of reading and individualizations of the whole process in which deficient or faulty habits may be displayed". The lists for both silent and oral reading follow:

\textbf{Silent Reading}

1. Lack of interest in material.
2. Lack of sustained application.
3. Too rapid or too slow reading rate.
4. Suspected visual deficiency.
5. Suspected auditory defect.
6. Undesirable eye movements.
7. Unnecessary head movements.
8. Excessive vocalization.
11. Restricted ability to note detail.
12. Incorrect or inadequate interpretation of total units.
13. Other deficiencies.

\textbf{Oral Reading}

15. Perfunctory or meaningless expression.
16. Improper phrasing.
17. Extreme timidity or self-consciousness.
18. Mispronunciation.
19. Substitutions or guesses.
20. Omissions.
21. Hesitancy in attacking now words.
22. Reversals of letters.
23. Reversals of words.
24. Pointing.
25. Stuttering or stammering.
26. Letter-reading or word-reading.
27. Inadequate mastery of phonics.
28. Slow oral-reading rate.
29. Repetitions.
30. Other deficiencies.

Marked differences between the habitual eye movements of good and poor readers have been noted by many investigators. Their

\textsuperscript{62}Paul Witty and David Kopeł, \textit{op. cit.}, p. 248.
studies show that the poor reader typically makes many and long fixation pauses, many regressive movements and slow, irregular return sweeps.63

Tinker64 reports that "Eye-movement patterns do not cause, but merely reflect efficient or poor performance...inefficient eye-movements are symptoms rather than causes of reading disability and are readily eliminated as reading efficiency improves."

The teacher should be alert to notice the presence of habits which interfere with efficiency in reading. One of the most common interfering habits is the tendency to make lip movements during silent reading. "Unnecessary head movements, excessive vocalization, lip movements, and pointing are frequently noted characteristics or correlates of poor reading,"65

"Lip movements definitely retard speed when they occur above the second grade level."66


65Paul Witty and David Kopel, op. cit., p. 249.

66Albert J. Harris, How to Increase Reading Ability, p. 78. New York: Longmans, Green and Company.
"The reading difficulties of some children are aggravated by their inability to concentrate on the reading matter. They are restless and fidgety in their seats and often interrupt their reading to look around the room or out of the window or get into mischief. In many cases such behavior is not a cause of their difficulties but is a natural result of giving them reading matter which is uninteresting or too difficult and disappears when appropriate materials are used."67

"In addition to the more general reading skills, there is need especially in the upper grades and secondary school, for providing pupils with training in specific study skills."68

Many of these children need training in reading of the work type. Because of their reading disabilities they have not acquired efficient work-habits. Dolch69 suggests that it is better to concentrate on a few skills or habits and teach them well than to scatter effort over a good many. He discusses the skills that need to be attacked first and that can be most successfully taught. The list follows:

A. Skill in use of the dictionary is important in most study.
B. Finding answers to fact questions is a widely useful study skill.
C. The most useful study skill is finding answers to thought questions.

67Paul Witty and David Kopel, _op. cit._, p. 79.
68Albert J. Harris, _op. cit._, p. 299.
69Edward Dolch, _op. cit._, p. 116 ff.
D. We may aid study by teaching methods of reference reading.

E. Outlining is indirect training in study.

Reviewing briefly the materials that have been presented from previous studies and investigations which seem related most closely to the problem which this study has attached, that of determining certain of the causes of reading disability in an effort to make some slight contribution to the formulation of a preventive reading program, the following findings seem pertinent: The general physical maturation of a child and his readiness to read so that he will experience success instead of failure is indicated, most of the writers conceded, by his general health conditions, by his mental age, not his chronological age, and by his acquisition of satisfactory motor coordination. Visual, articulatory, and auditory deficiencies are major causes of reading disabilities. These defects should be discovered early, and the responsibilities for their correction should be placed in the hands of specialists in the related fields of the profession. Concerning cerebral dominance and word-blindness as causes of reading deficiencies, there seems to be a variance of opinion. Writers seemed agreed upon those criteria in the child's intellectual development which are necessary for reading achievement; they are evidence of satisfactory mental maturity as shown by an intelligence test that does not involve too much reading or does not test for too many specific abilities, the ability to see likenesses and differences in words, the ability to remember a span of ideas, and the ability to do abstract thinking.
Most authorities emphasized the importance to a child's school success of favorable home conditions and of happy, satisfying school experiences. Many writers stressed the effect of emotional disturbances upon the child who is learning to read or who is experiencing difficulty in correcting reading defects. Emotional rehabilitation of the poor reader is sometimes the first and most important step in making his learning ability effective. The interest of the individual child was advocated as a most valuable means of motivating a reading program effectively. Finally, over-emphasis or under-emphasis upon word analysis activities, failures to make clear to the child the matter of directional orientation in studying a word, inadequate sight vocabulary, and the like, seem occasionally to be sufficient causes and are likely, under any circumstances, to be a contributing cause of difficulty. So the findings indicated by these previous studies provide certain causal factors that may aid in the interpretation of the data which this study of the causes of the reading difficulties of thirty children in the Butler Reading Clinic, the summer of 1939, will provide.
CHAPTER III

PRESENTATION OF FINDINGS

In June 1939, some forty children enrolled for one week's work in the five demonstration classes which were held in connection with the reading conference. Each teacher was asked to follow the case study outline, shown on page 108 of the appendix, as she carried on her diagnostic activities so that the data found could be used in this study.

For the post session twenty teachers enrolled in the course "Advanced Clinical Practice in Reading" and thirty of the forty children who had attended the demonstration classes were assigned to this group for individual study. Each teacher, using the outline as a guide, attempted to complete the case studies already started by the demonstration teachers. However, due to the lack of time and to the personal characteristics of the members of the class, some of the studies are not as complete as others.

At the end of August each child had been studied eight hours as a member of a group and twenty-four hours individually. In addition, six were given individual tutoring by the writer over a period of from two to ten weeks.

During this time the following tests, copies of which are in

(56)
the appendix, were given each child:

1. Betts Visual Sensation and Perception Tests (Telebinocular)
2. Photograph of eye movements made with Ophthalmograph
3. Dominance Tests
4. Stanford Revision of the Binet-Simon Test, Form L
5. California Test of Mental Maturity by Elizabeth Sullivan and Others
6. Reading Capacity Test by Durrell and Sullivan
7. Aspects of Personality by Pintner and Others
8. Durrell Analysis of Reading Difficulty
9. Ingraham-Clark Diagnostic Reading Tests

In addition, the teacher kept a daily log and the parents were asked to fill out the following questionnaires, copies of which are in the appendix:


In order to compile the data from all these sources so that it would be available for study and comparison, a "Diagnostic Record Blank" was developed. Each case study record was then analyzed and the findings transferred to one of these blanks. Finally, the data on these thirty sheets--three are in the appendix--was assembled
and is presented in this chapter.

It will be noted that, as in the case study outline, the data is grouped under four heads; physical adjustment, mental development, social and emotional adjustment, and specific reading difficulties. It will also be noted that the record blank has many more items than the case study outline. While compiling the data it was decided that the old form was inadequate if a complete case study was to be made; so a new form was developed and will be found on page 110 of the appendix.

Due to the fact that the original form was very brief, the teachers did not gather some material that might be very significant. This is especially true in the area of social and emotional adjustment. If the new outline had been used, more complete data would probably have been collected.

The findings in the area of each of the four topics listed above will now be discussed in order to find, first, whether those thirty individuals are different from other children; second, which deviations are most common; and third, which deviations are most significant.

Before presenting these findings certain facts concerning the children attending this clinic should be reviewed.

Children who come to the Butler Clinic are brought or sent by their parents because the latter have become concerned about the progress of the child in school. For this reason, satisfactory parent cooperation is usually obtained. However, in many cases,
over-anxiety concerning the child's failure to read satisfactorily has caused the parent to criticize the child unwisely.

Then, too, since Butler is in the outskirts of Indianapolis, a child must be able to pay carfare. This automatically excludes many of the low-income group.

A large majority of the teachers who take "Clinical Practice in Reading" teach in the first six grades. Since they wish experience with children from the grade level on which they teach, not many older children are used in the clinic. This is unfortunate since there are many students in junior and senior high school who need a remedial program and very few teachers who are trained to help them.

The distribution of the children used in this study by age and grade is shown below.

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Frequency</th>
<th>Age</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>7</td>
<td>3</td>
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<td>8</td>
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<td>4</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Ungraded</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A. Physical Adjustment

Four of the thirty children received birth injuries, one was slow in walking, and most of them had had the usual children's diseases.

With regard to muscular coordination, three have difficulties
in locomotion, twelve are awkward with tools or slow in writing, and
two are inferior at games.

Five are easily fatigued, and four have had bad tonsils or ade­
noids. Figures to cover the above items for the population as a
whole were not available, but these children seem typical.

Upon various occasions, when the writer has examined children
who have reading difficulties in school buildings in various towns,
about half of these were shown to be in need of an eye examination.
However, the group used in this study, when examined on the tele­
binocular showed that not more than one fourth needed such attention.
Perhaps this is due to the fact that the parents were concerned
about these children and many of them had been refracted and were
wearing glasses. A third of the children failed to pass the test
for fusion at reading distance. This is to be expected since school
nurses do not find a weakness in this area when the Snellen Chart is
used and many doctors do not check phorias and ductions. Similar
results have been obtained in checking other children both in In­
dianapolis and in other cities.

When photographed, nearly a third of the children showed that
their eyes were not working together so efficiently as might be
expected. However, those that failed on the telebinocular were not
the ones that showed the most difficulty when photographed.

The following distribution shows that thirteen of the thirty
cases had confused dominance with regard to hand, eye and foot
preferences. This seems a large group, but the per cent for the
population as a whole is not known.

<table>
<thead>
<tr>
<th>Hand</th>
<th>R</th>
<th>R</th>
<th>R</th>
<th>R</th>
<th>L</th>
<th>L</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>R</td>
<td>L</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Foot</td>
<td>R</td>
<td>R</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>R</td>
</tr>
<tr>
<td>Frequencies</td>
<td>17</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Only two cases showed speech difficulties and these were classed as careless in speech. Since there had been quite a bit of work done in the field of remedial speech activities in Indianapolis, this might not be true of children in other communities. It has been the writer's experience that many children who have speech difficulties of an emotional character such as stuttering, also have reading difficulties.

B. Mental Development

Since it was felt that the teachers should be familiar with a group intelligence test, the California test of mental maturity was used. This purports to measure both language and non-language maturity. Table I, shown below, presents the data from this test. The reader will note that the thirty cases are numbered and arranged according to I.Q. rank. In case he wished to compare the standing of any one individual in respect to other items as shown in other tables, he should look for the number assigned the pupil in this table.

Even though children who have reading difficulties are handicapped on any test which has many verbal items, fourteen of the thirty are above 100 I.Q. If only the scores from the non-language part of the test were used, there would be less than one third of
the cases below 100. It will be noted that only eight have a higher score on the language part than on the non-language, and only four of these show a noticeable difference between the two parts of the test.

**TABLE I.** **SCORES MADE ON THE CALIFORNIA TEST OF MENTAL MATURETY**

<table>
<thead>
<tr>
<th>Pupil</th>
<th>I. Q.</th>
<th>Language M. A.</th>
<th>Non-language M. A.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>127</td>
<td>139</td>
<td>190</td>
</tr>
<tr>
<td>2</td>
<td>124</td>
<td>118</td>
<td>117</td>
</tr>
<tr>
<td>3</td>
<td>118</td>
<td>87</td>
<td>101</td>
</tr>
<tr>
<td>4</td>
<td>113</td>
<td>87</td>
<td>95</td>
</tr>
<tr>
<td>5</td>
<td>107</td>
<td>110</td>
<td>120</td>
</tr>
<tr>
<td>6</td>
<td>108</td>
<td>79</td>
<td>153</td>
</tr>
<tr>
<td>7</td>
<td>105</td>
<td>107</td>
<td>118</td>
</tr>
<tr>
<td>8</td>
<td>104</td>
<td>155</td>
<td>135</td>
</tr>
<tr>
<td>9</td>
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<td>112</td>
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<td>93</td>
<td>101</td>
</tr>
<tr>
<td>12</td>
<td>102</td>
<td>99</td>
<td>92</td>
</tr>
<tr>
<td>13</td>
<td>100</td>
<td>128</td>
<td>144</td>
</tr>
<tr>
<td>14</td>
<td>100</td>
<td>116</td>
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<tr>
<td>15</td>
<td>99</td>
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<td>83</td>
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<td>16</td>
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<td>101</td>
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<td>17</td>
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<td>106</td>
<td>126</td>
</tr>
<tr>
<td>18</td>
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</tr>
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<td>19</td>
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<td>92</td>
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<td>21</td>
<td>94</td>
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<td>93</td>
<td>110</td>
<td>90</td>
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<td>23</td>
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<td>24</td>
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<td>87</td>
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<tr>
<td>25</td>
<td>88</td>
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<td>150</td>
</tr>
<tr>
<td>26</td>
<td>88</td>
<td>128</td>
<td>152</td>
</tr>
<tr>
<td>27</td>
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<td>28</td>
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<td>29</td>
<td>82</td>
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</tr>
<tr>
<td>30</td>
<td>79</td>
<td>73</td>
<td>94</td>
</tr>
</tbody>
</table>
Data from this table should be read as follows: Pupil One has an I.Q. of 127 as measured on the California Test of Mental Maturity. However, if the score on the non-language part of the test instead of the total score were used, his I.Q. would be over 150.

In order to provide another measure of the mental development of these children, the Durrell Capacity Test was used. This measures oral vocabulary, or word capacity, and ability to understand and remember a story read orally, or paragraph capacity. It will be noted that all of the cases have a higher capacity than their age level and that all but four have a higher score than their grade level. These exceptions can be explained as follows: numbers ten and twenty-four are too far advanced for their age as they probably started into school too young; number nineteen is too old for the test norms to be reliable, and number twenty-one has an emotional block (see personality scores) which makes a satisfactory performance almost impossible.

<table>
<thead>
<tr>
<th>Pupil</th>
<th>C. A.</th>
<th>Word Capacity</th>
<th>Paragraph Capacity</th>
<th>Present Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9-11</td>
<td>7.4</td>
<td>5.6</td>
<td>5B</td>
</tr>
<tr>
<td>2</td>
<td>8-0</td>
<td>3.1</td>
<td>3.5</td>
<td>3A</td>
</tr>
<tr>
<td>3</td>
<td>8-8</td>
<td>2.2</td>
<td>2.5</td>
<td>2B</td>
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<tr>
<td>4</td>
<td>8-6</td>
<td>1.7</td>
<td>2.7</td>
<td>2B</td>
</tr>
<tr>
<td>5</td>
<td>8-0</td>
<td>5.2</td>
<td>4.9</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>11-1</td>
<td>7.8</td>
<td>8.2</td>
<td>Ungraded</td>
</tr>
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<td>9-1</td>
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<td>10</td>
<td>8-9</td>
<td>3.1</td>
<td>3.5</td>
<td>4B</td>
</tr>
<tr>
<td>11</td>
<td>7-11</td>
<td>2.6</td>
<td>2.8</td>
<td>2B</td>
</tr>
</tbody>
</table>
The data from this table should be interpreted as follows: Pupil One, whose chronological age is nine years and eleven months, made a score of seventh grade and four months on section one of the test, which measures oral vocabulary (called word capacity) and a score of fifth grade and six months on paragraph meaning (called paragraph capacity). Since he is now in Grade 5B (low fifth) it is evident that he could easily meet the achievement standards in reading for that grade.

Experience Background

The home background of these children is typically middle class. Their homes have from five to seven rooms, five out of six have automobiles, and only two have servants.

The cultural background is much the same as that of any average income group. Eight of the fathers went only to grade school.
fourteen went to high school, and eight to college, while eight of
the mothers went to grade school, eighteen to high school, and only
four to college. Two of the children were colored.

Seven of the children were only children, six had one sibling,
eight had two, seven had three, and one had four.

With regard to reading background, a very significant item ap­
pears. Every child had had trouble with reading in the first grade.
This correlates positively with the results of other studies. How­
ever, just because the child failed in the first grade does not mean
that the first grade experiences were the cause of the failure. It
does mean that the first grade teacher did not prevent failure. A
study of the case records shows that many of these children entered
school very young or that they were immature in their social and
emotional development.

The number of grades repeated or the number of schools attended
does not seem significant.

C. Social and Emotional Adjustment

While the data with regard to social and emotional adjustment
has distinct significance in respect to each case individually, there
does not seem to be any profitable way of compiling this data. If
the new case study outline had been used, this would not have been
true.

Only twenty-three of the children were mature enough to take
the "Aspects of Personality Test". This data is shown in Table III
in terms of percentiles. High score, up to 90%, is desirable in
each case. It will be noted that only three cases are above 80% in at least two items.

TABLE III. SCORES MADE ON THE ASPECTS OF PERSONALITY TEST

<table>
<thead>
<tr>
<th>Pupil</th>
<th>Ascendance</th>
<th>Extroversion</th>
<th>Introversion</th>
<th>Emotional Stability</th>
</tr>
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<tbody>
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</table>

The data from this table should be interpreted as follows: Pupil One has more desirable score (is less submissive) than 90% of the other students, but does not do so well on the other parts of the test. Fifty-eight percent of students are more extrovert than he and sixty-four percent are more emotionally stable. The test manual\(^1\) has the following to say in regard to the

interpretation of such scores. "Section I. Ascendance-Submission. A very low score on this test may indicate a submissive, retiring type of child. Such a child is not likely to be a leader, but rather a docile follower. His attitude may be due to repression at home. It may be the result of a domineering home environment. It may also be due to feelings of inferiority, real or imaginary, on the part of the child.

In general, a child of this type needs opportunities for success. Responsibilities within his scope should be allotted to him, so that he may have the chance of experiencing, in however small a way, the feeling of leadership.

Children who score very high on this test, those above the 90th percentile, should be watched carefully to see that they do not develop into inconsiderate, domineering individuals who like to bully and dominate others for their own individual gratification.

Section II. Extroversion-Introversion. Children with low percentiles on this test are presumably too introverted, too much turned in on themselves. They withdraw too much from the world and tend to find too great satisfaction in their own daydreams. They may dodge the responsibilities of the real world and obtain their satisfactions in an imaginary one. Daydreaming, in and of itself, is no evil. It only becomes one when it is allowed to take the place of real accomplishment. The extremely introverted child is somehow missing the normal satisfactions in life, and whatever the teacher can do to help overcome the introvertive tendency should be done. Any interests that he may show should be energetically encouraged. Extreme cases of introversion call for the help of a psychiatrist.

Section III. Emotional Stability. A very low percentile rating on this section may indicate lack of emotional balance. Such ratings point toward the psychoneurotic type of individual. Such a child is likely to be flighty, easily upset; he probably has anger outbursts or temper tantrums; he may have many fears and anxieties; minor excitements may cause psychic shocks out of all proportion to their stimuli. The causes of emotional instability are legion, and only after a more thorough case study of each individual child has been made can appropriate treatment be begun."

In order to interpret this data more easily, Table IV was compiled with each part of the test arranged independently. While it would be a mistake to treat the results of any paper and pencil personality test too seriously, it certainly is plain that these
children are far from the normal range. With regard to Ascendence-Submission, eighteen of the twenty-three are below the fifty percentile and more than half below the twenty-five percentile. Nine are extroverted, and only six are below the twenty-five percentile. When it comes to emotional stability, only nine are above the median, and nearly one-half are below the twenty-five percentile.

**TABLE IV. SCORES MADE ON ASPECTS OF PERSONALITY TEST RANKED BY PERCENTILES**

<table>
<thead>
<tr>
<th>Ascendence-Submission</th>
<th>Extroversion-Introversion</th>
<th>Emotional Stability</th>
</tr>
</thead>
<tbody>
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<td>100</td>
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<tr>
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</tr>
<tr>
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</tr>
</tbody>
</table>
D. Specific Reading Abilities

If a child is to read narrative material rapidly, he must have an adequate sight vocabulary, must be able to recognize these words in content and must know how to attack a word which he does not know. After he is able to read simple narrative material effectively then he acquires the work habits which are needed, if printed material is to be used efficiently, in the solution of problems in the various content fields.

In order to measure the first three abilities, the "Durrell Analysis of Reading Difficulty" and the "Ingraham-Clark Diagnostic Reading" were used. Work habits were checked by observing the child at work on a simple problem.

Table V shows the scores made on two vocabulary tests, one, timed comprehension, and one, untimed comprehension test. In the last column the score made on the Durrell Capacity Test appears for the purpose of comparison of the achievement and capacity levels. Since many of these children become emotionally upset when being measured, the better score made on the two parts of the capacity test was used. You will note that the capacity score is well above the achievement scores in all but one case. Pupil Number Two did not lack reading skill but had an emotional blocking. She could read well under favorable conditions.

There is fairly close agreement between the scores made on the two vocabulary tests but since the Durrell is an individual test it is considered more reliable. A closer correlation between the scores
made on the two comprehension tests was expected, but this condition can probably be explained by the presence of emotional factors. As one measure of reading ability, use of the Durrell vocabulary is advised rather than a composite of the four. If a child recognizes isolated words quickly he can usually read material containing them.

It was decided, since promotional policies are different in almost every school system and even within schools in the same system, not to show achievement in comparison with present grade placement. If a comparison is desired, the reader may use chronological age (showing usual grade placement), Durrell vocabulary (showing achievement), and Durrell capacity, (showing possible grade placement).

This data is all contained in Table V. Since children in Indianapolis are admitted to school every half year, it is rather complicated to figure normal grade placement. Those who were in the first grade and who entered in the fall would be approximately seven years old at the time of the tests, while those who entered in the middle of the year would be six and a half. A child eleven should be in 4A while one who is nine and a half should be in 3B. For example, Pupil One is approximately ten years old and should be in 3A. However, his reading achievement is only 3B (low third), while his capacity is 7.4. This would show that he could easily be brought up to his normal grade placement.
TABLE V. SCORES MADE ON READING ACHIEVEMENT TESTS

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<tr>
<th>Pupil</th>
<th>C. A.</th>
<th>Vocabulary</th>
<th>Comprehension</th>
<th>Durrell</th>
<th>Capacity</th>
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<td></td>
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<td>Untimed</td>
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<td></td>
<td></td>
<td>Ingraham</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clark</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>6.7</td>
<td>7.6</td>
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<td>2.9</td>
<td>2.8</td>
<td>3.0</td>
</tr>
</tbody>
</table>

The data in this table would be read as follows: Pupil One had a chronological age of nine years, eleven months. On the Durrell Vocabulary Test he made a score of grade three while on the Ingraham-Clark Vocabulary Test he made a score of third grade, fifth month. On the timed comprehension test (Ingraham-Clark) he made a score of third grade, while on the untimed test using Durrell material he made a score of sixth grade.
of fifth grade. However, his capacity score on the Durrell test was seven years. This would show a difference between achievement and capacity of from two to four years.

While the scores in Table V are significant in that they show low achievement in all but one case the important question to be answered is, "What is the cause of this poor achievement?" Table VI shows the four causes which the writer feels are significant. The data for this table was secured by the teacher as she gave the tests mentioned above. The reader will note that twenty-seven out of thirty had an inadequate sight vocabulary, twenty were word by word readers, and all lacked word mastery skills. Only three seemed to show severe emotional blocking.

**TABLE VI. CAUSES OF SLOW READING AND POOR COMPREHENSION**

<table>
<thead>
<tr>
<th>Pupil</th>
<th>Inadequate Sight Vocabulary</th>
<th>Word by Word Reading</th>
<th>Lack of Word Mastery Skills</th>
<th>Emotional Blocking</th>
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<td>17</td>
<td>&quot;</td>
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</tbody>
</table>
The data in this table should be read as follows: Pupil One has an inadequate sight vocabulary and lacks word mastery skills.

The writer is much more concerned with causes than with symptoms but perhaps it would be worth while to list the errors these children made when they were given an oral check. A record of the types of error was kept until a total of sixty errors had been made. These are shown in table VII.
### TABLE VII. TYPES OF ERRORS FOUND WHEN CHILD WAS GIVEN AN ORAL CHECK

<table>
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<tr>
<th>Pupil</th>
<th>Vowel Errors</th>
<th>Reversals</th>
<th>Insertions</th>
<th>Omissions</th>
<th>Substitutions</th>
<th>Refusals</th>
<th>Repetitions</th>
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<td>17</td>
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<td>9</td>
<td>60</td>
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<td>28</td>
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<tr>
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<td>8</td>
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<td>36</td>
<td>60</td>
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<tr>
<td>30</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>22</td>
<td>20</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>62</td>
<td>74</td>
<td>146</td>
<td>130</td>
<td>570</td>
<td>307</td>
<td>421</td>
<td>1680</td>
</tr>
</tbody>
</table>
Since all the children lacked word mastery skills, a table was constructed showing which of the four skills was most in evidence: (1) recognizing words by general configuration, (2) getting meaning from context, (3) analyzing words visually, and (4) analyzing words phonetically. The results were so conclusive that it was not necessary to include the table. Only a very few children used general configuration, a few could use phonetic analysis but did not, and none used visual analysis. Several were rather good at guessing from context but usually obtained the wrong word.

The last specific ability to measure was that of work habits. None of the children showed a degree of efficiency which was at all satisfactory.

Summary

With regard to physical adjustment, the most common deviations had to do with fusion at reading distance and confused dominance. The writer feels that both of these are significant and preventive measures should be developed so that children showing these deviations would not be handicapped.

It was found that these children ranked considerably higher on a non-language test of intelligence than on a language test. It was also found that their mental development was higher than their chronological age when measured on a picture test. This would show that a verbal test is not an accurate measuring device for such individuals.

All of the thirty cases had had trouble with reading in the
first grade. This may mean that if a suitable preventive program were carried out that there would be fewer failures.

The results of the personality test show that nearly half of the scores are below the twenty-five percentile. This would indicate that students who have reading difficulties are likely to be socially and emotionally maladjusted. Some maintain that reading failure causes emotional maladjustment and some that emotional maladjustment causes reading failure.

When reading achievement tests were given several significant deviations were found. First, some children made scores on the vocabulary tests which were as much as eight years below their capacity scores. The score of only one child was higher on achievement than capacity. This would show that the school has not helped these children to reach their maximum level of development.

When the causes of specific reading difficulties were checked, it was found that the two outstanding were (1) an inadequate sight vocabulary, and (2) lack of word mastery skills. This agrees with other findings. The writer has never found an inefficient reader who had developed adequate techniques of word mastery. If a child does not recognize the words, he cannot read, and if he has no way of increasing his vocabulary, he is unable to make progress.

An analysis to see which word mastery skills were lacking showed that a few of the children had some idea of how to get meaning from the context, but none of them had developed skill in the other three, recognizing words by general configuration, analyzing words visually, or using phonetic analysis.
CHAPTER IV

CASE STUDIES OF READING DISABILITY

Case study procedures vary widely; those used in this study have already been described in Chapter III. In this chapter, cases of several types will be presented.

Case I is an eleven-year-old boy of high-average mental ability who was a non-reader and failure in all school subjects. His retardation was said to be due to emotional blocking. Symptoms of strephosymbolia were also present.

Case II illustrates how a physical condition, namely, vision, may be a cause of reading difficulties.

Case III shows the most common cause of reading disability found among the thirty case studies, that of ineffectual instruction.

Case I. General Weakness of Reading Techniques, Unsystematic Directional Orientation and Emotional Blocking

J, Ungraded—Chronological age 11 years, 1 month.

1. Physical Adjustment
   A. Developmental History

   J. has developed physically at a normal rate, except for his teeth. The permanent teeth were very slow in coming, and now, at
eleven years, J still has several baby teeth. He had measles at the age of 5, and was in bed for one year at the age of 8 with incipient tuberculosis.

B. Present Physical Condition

J is slightly underweight, subject to occasional headaches, and has a rather finicky appetite. He seems to have normal vitality in play, though he tires easily when doing academic work.

J is good at sports and is unusually skillful in the use of his hands, though he has never learned to write.

His general physical condition has been pronounced good by his physician. He is in need of orthodonture but his easily decaying teeth are well cared for.

On the telebinocular test his visual acuity scored satisfactorily except for lack of distance fusion. A subsequent examination by an eye specialist revealed a slight exophoric condition which was remedied by orthoptic training. It was impossible to photograph his eye movements because of his lack of reading skill.

J's auditory acuity, as measured by the whisper, watch ticking and low voice tests, is good.

The dominance tests revealed mixed hand-eye dominance—the preference being for the right hand, left eye, and right foot.

J's speech is clear with no apparent defects.

II. Mental Development

A. Intelligence Tests

The revised Stanford-Binet Intelligence Test, Form L, gives
J's I.Q. as 106, his M.A. 12 years.

The California Test of Mental Maturity Elementary Series (Grades 3-8) gives a total I.Q. of 88, a language I.Q. of 60, and a non-language I.Q. of 115. This test is more heavily weighed with tests which involve reading.

The Durrell Reading Capacity Test for Grades 3-6 gives in the test of word meaning an age score of 13 years, 4 months, and a grade score of 7.3; in paragraph meaning an age score of 13 years, 8 months, and a grade score of 8.2. The total age score is 13 years, 10 months, and the total grade score is 8.4.

B. General Characteristics

J does not like to put forth mental effort necessary to achieve. It is a distinct effort for him to concentrate on reading and he takes little initiative toward improving his ability. He seems willing when under supervision, but left to himself he is soon daydreaming.

C. Experience Background

J's experience background and economic status are superior. The father has a very good income as an insurance agent. The family is not particularly cultured and the father admits that reading is hard for him. He does little of it beyond reading the newspaper. The father and mother have high school educations.

J has one brother, four years older than himself, who is a superior student. He is very fond of this brother, and they have played together a great deal. The brother is growing away from J.
somewhat in his interests and activities and J is at a loss.

He has had few friends for the past year because the family moved to a new location. At present, playing with other children his own age seems to be his chief interest, with the radio a close second. Almost every evening is spent in drawing and listening to the radio. J is quite resourceful in entertaining himself and likes especially to play "big man"—a dramatic play where he is the hero. The movies are also very well-liked and form another of his chief interests.

Skating, swimming and bicycling are his favorite sports. He has not been interested in clubs or hobbies.

Reading Background

J spent one year at Kindergarten and started in first grade when he was 6 years and 3 months old. He experienced difficulty from the first—he has said since that he was so afraid of some of the boys that he couldn't keep his mind on his lessons. After two years of failure, he was put in an "opportunity" school. He was unhappy there and one day asked his mother if he were dumb. When the mother replied, "No", J said, "Then why do I have to go to school with those dummies?"

The mother then took him out of school and the family went for a trip to California via the Panama Canal. The next year (when J was nine) he was ill and in bed for a year. No school work was attempted.

The following year the family moved and undertook to place him
in the school nearby. The school refused to take him because of his school failure, and tutoring at home for one hour per day was substituted with no apparent results. During this time the child was examined by specialists at Columbia University and "emotional blocking" was given as the cause of J's failure. The eye specialist there reported that J's eyes had a tendency to turn out but thought that this would be overcome as he learned to read.

III. Social and Emotional Adjustment

A. At Home

J is remarkably well-adjusted considering his complete failure in school work. On the surface, he appears as a normal, happy-go-lucky boy. The credit for this goes to the mother for her wise handling of the situation.

The mother is definitely the dominant parent and the father seems to figure little in J's life. As mentioned above, he is very fond of an older brother and is rather disconcerted if the brother chooses to play with older companions.

The child's independence is limited. Most decisions are made by the mother, and, as a result, J is unusually docile. He fears the mother's displeasure.

B. At School

Though J is rather an expansive type, he is timid in new situations. In his present school he likes the teachers who are particularly friendly and avoids those who are perhaps more reserved or strict.
He tends to overcompensate with other children, especially until he feels established, by boasting. He earned the nickname of "Know-it-all" the first week at the new school, but the name disappeared when the children became better acquainted with him. He craves recognition and likes to take part in plays, games, etc., and, incidentally, to win.

J is afraid of older boys, and as he suspects they might tease him, will go to great lengths to avoid them. He spends much time in day-dreaming. This trait is not indicated on the scores of the Pintner Aspects of Personality Test which were as follows:

<table>
<thead>
<tr>
<th>Ascendance-Submission</th>
<th>66 Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extroversion-Introversion</td>
<td>94 Percentile</td>
</tr>
<tr>
<td>Emotionality</td>
<td>96 Percentile</td>
</tr>
</tbody>
</table>

IV. Specific Reading Abilities

J was a non-reader, having 8 words in his sight vocabulary, therefore, could not be given the reading tests or the ophthalmograph test.

The oral reading check showed general weakness in reading techniques with no word mastery skills beyond knowledge of the sounds of the consonants with the exception of c, q, and z. He tried to sound out words but was not successful. He confused letters which look alike, i.e., b, p, d, q, and reversed words, i.e., was for saw, net for ten.

J was as weak in other school subjects as in reading. He did not know the names of five of the letters of the alphabet and he
did not know how to write more than two or three of them.

Summary of Diagnosis. J is a non-reader, and his failure has probably been caused by the following: (1) emotional immaturity when he started school (domination at home discouraged independent effort); (2) emotional blocking; (3) lack of systematic directional orientation; (4) inappropriate school procedures; and (5) lack of easy visual fusion.

Recommendations for Treatment. (1) Emotional rehabilitation; (2) good first teaching; and (3) orthoptic training.

Case II. Visual Deficiency

D, Grade 5B—Chronological age 9 years, 11 months

I. Physical Adjustment

A. Developmental History

D has a normal developmental history, with chicken pox and "flu" listed as the diseases which he has had. His defective vision was not discovered until he was in the third grade.

B. Present Physical Condition

D is overweight, weighing 132 pounds with a height of five feet. This makes him a little awkward in movement. He is slow when using tools or when writing.

After wearing glasses for a year, they were changed a week before he entered the clinic. Because of the need of time for adjustment, the results of the telebinocular test were questionable.

During the first two weeks of the clinic, frequent rest periods were
needed. After his eyes became tired, blinking occurred and D complained of blurring. Report on the telebinocular test of visual efficiency was as follows:

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acuity of Both Eyes</td>
<td>90%</td>
</tr>
<tr>
<td>Acuity of Left Eye</td>
<td>80%</td>
</tr>
<tr>
<td>Acuity of Right Eye</td>
<td>90%</td>
</tr>
<tr>
<td>Eye Coordination</td>
<td>90%</td>
</tr>
<tr>
<td>Reading Distance Fusion</td>
<td>Fail</td>
</tr>
<tr>
<td>Sharpness of Image</td>
<td>Blurry (all balls)</td>
</tr>
</tbody>
</table>

The test was repeated during the third week and the following results were obtained:

<table>
<thead>
<tr>
<th>Test</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acuity of Both Eyes</td>
<td>100%</td>
</tr>
<tr>
<td>Acuity of Left Eye</td>
<td>98%</td>
</tr>
<tr>
<td>Acuity of Right Eye</td>
<td>100%</td>
</tr>
<tr>
<td>Eye Coordination</td>
<td>90%</td>
</tr>
<tr>
<td>Reading Distance Fusion</td>
<td>Normal</td>
</tr>
<tr>
<td>Sharpness of Image</td>
<td>Blurry on one ball</td>
</tr>
</tbody>
</table>

The ophthalmograpb record showed that the return sweep to the beginning of each line was not the same for both eyes.

D's auditory acuity was normal as measured by the low voice, watch ticking, and whisper tests.

The dominance tests showed preference for the right hand, right eye, and right foot.

His speech was clear with no apparent defect.

II. Mental Development

A. Intelligence Tests

The Revised Stanford-Binet Intelligence Test, Form L, gives an

\(^1\)100% is desirable
I.Q. of 115 and an M.A. of 11 years, 5 months.

The California Test of Mental Maturity, Elementary Series, gives an I.Q. of 127, a language I.Q. of 117, and a non-language I.Q. of 160.

The scores on the Durrell Capacity Test were, for word meaning, an age score of 12 years, 11 months, and a grade score of 7.4; for paragraph meaning an age score of 11 years, 1 month, and a grade score of 5.6; the total age score is 13 years, and the grade score 7.5.

B. General Characteristics

D decided that he liked the work at the clinic and cooperated willingly. Directions were followed if he could read them well enough to understand what he was to do. Since his eyes bothered him to some extent and it was necessary to take frequent rest periods, it was difficult to judge his perseverance, ability to concentrate, and like qualities.

C. Experience Background

D comes from a middle class home. His father is a mechanical engineer with a B. S. degree. The mother has a high school education. Travel has been limited to every other year, when the family usually vacations at some lake, the last trip being to Michigan.

D is an only child and likes to be with his parents. He sometimes plays football and engages in bicycle racing with a gang of boys from twelve to fifteen years old. He has two pals who are also slow in reading, each having repeated one grade. He has no pet but wants a shepherd or collie dog.
Books about the Hardy Boys and Oz books are favorites. D likes funny stories and the comics in the newspapers. He looks at these the first thing in the morning although he said he was unable to read many of them.

Arithmetic and Science are his favorite school subjects.

E. Reading Background

D started first grade at the age of six years, four months. Because he was large he was seated at the rear of the room. He attended school regularly and received average and below-average marks. Reading, especially, was difficult, thus hindering him in other work. He was passed to the second grade, and then to the third. The habit of asking his neighbor "What is that number or word on the board?" had been acquired, although the teacher did not like his bothering of neighbors. Discovery of an eye deficiency was not made until one day, D became disgusted, went to his teacher, and told her that he could not see the board. He was sent to the school nurse, and, in turn, to a doctor, who found his eyes in poor condition due to astigmatism. He was, at that time, completing the third grade.

III. Social and Emotional Adjustment

D appears to be an average boy, poised and cheerful. He is, perhaps, too dependent upon the companionship of his parents. He holds his own, according to the father, in time of need. D is unselfish and gets along well with both children and teachers.

The results of the Pintner "Aspects of Personality Test" were as follows:
IV. Specific Reading Abilities

D is entering fifth grade, whereas his reading ability is limited to third grade. The results of the tests were:

**Durrell Analysis of Reading Difficulty**
- Word Recognition: Grade 3.5
- Silent Reading: Grade 3.5
- Oral Reading: Grade 3.0
- Word Analysis: Very little skill

**Ingraham-Clark Diagnostic Reading Tests**
- Word Recognition: Grade 3.5
- Silent Reading: Grade 3.0

The Ophthalmograph Record gave a speed of 71 words per minute with 3 regressions per line and comprehension 100% on second grade material.

The oral reading check revealed that the chief type of error was substitution with repetition second. Tabulation of sixty errors shows:

<table>
<thead>
<tr>
<th>Vowel Errors</th>
<th>Substitutions</th>
<th>Reversals</th>
<th>Refusals</th>
<th>Insertions</th>
<th>Repetitions</th>
<th>Omissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20</td>
<td>4</td>
<td>13</td>
<td>3</td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

D has practically no word mastery skill except for the doubtful habit of spelling out unknown words. His sight vocabulary is inadequate and he uses lip movements in silent reading.
Summary of Diagnosis. D will enter fifth grade with third grade reading ability. He is somewhat more skilled in silent reading than in oral reading. He is a slow reader and uses lip movements. Inadequate sight vocabulary and lack of word mastery skills are his specific reading difficulties. His deficiency has probably been caused by defective vision, which caused him to lose the foundation work in reading.

Recommendations for Treatment. (1) Give an abundance of easy reading material for both silent and oral reading; (2) Use flash cards and other devices to build up sight vocabulary (be sure he knows the Dolch word list of 220 common words); (3) Help him to acquire skill in the four word mastery techniques, i.e., recognizing a word by general configuration, getting the meaning from the context, analyzing words visually, and analyzing words phonetically; (4) Substitute phonetic and visual analysis for spelling analysis.

Case III. Lack of Word Recognition Techniques
M, Grade 4B (on trial)--Chronological Age 9 years, 1 month.

I. Physical Adjustment

A. Developmental History

M has developed physically at a normal rate. He has had no diseases, and, except for rather frequent colds, has been in good health.

B. Present Physical Condition

M is subject to head colds at frequent intervals but is, other-
wise, in good physical condition.

He is skillful at games and in the use of tools.

M's visual acuity was perfect as measured on several telemicroscopic tests of visual sensation and perception, using the Betts "Ready to Read" slides. The ophthalmograph record showed that the return sweep to the beginning of each line was not the same for both eyes.

His auditory acuity was high, with the hearing of the right ear slightly keener than that of the left ear.

The dominance tests revealed a preference for the right hand, left eye, and right foot.

M's speaking voice is clear, modulated, and buoyant, void of lisping, stuttering, and baby-talk.

II. Mental Development

A. Intelligence Tests

The Revised Stanford-Binet Intelligence Test, Form L, gives M's I.Q. as 105, his M.A. 9 years, 6 months.

The California Test of Mental Maturity, Elementary Series, gives a total of I.Q. of 104, a language I.Q. of 106, and a non-language I.Q. of 104.

The Durrell Reading Capacity Test for Grades 3-6 gives in the test of word meaning an age score of 12 years, 6 months, and a grade score of 6.9; in paragraph meaning an age score of 10 years, 5 months, and a grade score of 5.0. The total age score is 11 years, 9 months, and the total grade score 6.2.
B. General Characteristics

M is a bright, happy individual with a pronounced eagerness to learn. While studying, his interest is quite high and constant. He is persistent in his work, in spite of difficulties, and is anxious to improve.

C. Experience Background

M is the oldest of two children of Russian-Jewish parentage. He is very fond of his baby brother but is not confined to play "nursemaid" to him. The father is a tailor and is away from home a great deal. Both father and mother have high school educations. M could recall no travel experiences.

He likes to play baseball with the children in the neighborhood. He enjoys the movies and radio programs. He likes especially to "make things" with tools, such as bird houses, and he is proud of his ability in drawing.

E. Reading Background

M began school at the age of 6 years, 3 months. His mother reports that he experienced difficulty from the first but did not repeat any grades. The parents became concerned when he was promoted to the fourth grade "on trial", particularly so since he was transferring to a new school, and brought him to the reading clinic.

The mother is perhaps over-anxious in her attitude toward the child's difficulty, and in her over-anxiety tends to nag him.

III. Social and Emotional Adjustment

A. At Home
M's mother reports that he has tantrums when commissioned, although this was not apparent at the clinic.

B. At School

M cooperates with teachers and children and is well-liked. The scores on the Pintner Aspects of Personality Test indicate that he is a rather well-adjusted individual except for a tendency toward introversion.

<table>
<thead>
<tr>
<th>Ascendance-Submission</th>
<th>66 Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extroversion-Introversion</td>
<td>27 Percentile</td>
</tr>
<tr>
<td>Emotionality</td>
<td>64 Percentile</td>
</tr>
</tbody>
</table>

IV. Specific Reading Abilities

The scores on the reading tests indicate that M's reading ability is at the third grade level. The results were as follows:

<table>
<thead>
<tr>
<th>Durrell Analysis of Reading Difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Recognition</td>
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<tr>
<td>Silent Reading</td>
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<tr>
<td>Oral Reading</td>
</tr>
<tr>
<td>Word Analysis</td>
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</tbody>
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<tr>
<th>Ingraham-Clark Diagnostic Reading Tests</th>
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<tbody>
<tr>
<td>Word Recognition</td>
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<tr>
<td>Silent Reading</td>
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</table>

The ophthalmograph record gives a speed of 75 words per minute, 5 regressions per line, an eye span of one-half word per fixation, and a comprehension score of 90% on second grade material.

The oral reading check revealed that the chief types of error were substitutions and repetitions. Tabulation of sixty errors shows
Vowel errors 0 Substitutions 20
Reversals 2 Refusals 7
Insertions 5 Repetitions 15
Omissions 10

M has no skill in word recognition techniques except to guess at a word from its general form. He knows the names of the letters of the alphabet but not the sounds. He ignores word endings and tends to read word by word at his grade level. He uses lip movements when reading silently.

Summary of Diagnosis. M's reading ability measures one year below his actual grade level. He is a slow reader, and uses lip movements in silent reading. Perhaps his chief deficiency is his lack of word mastery skills. He has no phonetic ability, and only a faint knowledge of getting meaning from the context or from general configuration.

Recommendations for Treatment. (1) Acquaint child with and give practice in a variety of methods of word analysis and recognition; (2) Help him to add the third grade list of words to his sight vocabulary; (3) Build new words into simple blackboard stories, trying to make content attractive to a boy of his years; (4) Provide a variety of silent reading material which makes use of his increasing vocabulary; (5) Encourage him to eliminate lip movements.
CHAPTER V

CONCLUSION

The problem for this study was to find which causes of reading difficulty were most common and which are most significant among those children who came to the Butler Reading Clinic during the summer of 1939.

The first step was to study the literature to see whether there was any agreement among the authorities with regard to which causes of reading difficulties were most significant. In chapter two a rather thorough review of related studies was presented.

The second step was to go over the case records which had been made over a period of two years at the clinic to see whether the data which they contained would give any clues. Using these records as a guide, a case study outline was prepared for the use of the teachers who were to assist with this study.

The third step was to supervise the work of the twenty teachers who were to make the case studies and to assist them when necessary. Ten tests were given, four questionnaires filled out, and a total of 30 hours spent with each child. After the teachers had finished their work, the writer compiled the data which is presented in chapter three, transferring to a "Diagnostic Record Blank" all the pertinent
data for each child. From these thirty blanks, the tables in chapter three were compiled.

The findings seem to indicate the following conclusions:

1. In the area of physical adjustment, many children lacked the ability to fuse at reading distance, as measured on the Keystone Telebinocular, and half of the group had confused dominance.

2. When mental development was checked, it was found that these children ranked considerably higher on a non-language test of intelligence than on a language test. It was also found that their mental development was higher than their chronological age when measured on a picture test. This would show either that these children did not do well on a verbal test because their reading failure had limited their range of experiences, or that they were limited in verbal intelligence.

3. The results of the personality test given in this study show that students who have reading difficulties are likely to be socially and emotionally maladjusted since nearly half of the cases were below the twenty-five percentile. Whether this is an effect or a cause is controversial.

4. All of the thirty cases had trouble with reading in the first grade.

5. The scores made on the reading tests showed that these children were not achieving anywhere near their possible level, indicating that teaching techniques had been faulty.

6. The two outstanding causes of difficulty as far as specific
reading abilities were concerned were (a) an inadequate sight vocabulary, and (b) a lack of word mastery skills.

In summarizing these findings, it would seem that reading failures are due to beginning the teaching of reading before children are ready and to poor techniques of teaching.

**Recommendations for a Preventive Program**

In an effort to reduce if not to avoid reading failures the following program is recommended:

1. An educational program should be carried on with the parents before the child enters school so that he will have the basic elements of reading readiness partially developed--oral vocabulary, ability to follow directions, and the ability to look and see.

2. Reading should be introduced as late as possible, certainly not earlier than the high first grade, and even as late as the low second if feasible.

3. In the pre-reading period each child should be checked as to the basic elements of reading readiness and given whatever individual help is necessary. Test each child on the telebinocular to see if his eyes function at reading distance. Test him for dominance and give appropriate exercises so that he will use his eyes in the left to right direction when using a picture book. Broaden the experience background and increase the oral vocabulary. Help those who need it to develop social and emotional maturity. Check each child to see whether he can look at objects and see as much as others do. If he shows lack of visual acuity, he should be given
special visual perception drills. The use of a tachistoscope is recommended for such activities.

4. Children should not be placed in reading situations until they are ready. Keep them in pre-reading groups.

5. When reading is introduced, the experience method should be used and new words taught as they are used by the children in their own stories.

6. A varied amount of repetition should be provided so that all children learn the basic words. Some will need added visual perception drills.

7. Each child must be helped to develop the four basic word mastery skills. Some will need much more help than others. This should be done in connection with their experience charts.

8. Books should not be used until the child has mastered the vocabulary used in the book.

9. After the child has become proficient reader of narrative material, he should be helped to acquire the work habits he needs to use printed material effectively as an aid to the solution of problems in the various content fields.

Suggestions for Further Study

Careful studies need to be made as to how much training in visual perception is needed to get children ready to learn to read and as to the most effective methods and materials to use.

Materials need to be prepared and techniques developed to help children develop the various word mastery skills.
Materials need to be prepared for use in helping children who have mixed dominance develop the left to right movement.

Bulletins should be prepared which would assist parents in developing reading readiness at home before the child enters school.
BIBLIOGRAPHY

Books


The authors set forth the objectives of reading and reading instruction and point out how these objectives may be realized through a proper interpretation and practical application of the findings of research in the field of reading.


In this book we find reports of the mental differences of bright and dull pupils as given by 500 teachers in the Detroit City Schools.


This book contains detailed accounts of three cases of non-readers illustrating symptomatic behavior; three cases showing symptoms, causes, and diagnosis; and three cases showing remedy and results.


Here we find a constructive contribution to both the theory and the practice of child guidance. The book offers a systematic aid to the diagnosis of children's problems and contains many and varied suggestions for treating them. It describes the methods by which the Detroit Scale of Behavior Factors was constructed and gives an analysis of the sixty-six items of the scale.


In this book an attempt is made to analyze the reading performance, the environmental background and the general adjustments of a group of children who were making slow progress in learning to read in the primary grades,
with especial reference to factors which might be exerting a causal influence upon their difficulty; and to discuss the nature and implications of their problem.


Cole, Luella, *The Improvement of Reading*. New York: Farrar Rhehart, Inc., 1935. This book discusses basic reading problems in the light of three guiding principles: (1) it is based on objectively proven facts, (2) it is practical, and (3) it is unbiased.

Dolch, E. W., *The Psychology and Teaching of Reading*. Boston: Ginn and Company, 1931. This book is devoted chiefly to an explanation of the principles underlying various practices in the teaching of reading. Since more attention is given to psychological than to pedagogical principles, the book is primarily an explanatory psychology of the reading processes and reading methods.

This study extensively investigates the relationship of various visual difficulties to reading disability. The data are reported in terms of the incidence of such factors as visual acuity, heterophoria, eye dominance, astigmatism and visual perception.


In this monograph we find an explanation of the kinaesthetic method of teaching reading which the author has found very successful. A number of case histories are given.


The authors describe an extensive study of reversal tendencies in reading. Previous work is criticised, new experimental findings presented, and remedial suggestions offered.


This is a systematic work on methods for preventing and improving reading deficiencies. The author's program for diagnosing reading disabilities and for remedial treatment is based upon the theory that reading comprises highly complex abilities that are not easily detected and observed.


Here is a book which deals with remedial procedure for the non-reader who has confused dominance. The authors are exponents of Orton's theory of cerebral dominance.


This article discusses the nature and significance of early European studies, growth of interest in the scientific study of reading, and their value in modifying teaching procedure.

This book analyzes factors influencing reading readiness, outlines instruction for fostering reading readiness and presents an analysis of the available tests for measuring it. In Part II we find a discussion of readiness which extends beyond the first grade.


In this book the authors present ocular, psychological and educational data for 636 cases and find that ocular defects are no more frequent in cases of reading disability than among the rest of the group; and that the Ophthalmograph is not a good indicator of ability in reading as measured by pencil and paper tests.


The author has made an effort "to supply definite help and guidance to teachers in the interest of the better education of all handicapped children". This is primarily a practical handbook and guide in the details of types of work which should be attempted with the dull child and with the procedures which should be employed in carrying the work forward.


This book presents the results of a study of the relation of social, economic and personal characteristics to the reading achievement of 315 pupils in grades III to V inclusive.


The plan has been to determine to what extent reading ability correlates with the difference between pupils' actual achievement and the achievement that might be expected of them in the light of their mental ability.
A good general background in the field of reading deficiencies may be obtained from the discussion presented in this book.


The author, whose background is in medicine, discusses at length various types of disorders in the development of the language faculty, including developmental alexia and developmental word deafness.


This book presents a summary of the literature of fact and theory together with various new experimental data and hypotheses concerning the relations of lateral dominance of the hands, eyes, ears, and visual acuity and eye-muscle imbalance to difficulties in reading and related subjects.


This book discusses the neurological basis of reading difficulties, describes tests appropriate for use in diagnosing cases due to such defects, and outlines therapeutic measures.


Here we are informed of the fundamental facts of a child’s physical development. The author has endeavored to summarize and interpret the best of the literature on the phases of school hygiene for the use of teachers and parents.


The teacher will find in this book a bibliography of leaders in reading research, a complete historical sketch of techniques for the study of eye movements in reading, and a description of the Metronoscope and Ophthalmograph.

The authors emphasize the necessity for constant and continuous analysis of the learner's interests and needs and the adjustment of method and material with respect to these, not only in dealing with remedial problems but for the prevention of reading difficulties at any stage in the child's development. Extensive record forms are given in the appendix.

Magazines


This bulletin discusses the "correlates of various types of reading disabilities", presents data relating to inter-pupillary distance at various grade levels, and emphasizes the significance of maturation in reading disability cases.

Betts, Emmett A. "Reading Disabilities and Their Correction", Elementary English Review, XII, (March, April, May, June, 1935).

Here we find critical summaries of 45 selected studies of reading disability; also a summary of important implications and conclusions.

Blanchard, Phyllis, "Reading Disabilities in Relation to Difficulties of Personality and Emotional Development", Mental Hygiene, XX (1936) pp. 384-413.

This is a report of data secured over a period of years in the clinical examination of 63 boys and 10 girls who had encountered difficulty in learning to read. The cases selected for discussion showed clearly "how difficulties in emotional development were intimately associated with failure in learning to read".


In this article Miss Cornell has tersely summarized the causes of failure in reading, the types of disability, and kinds of remedial work.

This article presents data which indicates that eye-muscle imbalance is related to visual fusion, alternating vision and ocular dominance.

Crider, Blake, "The Lack of Cerebral Dominance as a Cause of Reading Disabilities", Childhood Education, X (1934) pp. 238-239, 270.

The author summarizes the results of various investigations and points out the need of further evidence before the theory of dominance can be accepted.


This article reports the results of an experimental study involving eye-movement photographs to determine the difference in binocular behavior of the eyes of eleven "normal" individuals and eleven having a high degree of exophoria.


This points out the percentage that a basic sight vocabulary is of the total number of running words in school textbooks in four subjects—reading, arithmetic, geography, and history in grades one to six inclusive. It gives also the number of these basic sight words known by 65 pupils in a fourth grade remedial reading group before and after four weeks of special training.


The author discusses principles and assumptions underlying remedial instruction in reading and presents numerous practical suggestions for promoting growth among deficient readers.


Here we find a study of the ocular characteristics of two groups of children. One group was composed of one hundred fourteen reading disability cases, and the other consisted of one hundred forty three unselected children. A table presents the comparison of reading disability and unselected groups.

Experiments originally planned to determine some of the cerebral conditions in sensory learning, provided data on the relative use of the two cerebral hemispheres in normal humans. The results point to the inadequacy of the hypothesis of a general unilateral cerebral dominance for visual processes.


In this study we find a comparison of the reading achievement of 384 pupils in the seventh grade with that of a control group in the same grade of like size, chronological age, and ability but different in visual acuity.


The authors summarize data concerning the handedness, eye-dominance for sighting, visual acuity, and combinations of these in relation to reading in the case of three and, in some cases, four groups of children.


This article emphasizes the need for greater efficiency in reading in contemporary life and discusses both the developmental and the remedial problems which schools face today.


Here we find an explanation of the probable cause and cure of specific reading disability, which the author attributes to word-blindness.


This report summarizes the results of reading, writing, and intelligence tests given to primary classes in three schools to determine types of reversals, their frequency, and their relation to left-handedness.
Ilg, Vivienne, and Davis, Louise Farwell, "Training Eyes to Read", Parents' Magazine (March, 1939).

Though written primarily for parents, this article is of interest to all teachers of reading. It contains a brief description of some of the diagnostic techniques and methods of treatment used by the authors in the reading clinic at the National College of Education.

Jastak, J., "Interferences in Reading", Psychological Bulletin XXXI (April, 1934) pp. 244-272. The American Psychological Association, Ohio State University, Columbus.

The author presents a summary of "The most important facts and theories relative to special reading disability" from 171 references relating to this field.

Mower, Marion, "Diagnostic and Remedial Procedures in Reading", Education Record, Supplement No. 11, XIX (January, 1938) pp. 105-113.

This article describes three aspects of a successful remedial program and the procedures adopted in diagnosing and meeting the needs of seriously retarded readers in the Pittsburgh schools.


"This review is an attempt to present, integrate, and criticize the major theories of handedness and point out the objectives toward which studies and experiments are leading."


This report reviews surveys which have been made of pupils' intelligence, achievement, recreation, physical proficiency, mechanical ability, personality, character and problems of adjustment.


In this article we find a description of the methods used in the diagnosis and remedial treatment of reading disability cases in the Orthogenic school of the University of Chicago.

Fifty first grade children selected from three city schools in districts of three different social and economic levels, and showing reversal tendency in different degrees, were given individual psychological examinations. The findings were related to reading achievement at the end of the school year.


(December, 1932) pp. 346-358.

These articles give a rather complete bibliography on the subject of diagnostic and remedial reading and a critical review of the literature on certain phases of this field.


In this study tests were given to 64 students and records of eye movements secured. No significant correlation was found between accuracy of visual fixation and measures of reading proficiency.

Witty, Paul A. "Evaluating the Language Arts--Reading", Education Trends, VI (February, March 1938).

This article criticizes the use of extremely analytical and mechanical methods with inefficient readers and outlines a more functional type of training which should be provided.


The authors evaluate factors associated with poor reading and present a technique for diagnosing which emphasizes "only those items which are essential in adequate appraisal of reading difficulty and practical in typical school management".


Here we find the results of a study of 100 children which attempted to discover the relationship between ability in reading and various conditions of laterality.
I. PHYSICAL ADJUSTMENT
   A. General Condition
      1. Weight
      2. Tonsils and adenoids
      3. Glands
      4. Teeth
      5. Other items
   B. Visual Acuity
      1. Visual efficiency
      2. Vertical imbalance
      3. Eye coordination
      4. Lateral imbalance
      5. Visual fusion
      6. Clearness of vision
      7. Agility of fusion
         a. Convergence
         b. Relaxation of convergence
   C. Auditory Discrimination
      1. Acuity
      2. Span
      3. Perception
      4. Blending or fusing sounds into words
   D. Directional Confusion
      1. Hand preference
      2. Eye preference
      3. Foot preference
   E. Motor Control
      1. Games
      2. Using tools
      3. Handwriting
   F. Clearness of Speech
      1. Stuttering
      2. Lisping
      3. Baby-talk

II. MENTAL DEVELOPMENT
   A. Size of Oral Vocabulary
   B. Ability to Comprehend Material Read to Him
   C. Ability to Follow Directions, etc.
   D. Ability to Pass Intelligence Tests
      1. Group test
         a. California Mental Maturity
      2. Individual tests
         a. Detroit Test of Learning Aptitude
         b. Binet Test

III. SOCIAL AND EMOTIONAL ADJUSTMENT
   A. Level of Maturity of Parents
   B. Child's Adjustment to the Dominant Parent
   C. Adjustment to Brothers and Sisters
   D. Adjustment to Playmates
   E. Adjustment in School - (past and present)
   F. General Level of Emotional Maturity
G. Escape Mechanisms (aggressive opposition, withdrawal, compensation mechanisms, defeatism, hypertension)
H. Emotional Attitude Toward Reading

IV. SPECIFIC READING ABILITIES

A. Sight Vocabulary
   1. Durrell list
   2. Sangren-Wilson Test
   3. Holley Voc. Scale

B. Speed and Comprehension in Narrative Reading
   1. Level of Comprehension with unlimited time (sentences, paragraphs, story)
   2. Level of comprehension on timed test
   3. Length of eye span
   4. Ability to phrase
   5. Regressions
   6. Deficiencies shown by an oral check
      a. Word by word reading
      b. Substitutions, insertions, omissions, repetitions
      c. Ignoring punctuation

C. Word Mastery Skills
   1. Recognizing a word by its general configuration
      a. Distinctive shape
      b. Distinctive beginning or ending
   2. Getting meaning from context
      a. Proximity to a specific word
      b. Position in story
   3. Analyzing the word—visual
      a. Large and small component parts
      b. Prefixes and endings
      c. Initial consonants
   4. Analyzing the word—phonetic
      a. Consonant sounds
      b. Long and short vowel sounds
      c. Blends
      d. Syllables
      e. Synthesis (putting words together)
   5. Using all four methods when attacking a word

D. Work Habits
   1. Local information in libraries, in books, etc.
   2. Selecting and evaluating material
   3. Organizing material
   4. Using information to help solve a problem
   5. Remembering for a specific purpose
I. PHYSICAL ADJUSTMENT
A. Developmental History
1. Conditions during pregnancy and at birth
2. Development during infancy
3. Children's diseases
   a. Pre-school
   b. Post-school
4. Personal hygiene and other significant items, such as,
   a. Early self-care
   b. Sex history, etc.
B. Present Physical Conditions
1. Muscular coordination and strength
   a. Equilibrium
   b. Locomotion
   c. Use of hands
      (1) Tools
      (2) Handwriting
   d. Skill in games
      (1) Large muscle
      (2) Small muscle
2. General condition with regard to height, weight, glands, teeth, tonsils, adenoids, sinuses, etc.
3. General behavior and bodily control; covering such items as, eating habits, sleeping conditions, personal hygiene, elimination.
4. Visual acuity
   a. Visual efficiency
      (1) Suppression
   b. Vertical imbalance
   c. Eye coordination
   d. Lateral imbalance
   e. Fusion
      (1) Distance
      (2) Reading distance
   f. Sharpness of image
      (1) Distance
      (2) Reading distance
   g. Evidences of eye strain
      (1) Holds book too close
      (2) Squints, etc.
5. Auditory acuity
   a. Audiometer test
      (1) Percent of hearing loss,
          (a) Air conduction
          (b) Bone conduction
   b. Low voice test
      (1) Span
      (2) Perception
      (3) Blending
6. Laterality
   a. Hand preference
   b. Eye preference
   c. Foot preference
7. Clearness of speech
   a. Type of difficulty
      (1) Stuttering
      (2) Stammering
      (3) Lisping
      (4) Careless speech
   b. Causes
      (1) Emotional disturbance
         (a) Shock at home
         (b) Failure in school
      (2) Structural defects
II. MENTAL DEVELOPMENT
   A. Level of development
      1. Reaction time
      2. I.Q. on Stanford Binet Test
      3. I.Q. on non-language test
      4. I.Q. on language test
      5. Rating on performance tests
         a. Mazes
         b. Form boards
      6. Facility in the understanding of oral language
         a. Size of vocabulary
         b. Ability to remember and answer questions about a story
      7. Memory span for ideas
   B. General Characteristics
      1. Ambition
      2. Curiosity
      3. Dependability
      4. Initiative
      5. Judgment
      6. Originality
      7. Perseverance
      8. Reasoning
      9. Self-confidence
   C. Experience Background
      1. Home environment
         a. Economic status of family
            (1) Size of dwelling
            (2) Servants
            (3) Automobiles
            (4) Radio, piano, etc.
         b. Separate bedrooms
         c. Cultural background
            (1) Intellectual development of parents
            (2) Number of books, magazines, newspapers
            (3) Environment for reading
            (4) Attitude toward books
            (5) Language spoken at home
         d. Vocation of parents
         e. Hobbies of parents
         f. Early recreational opportunities
            (1) Indoor play space and equipment
            (2) Shop and tools
            (3) Outdoor play space and equipment
         g. Playmates within the family
h. Pets
   i. Influence of other adults in the home
   j. Amount of time parents spent with children

2. Neighborhood and early school experience
   a. Kind of playmates available
   b. Play space and recreational facilities
   c. Clubs and gangs
   d. Church and Sunday School
   e. Kind of movies
   f. Nursery school experience
   g. Kindergarten experience
   h. Type of experience in primary grades
   i. Circus, zoo, museum, etc.

3. Wider contacts
   a. Trips with parents
   b. Other trips
   c. Visits with family
   d. Other visits
   e. Summer Activities

4. Present interests
   a. Activities after school
   b. Activities in the evenings
   c. Activities when there is no school
      (1) Week-ends
      (2) Holidays
   d. Radio programs
   e. Types of movies
   f. Pets
   g. Clubs
   h. Hobbies (shop, drawing, music, etc.)
   i. Games and sports
   j. Funnies
   k. Favorite school subjects

D. Reading Background
1. Reading readiness tests
   a. Physical readiness
   b. Mental development
   c. Social and emotional maturity
   d. Experience background
2. Introduction of reading
   a. Age of child
3. Method used
   a. Experience
   b. Basic test
4. Provision for individual differences
   a. Developing sight vocabulary
   b. Word mastery skills
5. First appearance of difficulties
6. Type of difficulties
7. Grades repeated
8. Schools attended
9. Amount of time devoted to leisure time reading
10. Number and kind of books
11. Use of libraries
12. Parents attitude toward school
13. Parents attitude toward child
14. Remedial work attempted
III. Social and Emotional Adjustment

A. Social Adjustment—individualism versus group consciousness

1. At home
   a. To parents
      (1) Level of adjustment of parents
      (2) Attitude of parents toward child
      (3) Types of family recreation
   b. To siblings
      (1) Ambivalence
      (2) Domination or cooperation
      (3) Type of domination
   c. To other relatives
   d. To servants

2. At school
   a. To teachers
      (1) Fear or affection
   b. To children; covering such items as, desire for attention, desire for dominance, need for cooperation, need to take turns, sympathy, politeness, etc.

3. In other contacts
   a. At Sunday School
   b. At clubs, shows, dancing school, etc.
   c. With playmates.
      (1) Opportunity for play
      (2) Individual or group play
      (3) Boys or girls

4. Symptoms of poor adjustment (any not covered, should be discussed here)
   a. Fights, plays alone, etc.

5. Symptoms of good adjustment (any not covered above, should be discussed here)
   a. Respects rights of others, is sensitive to praise and blame, is unprejudiced, unselfish, etc.

B. Emotional Adjustment

1. Emotional pattern of the home
   a. With regard to security, affection, and acceptance
      (1) General home atmosphere; covering such items as, humor, religion, ideals, money, and whether children were wanted.
      (2) Level of adjustment of parents
      (3) Attitude toward child
      (4) Type of family control
         (a) Individual responsibilities
         (b) Joint responsibilities
      (5) Sympathy for child's problems
         (a) Love adjustment to parents
         (b) Sex adjustment
         (c) Need for security
   b. With regard to independence
      (1) Maturity and independence of parents
      (2) Ability of parents to let child develop
      (3) Ability of child to assume responsibility at home
      (4) Ability of child to become independent at school

2. Emotional pattern of the child
   a. Basic pattern
      (1) Expansive type
         (a) Conditioned by affection and love
         (b) Symptoms of good adjustment, such as: is resourceful, shows constructive imagination, is happy, poised, confident, curious
(2) Withdrawal type
(a) Conditioned by fear
(b) Symptoms of regressive behavior, such as: daydreams, is dependent, easily discouraged, sly, too deliberate, jealous, etc.

(3) Aggressive type
(a) Conditioned by anger
(b) Symptoms of protest, such as: has temper tantrums, steals, teases, boasts, is cruel, etc.

b. Symptoms of maladjustment, (any which were not covered above should be discussed here) such as: has nightmares, shows self pity, is extremely nervous, develops functional illness, fears or phobias, etc.

(1) Shown at home
(2) Shown at school

IV. SPECIFIC READING ABILITIES
A. Skill in Enlarging Sight Vocabulary
1. Visual memory
a. Tendency to make reversals

2. Phonetic skill

3. Kinaesthetic skill

B. Speed and Comprehension in Narrative Reading
1. Length of eye span
2. Ability to phrase
3. Level of comprehension with unlimited time
   a. Sentences
   b. Paragraphs
   c. Stories
4. Level of comprehension on a timed test
5. Causes of slow rate of reading and poor comprehension as shown by an oral check
   a. Inadequate sight vocabulary
   b. Word by word reading
   c. Lack of word mastery skills
   d. Emotional blocking
6. Types of errors found when making an oral check
   a. Substitution of initial consonant sounds
   b. Other consonant and vowel errors
   c. Substitution of words
   d. Repetition of words
   e. Insertion of words
   f. Omission of words
   g. Reversals
   h. Words refused
6. Use of Crutches
   a. Lip movement or vocalization
   b. Pointing

C. Word Mastery Skills
1. Recognizing a word by its general configuration
   a. Distinctive shape
   b. Distinctive beginning or ending
2. Getting meaning from context
   a. Proximity to a specific word
   b. Position in story
3. Analyzing the word--Visual
   a. Large and small component parts
   b. Prefixes and endings
   c. Initial consonants
4. Analyzing the word--Phonetic
   a. Consonant sounds
   b. Long and short vowel sounds
   c. Blends
D. Work Habits

1. General
   a. Using books to help solve problems
      (1) Locating information
         (a) In libraries
            x. Card index
            y. Reader's guide
         (b) In books
            x. Index
            y. Skimming
         z. Reading for details
      (2) Selecting and evaluating material
         (a) In light of past experience
         (b) By reference to authorities
      (3) Organizing material
      (4) Testing the solution
         (a) By reference to authorities

2. In specific fields
   a. Social science
      (1) Maps, graphs, etc.
   b. Science
      (1) Tables, charts, etc.
   c. Arithmetic
      (1) Problems, graphs, etc.

   a. Binocular vision
   b. Visual efficiency
      (1) Binoculars
      (2) Left
      (3) Right
   c. Vertical imbalance
   d. Eye coordination
   e. Lateral imbalance
   f. Fusion
      (1) Distance
      (2) Near distance
   g. Sharpness of image
      (1) Distance
      (2) Near distance
   h. Tolerance of eye strain: Level with nose; holds book too far away; excessive blurriness or strain of eyes
   i. Premise: defects shown on ophthalmoscope record. Return
   j. Auditory quality (low volume)
   k. Span
   l. Perception
   m. Endurance
   n. Laterality
      a. Hand preference
      b. Eye preference
   o. Foot preference
   p. Capacity of speech
      a. Type of difficulty
         (1) slurring; extreme, unmeasurable
         (2) breathing: extreme, unmeasurable
         (3) shouting: extreme, unmeasurable
         (4) articulation: extreme, unmeasurable, slight
DATE OF BIRTH: Sept 24, 1929, Age 9-11

PHYSICAL ADJUSTMENT

1. Developmental History
   a. Birth: pre-mature, delayed, injuries
   b. Infant: age at weaning, walking, talking
   c. Health history (list diseases, injuries and shocks chronologically)

2. Present Physical Conditions
   a. Motor coordination and strength
      (1) Equilibrium: stumbles, falls, balances
      (2) Locomotion: walks, runs, jumps, skips
      (3) Use of hands:
         (1) Tools: skillful, awkward, quick, slow
         (2) Handwriting: laborious, cramped, tremulous
      d. Skill in games: superior, average, inferior
   b. General condition: height, weight, teeth, tonsils, adenoids, sinuses, glands

3. Visual acuity (with glasses third week) score
   a. Binocular vision
   b. Visual efficiency
      (1) Binocular
      (2) Left
      (3) Right
   c. Vertical imbalance
   d. Eye coordination
   e. Lateral imbalance
   f. Fusion
      (1) Distance
      (2) Reading distance
   g. Sharpness of image
      (1) Distance
      (2) Reading distance
   h. Evidences of eye strain: holds book too close, holds book too far away, squints, lacks muscular control of eyes
   i. Physical defects shown on ophthalmograph record

4. Auditory acuity (low voice test) rating
   a. Span
   b. Perception
   c. Blending

5. Laterality
   a. Hand preference: right, left
   b. Eye preference: right, left
   c. Foot preference: right, left

6. Clearness of speech
   a. Type of difficulty
      (1) Stuttering: extreme, moderate, slight
      (2) Stammering: extreme, moderate, slight
      (3) Lisping: extreme, moderate, slight
      (4) Careless speech: extreme, moderate, slight
II. MENTAL DEVELOPMENT
A. Intelligence Tests
1. Stanford-Binet Revision
   I.Q.   M.A.   Grade
   115  151
2. California Test Mental Maturity
   a. Language
      I.Q.   M.A.   Grade
      117  139
   b. Non-language
      M.A. Grade
      160  180
3. Durrell, Capacity Test
   a. Word meaning
      7.5
   b. Paragraph meaning
      5.6
B. General Characteristics: ambitious, curious, dependable, creative, persevering, reasoning, self-confident,
C. Experience Background
1. Home Environment
   a. Economic status
      (1) Type of dwelling: house, double house, apartment
         (a) Number of rooms
      (2) Servants: number
      (3) Automobile: kind
      (4) Radio: yes, Musical instruments
   b. Separate bedroom for child, yes
2. Cultural background
   a. Father's name
      place of birth
      age
      occupation
   b. Mother's name
      place of birth
      age
      occupation
   c. Marital status of parents, living together, temporary separation, permanent separation, divorced, deceased, father, mother
   d. Education of father: grade school, high school, college
   e. Education of mother: grade school, high school, college
   f. Number of books, magazines, newspapers
   g. Environment for reading: satisfactory, unsatisfactory
   h. Attitude towards books
   i. Language spoken in the home
   j. Hobbies of parents: father, mother
3. Early recreational opportunities
   a. Indoor play space and equipment: adequate, inadequate
   b. Outdoor play space and equipment: adequate, inadequate
4. Playmates within the family
   name
   age
   grade
5. Pets: kind
6. Other adults in the home
   Mother's sister, brother, mother, father
   Father's sister, brother, mother, father
   Boarder's
D. Present interests
1. Activities after school
2. Activities on week-ends and holidays
3. Favorite radio programs:
   a. Time listen each day: 1/2 hour
   b. Types of movies: comedy, western, sad, news, love, serial, mystery, gangster
5. Pets: kind
5. Clubs
6. Hobbies
7. Games and Sports
8. Favorite school subjects

9. Reading Background
1. Introduction of reading: age of child
2. Method used: experience
3. First appearance of difficulties
4. Grades repeated
5. Schools attended
6. Amount of time devoted to leisure time reading
7. Number of books read
8. Parent's attitude toward school: cooperative, neutral, critical
10. Remedial work attempted

11. Social and Emotional Adjustment

A. Social Adjustment

1. At home
   a. To parents
      (1) Father plays with child: often, seldom
      (2) Mother plays with child: often, seldom
   b. To siblings
      (1) Child plays with brothers: often, seldom
      (2) Child plays with sisters: often, seldom
      (3) Child dominates sisters: often, seldom
      (4) Child dominates brothers: often, seldom
      (5) Child quarrels with siblings often, seldom

2. At school
   a. To teachers
      (1) Shows affection, fear
   b. To children
      (1) Dominates, shows off, cooperates, shows kindness, politeness, quarrels

3. Symptoms of poor adjustment
   a. Quarrels, plays alone, bullies

4. Symptoms of good adjustment
   a. Respects rights of others, is sensitive to praise and blame, unprejudiced, unselfish

B. Emotional Adjustment

1. Emotional pattern of the home
   a. Place of child in home
      (1) Accepted as an individual: usually, seldom
      (2) Accepted because parent feels need for child: usually, seldom
   b. Independence of child
      (1) Makes own decisions: usually, seldom
      (2) Is helped to make decisions: usually, seldom
      (3) Has decisions made for him: usually, seldom

2. Emotional pattern of the child
   a. Basic pattern
      (1) Expansive type: happy, poised, confident, curious, resourceful
      (2) Withdrawal type: dependent, easily discouraged, shy, too deliberate
      (3) Aggressive type: temper tantrums, shows self-pity, nervousness, develops functional illness, fears, and phobias

3. Results of Personality tests
   a. Ascendance
   b. Extroversion
   c. Emotionality
IV. SPECIFIC READING ABILITIES

A. Size of Sight Vocabulary
- Durrell: 3.0
- Ingraham-Clark: 2.5

B. Speed and Comprehension in Narrative Reading
- Durrell: 3.0
- Ingraham-Clark: 3.0

C. Ophthalmograph Record
- Eye span:...
- Speed of reading: 71 words per minute
- Regressions: 2 to 3 per line
- Comprehension:...

IV. SPECIFIC READING ABILITIES

A. Size of Sight Vocabulary
Durrell: 3.0
Ingraham-Clark: 2.5

B. Speed and Comprehension in Narrative Reading
Durrell: Level of comprehension with unlimited time
Ingraham-Clark: Level of comprehension on a timed test

C. Ophthalmograph Record
- Eye span
- Speed of reading: 71 words per minute
- Regressions: 2 to 3 per line
- Comprehension: 100%

D. Causes of slow reading and poor comprehension as shown by an oral check
- Inadequate sight vocabulary
- Word by word reading
- Lack of word mastery skills
- Emotional blocking

E. Types of errors found on oral check
- Tabulation of errors
  - Vowel errors
  - Reversals
  - Insertions
  - Omissions
  - Substitutions
  - Refusals
  - Repetitions
  - Total errors: 60

F. Use of "crutches"
- Lip movement
- Pointing

G. Word Mastery Skills
- Recognizes word by general configuration
- Gets meaning from context
- Analyzes word visually: small words, beginnings, endings
- Analyzes word phonetically: knows consonants, vowels, blends, phonograms

H. Work Habits
1. General
   - Using books to help solve problems
     - Locating information
       - In libraries
       - Card index
       - Reader's guide
     - In books
       - Index
       - Skimming
     - Reading for details
   - Selecting and evaluating material
     - In light of past experience
     - By reference to authorities
   - Organizing material
   - Testing the solution
     - By reference to authorities
2. In specific fields
   - Social science
     - Maps, graphs, etc.
   - Science
     - Tables, charts, etc.
   - Arithmetic
     - Problems, graphs, etc.
DIAGNOSTIC RECORD BLANK

2

Date of Birth: August, 1931, Age 2

Grade 3 A

Telephone

PHYSICAL ADJUSTMENT

1. Developmental History
   a. Birth: premature, delayed, injuries,
   b. Infancy: age at weaning, walking, talking, teeth
   c. Health history: list diseases, injuries and shocks chronologically

2. Present Physical Conditions
   a. Muscular coordination and strength
      (1) Equilibrium: stumbles, falls, balances,
      (2) Locomotion: walks, runs, jumps, skips
      (3) Use of hands:
         a. Tools: skillful, awkward, quick, slow
         b. Handwriting: slow, laborious, cramped, tremulous
      c. Skill in games: superior, average, inferior
   b. General condition: height, weight, teeth, tonsils, adenoids, sinuses, glands

3. Visual acuity
   a. Binocular vision
   b. Visual efficiency
      (1) Binocular
      (2) Left
      (3) Right
   c. Vertical imbalance
   d. Eye coordination
   e. Lateral imbalance
   f. Fusion
      (1) Distance
      (2) Reading distance
   g. Sharpness of image
      (1) Distance
      (2) Reading distance
   h. Evidence of eye strain: holds book too close, holds book too far away, squints, lacks muscular control of eyes
   i. Physical defects shown on ophthalmograph record: none

4. Auditory acuity (low voice test)
   a. Span
   b. Perception
   c. Blending

5. Laterality
   a. Hand preference: right, left
   b. Eye preference: right, left
   c. Foot preference: right, left

6. Clearness of speech
   a. Type of difficulty
      (1) Stuttering: extreme, moderate, slight
      (2) Stammering: extreme, moderate, slight
      (3) Lisping: extreme, moderate, slight
      (4) Careless speech: extreme, moderate, slight
II. MENTAL DEVELOPMENT

A. Intelligence Tests

1. Stanford-Binet Revision
   a. Language 124
   b. Non-language 126
2. California Test Mental Maturity
   a. Language 119
   b. Non-language 117
3. Durrell, Capacity Test
   a. Word meaning
   b. Paragraph meaning

Grade 3.9

B. General Characteristics: ambitious, curious, dependable, creative, persevering, reasoning, self-confident,
6. Clubs: None
7. Hobbies: Playing with dolls
8. Games and Sports: Playing with dolls
9. Favorite school subjects:

E. Reading Background
1. Introduction of reading: age of child
2. Method used: experience basic text
3. First appearance of difficulties
4. Grades repeated
5. Schools attended
6. Amount of time devoted to leisure time reading
7. Number of books read
8. Parent's attitude toward school: cooperative, neutral, critical
9. Parent's attitude toward child: patient, nagging, sympathetic, indulgent
10. Remedial work attempted

F. SOCIAL AND EMOTIONAL ADJUSTMENT
A. Social Adjustment
1. At home
   a. To parents
      (1) Father plays with child: often, seldom
      (2) Mother plays with child: often, seldom
   b. To siblings
      (1) Child plays with brothers: often, seldom
      (2) Child plays with sisters: often, seldom
      (3) Child dominates sisters: often, seldom
      (4) Child dominates brothers: often, seldom
      (5) Child quarrels with siblings: often, seldom
2. At school
   a. To teachers
      (1) Shows affection, fear
   b. To children
      (1) dominates, shows off, cooperates, shows kindness, politeness, quarrels, inconsiderate
3. Symptoms of poor adjustment
   a. quarrels, plays alone, bullies,
4. Symptoms of good adjustment
   a. Respects rights of others, is sensitive to praise and blame, unprejudiced, unselfish

B. Emotional Adjustment
1. Emotional pattern of the home
   a. Place of child in home
      (1) Accepted as an individual; usually, seldom
      (2) Accepted because parent feels need for child; usually, seldom
   b. Independence of child
      (1) Makes own decisions: usually, seldom
      (2) Is helped to make decisions: usually, seldom
      (3) Has decisions made for him: usually, seldom
2. Emotional pattern of the child
   a. Basic pattern
      (1) Expansive type: happy, poised, confident, curious, resourceful
      (2) Withdrawal type: daydreams, dependent, easily discouraged, shy, too deliberate
      (3) Aggressive type: temper tantrums, shows self-pity, nervousness, develops functional illness, fears, and phobias
3. Results of Personality tests
   a. Ascendance
   b. Extroversion
   c. Emotionality
### IV. SPECIFIC READING ABILITIES

**A. Size of Sight Vocabulary**
- Durrell: 4.0
- Ingraham-Clark: 3.8

**B. Speed and Comprehension in Narrative Reading**
- Durrell: 4.0
- Ingraham-Clark: 4.2

**C. Ophthalmograph Record**
- a. Eye span
- b. Speed of reading
- c. Regressions
- d. Comprehension

**D. Causes of Slow Reading and Poor Comprehension**
- a. Inadequate sight vocabulary
- b. Word by word reading
- c. Lack of word mastery skills
- d. Emotional blocking

**E. Types of Errors Found on Oral Check**
- a. Tabulation of errors
  - Vowel errors
  - Reversals
  - Insertions
  - Omissions
  - Substitutions
  - Refusals
  - Repetitions
  - Total

**F. Use of "Crutches"**
- a. Lip movement
- b. Pointing

**C. Word Mastery Skills**
- a. Recognizes word by general configuration
- b. Gets meaning from context
- c. Analyzes word visually: small words, beginnings, endings
- d. Analyzes word phonetically: knows consonants, vowels, blends, phonograms

**D. Work Habits**
- 1. General
  - a. Using books to help solve problems
    (1) Locating information
      - In libraries
        - x. Card index
        - y. Reader's guide
      - In books
        - x. Index
        - y. Skimming
        - z. Reading for details
    (2) Selecting and evaluating material
      - In light of past experience
      - By reference to authorities
    (3) Organizing material
    (4) Testing the solution
      - By reference to authorities
  - b. Specific fields
    a. Social science
      (1) Maps, graphs, etc.
    b. Science
      (1) Tables, charts, etc.
    c. Arithmetic
      (1) Problems, graphs, etc.
DIAGNOSTIC RECORD BLANK

Name ________________________________ Date of Birth ________________ Age __________

Address ______________________________ Telephone __________________________

MEDICAL ADJUSTMENT

1. Developmental History
   1. Birth: pre-mature, delayed, injuries, ________
   2. Infancy; age at weaning, walking, talking, teeth ________
   3. Health history (list diseases, injuries and shocks chronologically)

   C. Use of hands:
   (1) Tools: skillful, awkward, quick, ________
   (2) Handwriting: slow, laborsious, cramped, tremulous ________
   d. Skill in games: superior, average, inferior ________

2. Present Physical Conditions
   a. Equilibrium: stumbles, falls, balances, ________
   b. Locomotion: walks, runs, jumps, skips, ________
   c. Use of hands:
      (1) Tools: skillful, awkward, quick, ________
      (2) Handwriting: slow, laborsious, cramped, tremulous ________
   d. Skill in games: superior, average, inferior ________

3. Visual acuity
   a. Binocular vision score ________
   b. Visual efficiency ________
      (1) Binocular ________
      (2) Left ________
      (3) Right ________
   c. Vertical imbalance ________
   d. Eye coordination ________
   e. Lateral imbalance ________
   f. Fusion ________
      (1) Distance ________
      (2) Reading distance ________
   g. Sharpness of image ________
      (1) Distance ________
      (2) Reading distance ________
   h. Evidences of eye strain: holds book too close, holds book too far away, squints, lacks muscular control of eyes ________
   i. Physical defects shown on ophtalmograph record: could not read ________

4. Auditory acuity (low voice test) ________
   a. Span ________
   b. Perception ________
   c. Blending ________

5. Laterality
   a. Hand preference: right, left ________
   b. Eye preference: right, left ________
   c. Foot preference: right, left ________

6. Clarity of speech
   a. Type of difficulty
      (1) Stuttering: extreme, moderate, slight ________
      (2) Stammering: extreme, moderate, slight ________
      (3) Lisping: extreme, moderate, slight ________
      (4) Careless speech: extreme, moderate, slight ________
## II. MENTAL DEVELOPMENT

### A. Intelligence Tests

<table>
<thead>
<tr>
<th>Test</th>
<th>I.Q.</th>
<th>M.A.</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanford-Binet Revision</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>California Test Mental Maturity</td>
<td>119</td>
<td>95</td>
<td></td>
</tr>
<tr>
<td>a. Language</td>
<td>108</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>b. Non-Language</td>
<td>154</td>
<td>161</td>
<td>2.3</td>
</tr>
</tbody>
</table>

### B. General Characteristics:
- ambitious, curious, dependable, creative, persevering, reasoning, self-confident, lacks self-confidence

### C. Experience Background

#### 1. Home Environment

<table>
<thead>
<tr>
<th>Economic status</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Type of dwelling: house, double house, apartment</td>
</tr>
<tr>
<td>(a) Number of rooms:</td>
</tr>
<tr>
<td>(2) Servants: number:</td>
</tr>
<tr>
<td>(3) Automobile: kind:</td>
</tr>
<tr>
<td>(4) Radio Musikal instruments:</td>
</tr>
<tr>
<td>(5) Separate bedroom for child, yes:</td>
</tr>
</tbody>
</table>

#### 2. Cultural Background

<table>
<thead>
<tr>
<th>Father's name</th>
<th>age</th>
<th>occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>place of birth:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother's name</th>
<th>age</th>
<th>occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>place of birth:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marital status of parents, living together:</th>
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</thead>
<tbody>
<tr>
<td>temporary separation, permanent separation, divorced, deceased, father mother</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education of father: grade school, high school, college</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Education of mother: grade school, high school, college</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Number of books, magazines, newspapers:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Environment for reading: satisfactory, unsatisfactory</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Attitude towards books: likes, enjoys, ignores</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Language spoken in the home:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hobbies of parents: father, mother, judged</th>
</tr>
</thead>
</table>

#### 3. Early recreational opportunities

<table>
<thead>
<tr>
<th>Indoor play space and equipment: adequate, inadequate,</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Outdoor play space and equipment: adequate, inadequate,</th>
</tr>
</thead>
</table>

#### 4. Playmates within the family

<table>
<thead>
<tr>
<th>name</th>
<th>age</th>
<th>grade</th>
</tr>
</thead>
</table>

| Father's sister, brother, mother, father, Boeder's |

#### 5. Pets: kind

#### 6. Other adults in the home

| Mother's sister, brother, mother, father, Boeder's |

#### D. Present interests

| Activities after school: playing games, small chores |

| Activities on weekends and holidays: homework, traveling, sports |

<table>
<thead>
<tr>
<th>Favorite radio programs:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Time listen each day:</th>
</tr>
</thead>
</table>

| Types of movies: comedy, western, sad, news, love, serial mystery, gangster |

<table>
<thead>
<tr>
<th>Pets: kind:</th>
</tr>
</thead>
</table>
6. Clubs

7. Hobbies

8. Games and Sports (Cowboy, rope, etc.)

9. Favorite school subjects

---

I. Reading Background

1. Introduction of reading: age of child, 5-9

2. Method used: experience, basic text

3. First appearance of difficulties

4. Grades repeated

5. Schools attended

6. Amount of time devoted to leisure time reading

7. Number of books read

8. Parent's attitude toward school: cooperative, neutral, critical


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II. SOCIAL AND EMOTIONAL ADJUSTMENT

A. Social Adjustment

1. At home
   a. To parents
      (1) Father plays with child: often, seldom
      (2) Mother plays with child: often, seldom
   b. To siblings
      (1) Child plays with brothers: often, seldom
      (2) Child plays with sisters: often, seldom
      (3) Child dominates sisters: often, seldom
      (4) Child dominates brothers: often, seldom
      (5) Child quarrels with siblings often, seldom

2. At school
   a. To teachers
      (1) Shows affection, fear
   b. To children
      (1) dominates, shows off, cooperates, shows kindness, politeness, quarrels,

3. Symptoms of poor adjustment
   a. quarrels, plays alone, bullies, timid

4. Symptoms of good adjustment
   a. Respects rights of others, is sensitive to praise and blame, unprejudiced, unselfish

B. Emotional Adjustment

1. Emotional pattern of the home
   a. Place of child in home
      (1) Accepted as an individual; usually, seldom
      (2) Accepted because parent feels need for child; usually, seldom
   b. Independence of child
      (1) Makes own decisions: usually, seldom
      (2) Is helped to make decisions: usually, seldom
      (3) Has decisions made for him, usually, seldom

2. Emotional pattern of the child
   a. Basic pattern
      (1) Expansive type: happy, poised, confident curious resourceful
      (2) Withdrawal type: daydreams, dependent, easily discouraged, sly, too deliberate shy, timid
      (3) Aggressive type: temper tantrums, shows self-pity, nervousness, develops functional illness, fears, and phobias

3. Results of Personality tests
   a. Ascendance
   b. Extroversion
   c. Emotionality
### IV. SPECIFIC READING ABILITIES

<table>
<thead>
<tr>
<th>A. Size of Sight Vocabulary</th>
<th>Durrell 1.0</th>
<th>Ingraham-Clark 2.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Speed and Comprehension in Narrative Reading</td>
<td>Durrell</td>
<td>Ingraham-Clark</td>
</tr>
<tr>
<td>1. Level of comprehension with unlimited time</td>
<td>10</td>
<td>1.4</td>
</tr>
<tr>
<td>2. Level of comprehension on a timed test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Ophthalmograph Record</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Eye span</td>
<td>Could not read</td>
<td></td>
</tr>
<tr>
<td>b. Speed of reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Regressions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Comprehension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Causes of slow reading and poor comprehension as shown by an oral check</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Inadequate sight vocabulary</td>
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<td></td>
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<tr>
<td>b. Word by word reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Lack of word mastery skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Emotional blocking</td>
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<td></td>
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<tr>
<td>5. Types of errors found on oral check</td>
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<td></td>
</tr>
<tr>
<td>a. Tabulation of errors</td>
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<tr>
<td>Vowel errors</td>
<td>o</td>
<td>Insertions</td>
</tr>
<tr>
<td>Reversals</td>
<td>8</td>
<td>Omissions</td>
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<tr>
<td>Substitutions</td>
<td>2</td>
<td>Refusals</td>
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<tr>
<td>Repetitions</td>
<td>25</td>
<td>Total</td>
</tr>
<tr>
<td>6. Use of &quot;crutches&quot;</td>
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</tr>
<tr>
<td>a. Lip movement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Pointing</td>
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<tr>
<td>C. Word Mastery Skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Recognizes word by general configuration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Gets meaning from context</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Analyzes word visually: small words, beginnings, endings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Analyzes word phonetically: knows consonants, vowels, blends, phonogram</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. Work Habits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. General</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Using books to help solve problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Locating information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) In libraries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>x. Card index</td>
<td></td>
<td></td>
</tr>
<tr>
<td>y. Reader's guide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) In books</td>
<td></td>
<td></td>
</tr>
<tr>
<td>x. Index</td>
<td></td>
<td></td>
</tr>
<tr>
<td>y. Skimming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>z. Reading for details</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Selecting and evaluating material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) In light of past experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) By reference to authorities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Organizing material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Testing the solution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) By reference to authorities</td>
<td></td>
<td></td>
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<tr>
<td>2. In specific fields</td>
<td></td>
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<tr>
<td>a. Social science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Maps, graphs, etc.</td>
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<td></td>
</tr>
<tr>
<td>b. Science</td>
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</tr>
<tr>
<td>(1) Tables, charts, etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Arithmetic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Problems, graphs, etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Betts READY TO READ Tests**

EMMETT A. BETTS
Research Professor and Director of the Reading Clinic, Penn State, State College, Penna.

---

### Visual Survey Form 1938 Edition

| Form MS-DB-1 |

---

**Visual SENSATION and PERCEPTION**

<table>
<thead>
<tr>
<th>Wearing glasses?</th>
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<tbody>
<tr>
<td>Yes</td>
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<table>
<thead>
<tr>
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<table>
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<tr>
<th>Name of birth</th>
<th>Date of birth</th>
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<table>
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<tr>
<th>City</th>
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<table>
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<table>
<thead>
<tr>
<th>Address</th>
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</thead>
</table>

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<table>
<thead>
<tr>
<th>Examiner</th>
</tr>
</thead>
</table>

---

**VISUAL SENSATION and PERCEPTION**

1. **Introductory:** Slide DB-10. Set slide holder at 00-00
   - Right (Dog only) (fail) Left (Pig only) (fail) Both (Dog & Pig) (normal)
   - Score

2. **Distance Fusion:** Slide DB-4. Set slide holder at 00-00
   - 2. (fall) 3. (normal) 4. (fall) 4 then 3. 3 then 4.
   - Score

3. **Visual Efficiency:** Set slide holder at 00-00
   - a. Two Eyes: (Slide DB-1) R L 2 3 4 5 6 7 8 9 10 11
     - 20% 20% 30% 40% 50% 60% 70% 80% 90% 100% 105% 110%
     - Score
   - b. Left: (Slide DB-2) T B C R L 2 3 4 5 6 7 8 9 10 11
     - 20% 30% 40% 50% 60% 70% 80% 90% 100% 105% 110%
     - Score
   - c. Right: (Slide DB-3) R L C B T 1 2 3 4 5 6 7 8 9 10 11
     - 20% 30% 40% 50% 60% 70% 80% 90% 100% 105% 110%
     - Score

4. **Vertical Imbalance:** (Slide DB-8) Set at 00-00
   - Ball above, on, or below line.
   - Score

5. **Coordination Level:** (Slide DB-6) Set slide holder at 00-00
   - 1. 2 3 4 5 6 7 8 9 10 11
     - 19% 20% 30% 40% 50% 60% 70% 80% 90% 100%
   - Score

6. **Lateral Imbalance:** (Slide DB-9) Set slide holder at 00-00
   - Arrow points to 1.2.3.4.5.6.7.8.9.10.11.12.13.14.15.
   - (Slide DB-9) Set slide holder at Reading Distance
   - Arrow points to 1.2.3.4.5.6.7.8.9.10.11.12.13.14.15.
   - Score

7. **Reading Distance Fusion:** (Slide DB-5) Set slide holder at Reading Distance
   - 2. (fall) 3. (normal) 4. (fall) 4 then 3. 3 then 4.
   - Score

8. **Sharpness of Image:** (Slides DB-7c and DB-7d) New DB-7f-7g recommended for (a)
   - a. Set at Reading Distance
     - No. lines in A B C D E F
     - Score
   - b. Set at 00-00
     - No. lines in A B C D E F
     - Score

---

*With slides obtained prior to April, 1936, the setting of the slide holder should be at 1.00-40.
*Reading Distance for slides obtained since April, 1936, on Telebinoculars with fully calibrated shaft is denoted by 2.50-16.
*With slides DB-5 obtained before April, 1936, slide holder should be set at 3.00-13.

Note: For Further interpretation of these tests see "The Prevention and Correction of Reading Difficulties," by Emmett A. Betts—published by Row, Peterson & Company and distributed by Keystone View Company.
**Butler University Reading Clinic**

**Ophthalmograph Record**

<table>
<thead>
<tr>
<th>Tests for hand</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Test</th>
<th>Hand</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The child may volunteer to give a test. The drawing with the other hand would be read as a test to be repeated in one of the forms of the eye.

<table>
<thead>
<tr>
<th>Reading Data</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Comprehension score</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Time in seconds to read 100 words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Reading rate - words per minute</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Number of fixations (incl. reg.) per 100 words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Number of regressions per 100 words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(f) Average span of recognition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(g) Average duration of fixation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Binocular Ector Coordination**

<table>
<thead>
<tr>
<th>Fixation adjustments</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conv.</td>
<td></td>
</tr>
<tr>
<td>Div.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Lateral vergence</th>
<th>Left</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conv.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Div.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vertical deviation (Yes or No)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(J)</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**

- Fixation stability
- Speed of adjustments
- Lateral control (control-sweeps)
- Synchronization of binocular movements
- Lip movements (observed)
- Head movements (observed)

**Signed:**
Tests for Hand Preference:

1. Record the hand used for holding pencil or crayon in drawing.
2. Have the child write or print his name if he is able to do so. Notice hand used and direction used in forming letters.
3. (Watch for reversals, kinetic (the whole word moves from right to left) and static (a single letter here and there reversed)
4. Ask the child to see if he can write his name with his other hand.
5. The child may volunteer to draw a picture.
6. The drawing with the other hand should be requested as it was with the writing.
7. The first test to be recorded in the form of numerical scores is the dart and target test. Taking a dart the examiner says, "This is a game to see how well you can throw. Stand with your feet right here, hold the dart like this, and throw it, this way." (Demonstrate.) "See, mine is on the circle, so I get a score of ten. Now you see how you can throw it." Care should be taken here, as in all the handedness tests, not to place the dart in the child's hand. The darts should be placed on a table or chair convenient to the child, and the hand which the child uses recorded.
8. Then the examiner says, "Now let's see what the other hand can do. This is a race between the two hands".

<table>
<thead>
<tr>
<th>Hand Volunteered</th>
<th>Right</th>
<th>Left</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scores</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5, etc.</td>
<td></td>
</tr>
</tbody>
</table>

5. Introduce the bean-bag test, for which a cardboard box about 8" wide, 12" long, and 5" or 6" deep is needed. In the center of the cover there should be a hole about five inches in diameter. Twenty simple bean-bags, four inches square, each containing a scant half cup of beans, complete the equipment. The box should be placed about 8 feet away from the child. The same general procedure is followed here, as in the preceding test; all bags being thrown once with each hand. Scores are kept as before.

6. This test calls for the use of the smaller muscles, and is the primary type of peg board. The explanation is as follows: "These little pegs each fit into holes like this. We are going to see how many pegs you can put in a row by the time my watch tells me it has been one minute. Start when I say "go". After the volunteered hand has worked a full minute, stop the subject and count the pegs that have been put in.

Then the examiner says, "Now we will let the other hand try it, and this time the first hand must not help at all".

The score in this instance is the number of pegs inserted by the left and right hands.

Tests for Eye Preference

1. In the first test used a simple tube is made by rolling an ordinary piece of paper into a cylinder about one inch in diameter. Call attention with the finger to the center of bull's eye of the target that was used in the dart game, and ask the child to find it as quickly as he can looking through the tube, and to tell when he has found it.
As the tube is raised to the selected eye, record the result of the first choice-of-the-eye test.

Next a simple artificial Easter egg, such as can be bought at Easter time in any ten-cent store, is used. This must be a hollow egg, with an opening at one end through which the subject is to look. There is usually a picture or a small object inside the egg, and the subject is told to see how quickly he can tell what he sees. The eye used is recorded.

The next test should be one in which the object to be looked at, or looked into, is held by the examiner. This may be another Easter egg with a different picture in it, or any small box-like toy into which the child can look. The examiner holds the object at eye height two or three feet in front of the child and asks him to walk up to it and look in it. Again the choice of eye is recorded.

The fourth eye test is called the "Card with the Hole". It consists of a piece of cardboard eight or nine inches square. In the center of this card is cut a hole one half inch in diameter. The child being tested stands at one side of the room and is directed by the examiner to look at some small object opposite him. "Hold this card in your two hands, as far in front of you as you can reach. Now keep your eyes looking through that hole and move the card around until you can see the door knob. Can you see it now?"

"Yes, I see it".

Hold the card very still and keep looking at the door knob, right at it. Then the examiner covers one of the subject's eyes with a piece of blotter. "Now can you still see the door knob?" If the eye covered is the non-dominant one, the answer will be, "Yes". The examiner covers up the other eye. "Now can you see it?" The child, very much surprised, says, "No it is gone."

The keyhole test is next. Here, the child is merely asked to walk up to a door and look through the keyhole and tell what he can see on the other side. Again the chosen eye is recorded.

It is well to give several more of these tests, especially those in which the child holds the object. A toy telescope, a periscope, or others might be added.

Tests for foot preference

1. Observe the foot usually chosen to mount stairs.
2. See how well the child can hop to the door and back without losing his balance.
3. Kicking an imaginary football may be demonstrated and noted.
4. "Energetic stepping", that is stepping up onto a chair, or some other object too high to be negotiated without effort.

At this point, after these tests involving choice of eye, hand, or foot have been given, it is well to go back to observation of choice of hand used in everyday practical acts. The best procedure is to lay out upon a table a series of familiar objects and ask the child to show how each one is used.

As a final handedness test, energetic reaching may be used. The child is told to see how far he can reach up on the wall, without standing on tip-toes. Then the examiner says, "Now see how much further you can reach if you stand way up on tip-toes". The most useful hand and arm will come into play here.

This material has been adapted from Stanger and Donahue, Prediction and Prevention of Reading Difficulties. Oxford Press
CALIFORNIA TEST OF MENTAL MATURITY—ADVANCED SERIES

Devised by Elizabeth T. Sullivan, Willis W. Clark, and Ernest W. Tiegs

Name: ____________________________ Grade: ____________________________ Boy-Girl

School: ____________________________ Age: __________ Last Birthday: __________

Teacher: ____________________________ Date: __________

TEST FACTOR | Possible Score | Pupil's Score
---|---|---
1. Visual Acuity | 40 | Low 9 High 28
2. Auditory Acuity | 15 | Low 10
3. Motor Coordination | 20 | Low 15

---|---|---

TEST FACTOR | Possible Score | Pupil's Score
---|---|---
A. Memory | 53 | 32 25 18 11 4 1
4. Immediate Recall* | 20 | 15 10 5 2
5. Delayed Recall | 20 | 15 10 5 2
B. Spatial Relationships | 45 | 30 20 15 9 3
6. Sensing Right and Left* | 20 | 15 10 5 2
7. Manipulation of Areas* | 15 | 10 5 2
8. Foresight in Spatial Sit'ns* | 10 | 5 2
C. Reasoning | 105 | 70 40 15 5 1
9. Opposites* | 15 | 10 5 2
10. Similarities* | 15 | 10 5 2
11. Analogies* | 15 | 10 5 2
12. Number Series* | 15 | 10 5 2
13. Numerical Quantity* | 15 | 10 5 2
14. Numerical Quantity | 15 | 10 5 2
15. Inference | 15 | 10 5 2
D. 16. Vocabulary | 50 | 25 10 5 2
E. Total Mental Factors | 253 | 160 105 48 12 2
F. Language Factors | 100 | 70 30 10 5 2
G. Non-Language Factors | 153 | 80 50 10 5 2
H. Chronological Age | 240 |
I. Actual Grade Placement | |

Mental Age

<table>
<thead>
<tr>
<th>Mo.</th>
<th>120</th>
<th>132</th>
<th>144</th>
<th>156</th>
<th>168</th>
<th>180</th>
<th>192</th>
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<th>228</th>
<th>240</th>
<th>300</th>
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<tbody>
<tr>
<td>Yr.</td>
<td>10</td>
<td>11</td>
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<td>18</td>
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SUMMARY OF DATA

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<th>C. A.</th>
<th>I. Q.</th>
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<tbody>
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<tr>
<td>F. Language Factors</td>
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<td></td>
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</tr>
<tr>
<td>G. Non-Language Factors</td>
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<td></td>
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</tr>
</tbody>
</table>

Copyright, 1937, by E. T. Sullivan, W. W. Clark, and E. W. Tieg Published by California Test Bureau 3136 Beverly Boulevard, Los Angeles, California
**Test 1.**

Directions: In each group of letters and numbers, put a circle around the letters and numbers in the second row that are the same as those in the first row of the group.

<table>
<thead>
<tr>
<th>A.</th>
<th>B.</th>
<th>C.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>D E L 3</strong></td>
<td><strong>V O L C R E N</strong></td>
<td><strong>Z X O 4</strong></td>
</tr>
<tr>
<td><strong>Z A N H X O S 4 R</strong></td>
<td><strong>C D T 6</strong></td>
<td><strong>R 6 N J C T H D U</strong></td>
</tr>
<tr>
<td><strong>P 5 D S</strong></td>
<td><strong>G D 5 S X B R P V</strong></td>
<td><strong>A G R 7</strong></td>
</tr>
<tr>
<td><strong>E O R 7 A C S F G</strong></td>
<td><strong>H F 3 C B E X D T</strong></td>
<td><strong>D E F 3</strong></td>
</tr>
<tr>
<td><strong>P Q 8 V K H A O E</strong></td>
<td><strong>S E L R J H 7 M 9</strong></td>
<td><strong>V Y 5 O Q C P X 3</strong></td>
</tr>
<tr>
<td><strong>S B T R V D 6 X 8</strong></td>
<td><strong>T M W N K 4 L Z E</strong></td>
<td><strong>S E L R J H 7 M 9</strong></td>
</tr>
</tbody>
</table>
TEST 2.

Directions: In each row, put an X on the line under the object that is named. Then write the number of the object you mark, on the line to the right.
TEST 3.

Directions: Start at the first arrow at A and draw a line to each number when called. Try to keep within the black lines. Do B in the same way.
Directions: Listen to the pairs of words that will be read to you. The first word of each pair will be repeated and you are to remember what went with it. Find the object. Put an X on the line under it and put the number of the object you mark on the line to the right.
Directions: Put a circle around the letter R in all rights. Put a circle around the letter L in all lefts.
**TEST 7.**

**Directions:** In each row find a drawing that is either the same drawing or different views of the first drawing. Put an X on the line under this drawing and put the number of the drawing you mark on the line to the right.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Drawing 1" /></td>
<td><img src="image2.png" alt="Drawing 2" /></td>
<td><img src="image3.png" alt="Drawing 3" /></td>
<td><img src="image4.png" alt="Drawing 4" /></td>
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<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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</table>

<table>
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<tr>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
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<tbody>
<tr>
<td><img src="image5.png" alt="Drawing 5" /></td>
<td><img src="image6.png" alt="Drawing 6" /></td>
<td><img src="image7.png" alt="Drawing 7" /></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>11</th>
<th>12</th>
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</thead>
<tbody>
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<td><img src="image8.png" alt="Drawing 8" /></td>
<td><img src="image9.png" alt="Drawing 9" /></td>
</tr>
<tr>
<td>4</td>
<td>5</td>
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<table>
<thead>
<tr>
<th>13</th>
<th>14</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image10.png" alt="Drawing 10" /></td>
<td><img src="image11.png" alt="Drawing 11" /></td>
<td><img src="image12.png" alt="Drawing 12" /></td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
</tr>
</tbody>
</table>

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**Test 7. Score (number right):** ______________________
Directions: Begin at the arrow in drawing A. Draw a line to show the path you would take through all the drawings so as to finish at the arrow in drawing 10.
**TEST 9.**

Directions: In each row there is one object that represents the opposite of the first object. Put an X on the line under it and put the number of the object you mark on the line to the right.
Directions: The first three objects in each row are alike in some way. Find another object in the same row that belongs with them. Put an X on the line under it and put the number of the object you mark on the line to the right.
**TEST 11.**

**Directions:** In each row the first object is related to the second. Find an object that goes with the third object in the same way. Put an X on the line under it and put the number of the object you mark on the line to the right.

<table>
<thead>
<tr>
<th>Row</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="image1" alt="Object 1" /></td>
<td><img src="image2" alt="Object 2" /></td>
<td><img src="image3" alt="Object 3" /></td>
<td><img src="image4" alt="Object 4" /></td>
</tr>
<tr>
<td>2</td>
<td><img src="image5" alt="Object 1" /></td>
<td><img src="image6" alt="Object 2" /></td>
<td><img src="image7" alt="Object 3" /></td>
<td><img src="image8" alt="Object 4" /></td>
</tr>
<tr>
<td>3</td>
<td><img src="image9" alt="Object 1" /></td>
<td><img src="image10" alt="Object 2" /></td>
<td><img src="image11" alt="Object 3" /></td>
<td><img src="image12" alt="Object 4" /></td>
</tr>
<tr>
<td>4</td>
<td><img src="image13" alt="Object 1" /></td>
<td><img src="image14" alt="Object 2" /></td>
<td><img src="image15" alt="Object 3" /></td>
<td><img src="image16" alt="Object 4" /></td>
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</tbody>
</table>

Test 11. Score (number right)
TEST 12.

Directions: In each row of numbers below, there is one that is wrong. Find this wrong number and draw a line under it. Then write it on the line to the right.

Sample: 2 4 6 8 9 10 11 12 13 14 15 16 17 18 19

A. 18 15 13 12 9 6 3
B. 1½ 0 1 2 4 8 16
C. 4 5 7 10 11 13 14 16 17 19
D. 56 49 43 38 35 34 31 29
E. 7 9 10 13 16 19
F. 27 25 22 17 12 7
G. 3 5 6 11 12 14 19 20 21
H. 37 34 31 29 27 24 22 21 19
I. 1 2 4 7 11 15 16 22
J. 18 21 19 20 22 23 21 24

Go right on with the following until told to stop. In each row of numbers below, the numbers increase or decrease in accordance with a definite series of whole numbers. Supply the missing numbers and also write them on the line to the right.

Sample: 2 4 7 9 12 14 17 19 21 23 25

K. 15 16 18 21 24 25
L. 17 19 23 26 28 29
M. 27 29 28 27 24 23
N. 30 55 51 49 40 37
O. 48 44 41 36 34 28

Test 12. Score (number right)

TEST 13.

Directions: In each problem you are to find a certain number of coins to make a certain amount of money. Put the number of coins required under the name of the coin.

<table>
<thead>
<tr>
<th>Samples</th>
<th>cent</th>
<th>nickel</th>
<th>dime</th>
<th>quarter</th>
<th>half-dollar</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 coins—10 cents</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 coins—25 cents</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. 6 coins—10 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. 7 coins—15 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C. 3 coins—35 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D. 4 coins—86 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. 4 coins—45 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>F. 4 coins—95 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. 3 coins—70 cents</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. 5 coins—42 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. 5 coins—67 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J. 5 coins—46 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K. 7 coins—93 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L. 6 coins—56 cents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M. 6 coins—$1.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N. 5 coins—$1.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O. 15 coins—$5.51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test 13. Score (number right)
### Directions: Work these problems. Write the letter of the answer on the line to the right.

<table>
<thead>
<tr>
<th>Test 14.</th>
<th>Score (number right)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. If a man earned $25.00 and spent $10.00, how much money did he have left?</td>
<td>Ans.: * $5 b $15 c $20 d $10 b A</td>
</tr>
<tr>
<td>1. How many picture postal cards can you buy for 15 cents at the rate of 3 for 5 cents?</td>
<td>Ans.: * 9 b 3 c 15 d 34 1</td>
</tr>
<tr>
<td>2. How many feet of railroad track can be laid with 750 ties if 25 ties are needed for each 50 feet?</td>
<td>Ans.: * 1250 b 1500 c 325 d 30 2</td>
</tr>
<tr>
<td>3. What number if multiplied by 3, is 2 times 9?</td>
<td>Ans.: * 3 b 9 c 18 d 6 3</td>
</tr>
<tr>
<td>4. A sample rug is 12 inches long and 9 inches wide. How long will a larger rug of the same proportions be if it is 36 inches wide?</td>
<td>Ans.: * 108 in. b 48 in. c 15 in. d 36 in. 4</td>
</tr>
<tr>
<td>5. What is the number which if divided by 4, is 1/6 of 72?</td>
<td>Ans.: * 12 b 18 c 48 d 3 5</td>
</tr>
<tr>
<td>6. A high school student borrowed $75.00 for one year at 6% to start a chicken ranch. How many little chickens must he sell at 10 cents each to pay back the money he borrowed with interest?</td>
<td>Ans.: * 45 b 450 c 750 d 795 6</td>
</tr>
<tr>
<td>7. A dealer allowed an old customer a discount of 10% on the marked price of book cases. What is the marked price of a book case for which this customer paid him $36.00?</td>
<td>Ans.: * $40 b $32.40 c $3.60 d $39.60 7</td>
</tr>
<tr>
<td>8. A circular flower bed 7 feet in diameter is to be bordered by plants set one foot apart. What will be the cost of the plants at the rate of 2 for 15 cents? (Circumference of a circle is about 3 1/2 times the diameter.)</td>
<td>Ans.: * $24 b $1.65 c $70 d $1.57 8</td>
</tr>
<tr>
<td>9. A man placed four stepping stones one foot square in a row in a section of his garden so that there were equal spaces on all four sides of each of the stones. If the section was 3 feet wide, how long was it?</td>
<td>Ans.: * 12 ft. b 5 ft. c 9 ft. d 8 ft. 9</td>
</tr>
<tr>
<td>10. Ben lives 1.5 miles east of the library. James lives 2.5 miles directly west of the library. On a scale of 1/4 inch = 1/4 mile, how many inches will represent the distance between the boys' houses?</td>
<td>Ans.: * 8in. b 16 in. c 6 in. d 2 in. 10</td>
</tr>
<tr>
<td>11. What is the number which if added to 5 is 3 less than 1/3 of 3/5 of 60?</td>
<td>Ans.: * 1/2 b 1/2 c 1 d 12 11</td>
</tr>
<tr>
<td>12. A gallon of water weighs 8.4 pounds. A gallon of gasoline weighs 68 per cent as much as a gallon of water. A pilot flying the air mail carried 50 gallons. How many pounds did this gasoline weigh?</td>
<td>Ans.: * 285 b 285.6 c 278.6 d 380 12</td>
</tr>
<tr>
<td>13. A coffee shop buys a blend of coffee composed of 2/3 of Grade A at 60 cents a pound and 1/3 of Grade B at 30 cents a pound. If they change the mixture, using 1/3 of Grade A and 2/3 of Grade B, how much will they save on every 10 pounds of coffee?</td>
<td>Ans.: * 3¢ b 10¢ c 30¢ d $1.00 13</td>
</tr>
<tr>
<td>14. A man’s will provides that his estate of $15,000.00 should be divided as follows: 2/5 to his wife and 1/5 each to three children, except that in the event any of the children were deceased, their share should be divided equally between the remaining children and the wife. Two children were killed in an automobile accident. How much did the remaining child receive from the estate?</td>
<td>Ans.: * $6000 b $4500 c $4500 d $5000 14</td>
</tr>
<tr>
<td>15. If a set of tires for one automobile costs one-half of what a set costs for another automobile; and if three sets of the cheaper tires last only as long as two sets of the more expensive kind, the total cost of the cheaper tires during a given period will average what fraction or per cent of the cost of the more expensive kind?</td>
<td>Ans.: * 1/2 b 1/3 c 1/3 or 33 1/3% d 1/2% 15</td>
</tr>
</tbody>
</table>
Directions: Read each group of statements and draw a line under the correct logical answer. Write the number of this answer on the line to the right.

0. All four-footed creatures are animals.
   1 Creatures other than horses can walk
   2 All horses can walk
   3 All horses are animals

1. Elm Street is parallel to Oak Street.
   Oak Street is parallel to Palm Avenue.
   Therefore
   1 Elm Street crosses Palm Avenue
   2 Palm Avenue is longer than Elm Street
   3 Elm Street is parallel to Oak Avenue

2. George Washington was a skillful general.
   George Washington was President of the United States.
   Therefore
   1 Skilled generals make good presidents
   2 A President of the United States was a skillful general
   3 Good presidents make skillful generals

3. If he steers toward the land he will be wrecked; and if he steers toward the open sea he will be wrecked; but, he must steer either toward the land or toward the open sea. Therefore
   1 He should head for the open sea
   2 The coast is dangerous for ships
   3 He will be wrecked

4. If the wind changes it will either grow warmer or it will storm.
   The wind does not change. Therefore
   1 It will probably grow warmer
   2 It will not grow warmer nor will it storm
   3 The storm will be accompanied by warm weather

5. X is younger than Y.
   Y is younger than Z. Therefore
   1 Y is younger than X
   2 X is younger than Z
   3 Y has lived longer than Z

6. All circles are round figures.
   The figure is not round. Therefore
   1 It is oval
   2 It is either a square or a triangle
   3 It is not a circle

7. A is situated to the east of B.
   B is situated to the east of C. Therefore
   1 C is situated close to A
   2 A is situated to the east of C
   3 C is nearer to A than to B

8. If he is to complete his high school course, he must avoid wasting his energy and his money.
   But he will not avoid wasting his energy, or he will not avoid wasting his money. Therefore
   1 He will not complete his high school course
   2 He will be sorry some day
   3 He should be criticized for not doing better

9. If the students are in error, your refusal to listen to their side is unreasonable;
   if they are not in error, your refusal is unjust.
   But, the students are in error or they are not. Therefore
   1 Your refusal is justifiable
   2 Your refusal is either unreasonable or it is unjust
   3 Your refusal may be reconsidered later

10. Three boys are up on a ladder.
    Tom is farther up the ladder than Paul.
    Jim is farther up than Tom.
    Which boy is in the middle position on the ladder?
    1 Tom
    2 Paul
    3 Jim

11. A is either B or C or D.
    A is not B. Therefore
    1 A is C
    2 A is either C or D
    3 The conclusion is uncertain

12. If he were loyal he would not speak unkindly of his family in earnest.
    If he were wise he would not speak unkindly of them in jest.
    Either he speaks unkindly in earnest or in jest. Therefore
    1 He is either not loyal or not wise
    2 He is unkind
    3 The conclusion is uncertain

13. If A is B, E is F; if C is D, G is H.
    Either A is B or C is D. Therefore
    1 A is F or C is H
    2 Either E is F or G is H
    3 The conclusion is uncertain

14. A is between B and C.
    B is between C and D. Therefore
    1 A is not between C and D
    2 A is between B and D
    3 A is nearer to B than to D

15. If A is B, E is F, and if A is B, G is H.
    Either E is not F or G is not H. Therefore
    1 A is not B
    2 A is B
    3 The conclusion is uncertain
TEST 16.

Directions: Draw a line under the word which means the same or about the same as the first word. Write the number of this word on the line to the right, as:

0. blossom 1. tree 2. flower 3. vine 4. garden 5. 0
1. inefficient 1. avoidable 2. quarrelsome 3. incompetent 4. unseemly 5. 1
2. confiscate 1. assert 2. seize 3. compel 4. comfort 5. 2
3. malign 1. insure 2. muffle 3. slander 4. invade 5. 3
4. whimsical 1. accurate 2. fashionable 3. weighty 4. fanciful 5. 4
5. avarice 1. virtue 2. promiscuity 3. greed 4. honor 5. 5
6. eradicate 1. destroy 2. vacate 3. use 4. solve 5. 6
7. impecunious 1. precedent 2. settlement 3. resignation 4. accusation 5. 7
8. discordant 1. clashing 2. despondent 3. unsteady 4. distinctive 5. 8
9. titanic 1. reddish 2. acid 3. large 4. ancient 5. 9
10. edict 1. decree 2. diction 3. sovereign 4. edition 5. 10
11. recumbent 1. cumbrous 2. curved 3. reclining 4. saving 5. 11
12. caprice 1. action 2. whim 3. capture 4. tact 5. 12
13. expedite 1. expel 2. dictate 3. delay 4. hasten 5. 13
14. loquacious 1. talkative 2. logical 3. legal 4. delicious 5. 14
15. idiosyncrasy 1. irritability 2. peculiarity 3. office 4. immecility 5. 15
16. perfidious 1. treacherous 2. fragrant 3. studious 4. responsible 5. 16
17. artifice 1. artless 2. hate 3. definition 4. device 5. 17
18. anomaly 1. ceremony 2. illness 3. irregularity 4. normal 5. 18
19. reciprocal 1. charming 2. mutual 3. agreeable 4. meditative 5. 19
20. travesty 1. burlesque 2. tragedy 3. meeting 4. hotel 5. 20
21. obtrude 1. pointed 2. reversible 3. blunt 4. objectionable 5. 21
22. abstemious 1. stormy 2. excessive 3. mournful 4. temperate 5. 22
23. tangent 1. blend 2. agent 3. touching 4. sensing 5. 23
24. extraneous 1. extra 2. foreign 3. transparent 4. noisy 5. 24

25. erudite 1. crude 2. learned 3. rugged 4. polite 5. 25
26. ameliorate 1. improve 2. harden 3. dilute 4. decorate 5. 26
27. malapert 1. sick 2. lazy 3. slow 4. saucy 5. 27
28. opulence 1. jewel 2. generosity 3. wealth 4. honor 5. 28
29. urbanity 1. loyalty 2. refinement 3. weakness 4. barbarism 5. 29
30. propinquity 1. nearness 2. curiosity 3. diligence 4. propriety 5. 30
31. trajectory 1. court 2. project 3. area 4. curve 5. 31
32. corollary 1. crown 2. inference 3. enclosure 4. supersede 5. 32
33. ostensible 1. actual 2. available 3. genuine 4. pretended 5. 33
34. salient 1. salty 2. outstanding 3. weakness 4. barbarism 5. 34
35. avarice 1. virtue 2. prominence 3. weighty 4. fanciful 5. 35
36. eradicate 1. destroy 2. vacate 3. use 4. solve 5. 36
37. pyrophoric 1. papyrus 2. rock 3. cave 4. manuscript 5. 37
38. strident 1. muscular 2. shrill 3. headless 4. sensible 5. 38
39. tyro 1. scold 2. village 3. law 4. beginner 5. 39
40. tyro 1. scold 2. village 3. law 4. beginner 5. 40
41. perimeter 1. measure 2. instrument 3. boundary 4. difficulty 5. 41
42. diurnal 1. seasonable 2. occasional 3. timely 4. daily 5. 42
43. obloquy 1. disaster 2. blame 3. pride 4. obligation 5. 43
44. eyot 1. island 2. lake 3. river 4. insect 5. 44
45. detritus 1. fossil 2. dextrous 3. fragment 4. poem 5. 45
46. palladium 1. burden 2. dextrous 3. fragment 4. poem 5. 46
47. quiddity 1. oddity 2. doubt 3. essence 4. presence 5. 47
48. ambient 1. uncertain 2. surrounding 3. surprising 4. well-wishing 5. 48
49. orrery 1. book 2. prophecy 3. apparatus 4. error 5. 49
50. syzygy 1. separation 2. choice 3. conjunction 4. nonsense 5. 50
TEST 5.

Directions: Read the following and draw a line under the correct answer. Put the number of this answer on the line to the right.

0. The report read to you a little while ago was about the
1 Apaches 2 Sioux 3 Hurons 4 Chippewas

1. The report dealt chiefly with customs concerning
1 war 2 hunting 3 fishing 4 dreams

2. The tribe lived in
1 Western United States 2 Southern France 3 Mexico 4 Northeastern North America

3. The Huron village was
1 In the wilderness 2 Near the ocean 3 On the plains 4 Near the gulf

4. The centuries with which this report dealt were
1 14th and 15th 2 17th and 18th 3 19th and 20th 4 15th and 16th

5. Their Manitou was a
1 Chieftain 2 Medicine man 3 Guiding spirit 4 The oldest man

6. The wishes of their Manitou were carried out
1 Occasionally 2 Frequently 3 Always 4 Seldom

7. The wishes of their Manitou were satisfied by
1 Relating the dream to the captains 2 Giving a feast in his honor 3 Fasting 4 Consulting the medicine men

8. If what they dreamed of was not obtainable for the feast they
1 Used a substitute 2 Had games instead 3 Raided the French post 4 Delayed the feast

9. If a sick man dreamed that he wished to refurbish his cabin
1 He did so when he got well 2 Others asked him for his old things 3 Men of the village took charge of the refurbishing 4 He bargained for furnishings

10. The furnishings given in response to a dream were obtained from
1 Cabins in the village 2 Dutch traders 3 Central supply house 4 The French

11. A dream in which an enemy was taken captive was followed by
1 Peace and quiet 2 War with the enemy 3 Sending an envoy to the enemy 4 Feasting in honor of the dreamer

12. If an Indian dreamed that he was taken captive by the enemy he was
1 Guarded 2 Given to the enemy 3 Tortured 4 Feasted

13. The Indian who dreamed that he saw 10 men plunging into a river
1 Warned them 2 Reported them to the captains 3 Said nothing about his dream 4 Invited these men to a diving contest

14. The owner of an object dreamed of by another Indian
1 Often refused to give it up 2 Gave it up without protest 3 Usually hid it 4 Traded it for something the dreamer had

15. The “Game of Dish” was played with
1 Seeds 2 Shells 3 Beads 4 Stones

16. Neighboring tribes took part in the Game of Dish
1 On stated occasions 2 When formally invited 3 In the early spring 4 When the men were hunting

17. The place of meeting for the Game of Dish was decided by
1 The dreamer 2 The captains 3 Drawing lots 4 The invited tribe

18. The Game of Dish was entered into by
1 Old men principally 2 Young children and women for the most part 3 Young men only 4 Young and old alike

19. The institution of the feast gave the Indians
1 Little advantage 2 Power over the enemy 3 Opportunity to satisfy the wishes of their Manitou 4 Mainly hard work in preparation

20. The custom of the feast tended principally to
1 Reduce war 2 Reclaim the covetous and revengeful 3 Relieve the monotony of primitive life 4 Increase the general wealth of the tribe

Test 5. Score (number right).......

— 16 —
DURRELL-SULLIVAN
READING CAPACITY AND ACHIEVEMENT TESTS

READING CAPACITY TEST

By DONALD D. DURRELL
Professor of Education and Director of the Educational Clinic
Boston University

and HELEN BLAIR SULLIVAN
Associate Director of the Educational Clinic
Boston University

INTERMEDIATE TEST: FORM A
For Grades 3 to 6

Name:... Grade:... Teacher:... Boy or girl:...

When is your next birthday?... How old will you be then?...

Name of school:... City:... Date:...

<table>
<thead>
<tr>
<th>Test</th>
<th>Score</th>
<th>Grade Equivalent</th>
<th>Age Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Word Meaning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Paragraph Meaning</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
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Patent No. 1,586,628

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DURRELL
ANALYSIS OF READING DIFFICULTY

By DONALD D. DURRELL
Professor of Education and Director of the Educational Clinic
Boston University

INDIVIDUAL RECORD BLANK
For Grades 1 to 6

Name.............................................. School..........................
Date.............................................. Examiner........................
Date of birth..................................... Age......................... Grade......
Report to........................................... Address........................

PROFILE CHART

READING ANALYSIS TESTS

| GRADE | Oral reading | Silent reading | Flash reading | Word 
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Comp. Recall</td>
<td>words</td>
<td>words</td>
</tr>
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</tbody>
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DURRELL-SULLIVAN

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Achievement</th>
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<tbody>
<tr>
<td>Word Para.</td>
<td>Word Para.</td>
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</table>

BINET-SIMON

<table>
<thead>
<tr>
<th>Voc.</th>
<th>M.A.</th>
<th>AGE</th>
</tr>
</thead>
</table>

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# CHECK LIST OF DIFFICULTIES

## BACKGROUND SKILLS
- Hearing vocabulary poor
- Hearing comprehension poor
- From Durall-Sullivan Reading Capacity Test
- Marked voice or speech habits

## Word Mastery Skills

### Word Recognition
- Low sight vocabulary
- Will not try different words
- Can spell but not pronounce
- Guesses at words from context

### Word Analysis
- Word-analysis ability poor
- Will not try difficult words
- Has no method of word analysis
- Errors or omissions
- Guesses at unknown words from context
- Avoids use of new words in recall

## General Reading Habits
- Sounds aloud by single letters
- Blends or syllables
- Loses place easily
- Uses fidget or pointer
- Inadequate phrasing

## Oral Reading
- Voice, pronunciation, expression
- Strained, high-pitched voice
- Monotonous tone
- Volume too loud
- Volume too soft
- Poor pronunciation
- Poor enunciation of difficult words
- Ignoring punctuation
- Poor recall
- Unaided recall scanty

## Recall
- Oral recall
- Unaided recall scanty
- Poorly organized recall
- Inaccurate memories and guesses
- Recalls details badly on questions
- Very scanty recall on hard material

## Comprehension
- In easy material
- In difficult material

## Written Recall
- In easy material
- In difficult material

## Study Skills
- Organization and evaluation
- Reading for details
- Outlining and summarizing

## Speeded Reading Skills
- Resident or fast
- Skimming through text
- Locating information
- Scanning

## Associated Reading
- Use of dictionary and reference materials
- Thorough reading

## Mechanics
- Spelling
- Low rate of silent reading
- Derives no word meanings from context
- Slow handwriting
- Ignores word errors and reads on

## Oral Reading (Cont’d)
- Inadequate phrasing
- Incorrect phrasing
- Eye-voice span too short

## Silent Reading
- Inadequate phrasing
- Derives no word meanings from context

## Writing
- Poor letter formation
- Skimming through text
- Locating information
- Scanning
- Slow handwriting

## REMEMBER

1. Language
2. Memory
3. Writing
4. Organization and evaluation
5. Speeded reading skills
6. Associated reading

---

**PSYCHOLOGICAL ASSESSMENTS**

- **307**
- **H**
- **E**
- **S**
- **T**
- **R**

---

**MEASUREMENTS**

- **Late**
- **Clinical**
- **Hearing**
- **Pertinent**
Reading Difficulty

Page 10

SCHOOL RECORD

Age at school entrance ................................................................. Onset of difficulty

First-grade absences ..................................................................... Schools attended

Recent absences ............................................................................. Reading method used

School report (or classroom visit): .............................................. Poor discipline

Medical record (or classroom visit): ........................................... Discouraged

MEDICAL RECORD

Latest examination of eyes .......................................................... by

Clinical examination suggests:

- Nearsighted
- Farsighted
- Astigmatism
- Coordination difficulty
- Auditory discrimination

Pertinent medical history:

PHYSICAL FACTORS—HOME HISTORY: Source

Other siblings — where in school?
Handedness change
Emotional reactions
Special interests
Tutoring possibilities
Previous tutoring

REMEDIAL PLANS

(Individual tutoring — small group work — remedial class)

1. Level of reading materials
2. Motivation type — interests
3. Word work
   - Word analysis — level, type
   - Immediate recognition
   - Phrase work
4. Oral reading plans
   - Mechanics
   - Comprehension
5. Silent reading plans
   - Mechanics
   - Comprehension
6. Study skills
   - Thoroughness
   - Flexibility
   - Association
ORAL READING

Instructions. Make a record of time, errors, phrasing, and comprehension according to the directions in the manual.

1. Time. Number of Reading Errors.
   
   Muff is a little yellow kitten.
   She drinks milk.
   She sleeps on a chair.
   She does not like to get wet.
   
   - 1. What color was the kitten?
   - 2. What does she drink?
   - 3. Where does she sleep?
   - 4. Why doesn't Muff like to go out on rainy days?

2. Time. Number of Reading Errors.
   
   A little black dog ran away from home. He played with two big dogs. They ran away from him. It began to rain. He went under a tree. He wanted to go home, but he did not know the way. He saw a boy he knew. The boy took him home.
   
   - 1. Who ran away from home?
   - 2. How many other dogs did he play with?
   - 3. Why did the dog go under the tree?
   - 4. What did the dog want then?
   - 5. Whom did he see?
   - 6. How did he get home?

3. Time. Number of Reading Errors.
   
   Six boys put up a tent by the side of the river. They took things to eat with them. When the sun went down, they went into the tent to sleep. In the night, a cow came and began to eat grass around the tent. The boys were afraid. They thought it was a bear.
   
   - 1. How many boys went camping?
   - 2. Where did they put up their tent?
   - 3. What did they take with them besides their tent?
   - 4. What did the boys do when the sun went down?
   - 5. What came around their tent in the night?
   - 6. What was the cow doing?
   - 7. What did the boys think the cow was?

4. Time. Number of Reading Errors.
   
   Henry goes to a large lake in summer. He is a motorboat sank near his house. The boat had ten men on it. The man who was running the boat brought it very close to the shore when the water was low. He hit a big rock under water. It made a hole in the bottom of the boat. The water came in very fast. Six of the men swam to shore.
   
   - 1. Where does Henry go in summer?
   - 2. What happened near his house?
   - 3. What kind of boat was it?
   - 4. What did the boat hit?
   - 5. How fast did the water come in?
   - 6. How many men were on the boat?
   - 7. What happened to the men on the boat?

5. Time. Number of Reading Errors.
   
   In 1807, Robert Fulton took the first long trip in a steamboat. He went one hundred and fifty miles up the Hudson River. The boat was four miles an hour. This was faster than a steamboat had ever gone before. Crowds gathered on the banks of the river to see this new kind of boat go by. The fishermen did not like the boat. They were afraid that its noise and splashing would drive away all the fish.
   
   - 1. What did Robert Fulton do in this story?
   - 2. What kind of boat was it?
   - 3. What was the trip made on?
   - 4. How far did the boat go?
   - 5. Why did it go?
   - 6. Who did not like the boat?
   - 7. What purpose did the fishermen fear would happen?

TIME AND ERROR RECORD

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<tr>
<th>Paragraph No.</th>
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1 In seconds.
The richest diamond field in the world is in Africa. Deep pits yield a hard substance called "blue ground" which contains the diamonds. The blue ground is spread over the drying fields for weeks. The weather gradually crumbles it. Then it is taken up and run through washing machines which sort out the stones and the diamonds. The value of the diamonds is determined by color, size, and purity. Blue, yellow, orange, brown, and green diamonds have been discovered. The most valuable are pure white. The largest diamond ever weighed almost two pounds.

1. In what country is the richest diamond field of the world?  
2. What is the substance containing the diamonds called?  
3. Why is the blue ground spread over the drying fields?  
4. What do the washing machines do?  
5. What are some of the colors of diamonds?  
6. Which diamonds are the most valuable?  
7. How heavy was the largest diamond ever found?

Golf originated in Holland as a game played on the beach. It became unusually popular and was found so enjoyable that it was known as the "royal game." James IV, however, thought people neglected their work to indulge in this fascinating sport so that it was forbidden in 1457. It was relented when he found how attractive it was, and it immediately regained its former popularity. Golf spread gradually to other coun­tries, being introduced in America in 1890. It has been in favor until there is hardly a town that does not boast of a private or public course.

1. Where did golf originate?  
2. How was it first played?  
3. Where did it first appear in its present form?  
4. Why was golf forbidden by James IV?  
5. Why did he change his mind?  
6. When was golf first introduced in America?  
7. What evidence have we of its popularity?
ORAL READING — UNAIDED ORAL RECALL

Instructions: Record time, errors, number of unaided memories, inaccurate memories, and prompted memories, according to directions in the Manual.

1. Time No. of Reading Errors
   | Bob was going to school. He saw a red light, and he stopped. The green light came, and Bob ran fast. | Total |

2. Time No. of Reading Errors
   | A boy had a big gray cat. He was going to give her some milk. She did not come when he called. He saw her up in a tree looking down at a big dog. The boy sent the dog away. Then the cat jumped down from the tree and came for her milk. | Total |

3. Time No. of Reading Errors
   | Dick jumped out of bed and ran downstairs. It was his birthday. He found a big basket on his chair. Something was moving in the basket. Dick took off the cover. Out jumped a little brown dog. The dog started to bark and wag his tail. He was glad to get out. | Total |

4. Time No. of Reading Errors
   | A boy was hurt on one street yesterday. He had been playing ball and was riding his bicycle away from the ball field when a car came down the road. He did not see the car coming because he was looking back at the boys who were still playing ball. The car was going slowly. It hit the boy, but did not run over him. His arm was hurt, and his bicycle was bent. | Total |

5. Time No. of Reading Errors
   | Peter Cooper built one of the first railroad engines in the United States. It was used to pull cars from a city to a town. It was used to pull cars in the year 1830. It was hitched to a car packed full of people. It went at a speed of eighteen miles an hour and made the trip in forty-eight minutes. People were surprised that anyone could breathe while going so fast. | Total |

6. Time No. of Reading Errors
   | Large kites have been used for a great many things. In war they have been used to carry signal lanterns and to carry automatic cameras over enemy territory. One general used kites to pull ropes across a swift river so that he could start to build a swinging bridge. Some people in China make "singing kites" which are supposed to frighten away evil spirits. The weather bureau has used kites to study temperature and the speed of the wind at great heights. A string of kites once went up over four miles in the air. Some kites are big enough to lift a man. | Total |

CHECK LIST OF DIFFICULTIES

Recall
- Unaided recall scanty
- Poorly organized recall
- Inaccurate memories and guesses
- Response labored and slow
- Avoids use of new words in recall
- Recalls details badly on recall
- Very scanty recall on hard material

General Reading Habits
- Head movements; marked—sighs
- Lasts place easily
- Uses finger to pointer
- Holds book too close or incorrectly
- Frowns and shows signs of tiredness
- Poor posture
- Effort and attention low
- Easily distracted
- Lacks aggressiveness in attack
- Shows aversion to reading

(6)
Durtell Anal.

Reading

Dlflcill1

No. of Reading Errors...

8.

Time .......

No. of Reading Errors...

...8.

Continued

Failure to plan.

for suitable defense.

under irregular conditions.

of warfare.

accounts for defeat.

in the first war.

waged by the United States.

An army.

of two thousand men.

under General Arthur St.

Clair.

marched northward.

from Cincinnati.

to punish Indians who

had broken treaty provisions.

They neglected to guard

against,

unexpected assault.

and found themselves defenseless.

when hostile Indians

suddenly attacked them.

in the forest.

Firearms gave little protection.

against an enemy in ambush.

After a futile attempt at defense,

St. Clair ordered his men to retreat.

Only fifty.

escaped uninjured.

President Washington.

felt very bitterly.

about St. Clair's carelessness.

in the country's first

military campaign.

Total.

TIME AND ERROR RECORD

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1 In seconds.
SILENT READING — UNAIDED ORAL RECALL

Instructions. Record time, number of unaided memories, inaccurate memories, and prompted memories according to directions in the Manual.

1. Time.... No. of Memories....
   Peter is....
   a big white rabbit....
   He has long ears....
   He has a little tail....
   He can jump and hop....
   Total....

2. Time.... No. of Memories....
   A hen had....
   six little yellow chickens....
   One morning....
   she took them for a walk....
   They looked for....
   something to eat....
   They found some seeds and sand....
   A dog came....
   to play with them....
   The hen....
   did not like the dog....
   She flew at the dog....
   and made him run away....
   Total....

3. Time.... No. of Memories....
   Three boys....
   built a house....
   in the woods....
   They put a table....
   and two old chairs in it....
   There was a basket....
   full of apples....
   under the table....
   One afternoon....
   they went away....
   and left the door open....
   When they came back....
   they found two little pigs....
   eating the apples....
   Total....

4. Time.... No. of Memories....
   A little girl....
   got off the train....
   all alone....
   There was nobody....
   at the station....
   to meet her....
   She asked the man....
   inside the station....
   where her mother was....
   He said that her mother....
   could not get the car started....
   A man was trying to fix it....
   The little girl sat down....
   to wait....
   A few minutes later....
   a big car....
   came around the corner....
   with her mother in it....
   The little girl got in....
   and they drove home....
   Total....

5. Time.... No. of Memories....
   About one hundred and fifty years ago....
   in France....
   the first man....
   went up in a balloon....
   His balloon was made of paper....
   covered with strips of cloth....
   to make it strong....
   A long rope kept it from going too high....
   Later this man took a friend up in the balloon with him....
   On this trip they rose....
   over five hundred feet....
   The trip lasted....
   thirty minutes....
   They came down....
   several miles....
   from where they started....
   Total....

CHECK LIST OF DIFFICULTIES

MECHANICS OF SILENT READING

Comprehension
... Good
... Fair
... Poor

Lip movements; constant — occasional
Whispering; constant — occasional
Lacks persistence in hard material
Marked insecurity evident
Poor attention necessitates rereading

RECALL

Unaided recall scanty
Poorly organized recall
Inaccurate memories and guesses
Response labored and slow
Avoids use of new words in recall
Recalls details badly in questions
Very scanty recall on hard material

EYE MOVEMENTS

Range of eye movements per line ______ to ______
Irregular pauses
Regressive movements

COMPARISON WITH ORAL READING (Under-line)

Speed; higher — same — lower
Recall; better — same — poorer
Security; better — same — poorer

[8]
Railroad communication... developed rapidly...

Between 1865 and 1873, thirty-five thousand miles of track were laid...

This doubled the distance people could travel by railroad...

Some of the new roads connected important cities and some extended westward beyond populated regions...

Some of the large Western universities owned by the railroad was made easier through this checkerboard arrangement...

A bright silvery appearance, and it could be molded into very elaborate and attractive patterns...

Opinion differs as to whether it is a satisfactory game... for girls...

It has been modified... to make it less strenuous...

by restricting the playing area of each player...

Some of the large Western universities...

have audiences of over twenty thousand... at their conference games...

Table...

The sale of sections of land... was made easier...

by granting land to companies interested in furthering the expansion...

Grants included territory lying within twenty miles of the proposed roadbed...

Alternate sections were allotted to the railroad... those in between were reserved for homesteaders...

The sale of sections of land... was made easier through this checkerboard arrangement...

Summary

1. Time.... No. of Memories....

Early settlers in America... heard that Indians could sell skins and furs...

Many men earned their living... by making glass beads and bottles...

In 1827, a man invented a way to press molten glass into iron molds...

The most famous glass works was in the town of Sandwich in Massachusetts...

The Sandwich glass had a bright silvery appearance... and it could be molded into very elaborate and attractive patterns...

Beautiful lamps and candlesticks... as well as all sorts of dishes were made from this glass...

In many New England homes pieces of Sandwich glass are still found on display...

Total...

<table>
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Summary

1. In seconds.
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**Summary**

- Grade L: 1 memory in 1 second
- Grade M: 2 memories in 2 seconds
- Grade H: 5 memories in 5 seconds

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**FLASHED WORD RECOGNITION AND WORD ANALYSIS TEST — First Grade**

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**FLASH RECOGNITION**

- **Total Correct:**
- **Grade:**

**CHECK LIST OF DIFFICULTIES IN WORD ANALYSIS AND WORD RECOGNITION**

**WORD RECOGNITION SKILLS**
- Low sight vocabulary
- Will not try difficult words
- Can spell but not pronounce
- Ignores word endings
- Guesses at words from general form

**WORD ANALYSIS**
- Word-analysis ability poor
- Will not try difficult words
- Has no method of word analysis
- Sounds aside by: single letters — blends — syllables
- Unable to combine sounds into words
- Looks away from words after sounding
- Sounds slow or inaccurate
- Spells words: successful — inadequate
- Silent word study: successful — inadequate
- Enunciates badly when prompted
- Systematic errors (See tabulation)
- Names of letters not known
- Sounds of letters not known
- Blends not known

**DETAILED ANALYSIS OF FAULTY PRONUNCIATION**

(From word pronunciation test)

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**Word Analysis**

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<tr>
<td>16. ceiling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. provide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. battery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. bristle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. unloading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. drawbridge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. troublesome</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. wheelbarrow</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. headquarter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. delayed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLASH RECOGNITION</th>
<th>TOTAL CORRECT</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. crown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ache</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. argue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. delighted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. thoughtfulness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. championship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. nephew</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. advertisement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. shingle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. freight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. blundering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. wreches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. postpone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. windscreen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. strengthen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. prairie</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. powerfully</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. smother</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. occasionally</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. standardized</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. obsolete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. circumstances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. triumphant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. thorough</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FLASH RECOGNITION</th>
<th>TOTAL CORRECT</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. understand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. single</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. workman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. saucer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. guard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. twilight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. chapter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. drawn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. cramp</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. midnight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. forgotten</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. review</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. noise</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**PHONETIC INVENTORY**

What are the names of these letters?

| s t c p e d f r i m l a b w g n h y u v j k x q t S a I E P n r g B C U o k f m q d h w y z v x j |

What do these letters say?

| c l a s i b r t j u m h p e f o g x n v q d w y k z |

What do these say?

| t h s t w h sh b r t h d r t r d r f r g r pl sm tw fl sk y w |

Phonetic inventory results:
- Letter names missing
- Letter sounds missing
- Blends missing

**DIFFICULTIES IN SPELLING**

<table>
<thead>
<tr>
<th>Check List of Difficulties</th>
<th>Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omit sounds or syllables</td>
<td>List 1</td>
</tr>
<tr>
<td>Adds sounds or syllables</td>
<td>Grade II - 8</td>
</tr>
<tr>
<td>Incorrect phonetic spelling</td>
<td>Grade III - 12</td>
</tr>
<tr>
<td>Correct, phonetic spelling but incorrect on non-phonetic word elements</td>
<td>Grade IV - 16</td>
</tr>
<tr>
<td>Slow handwriting</td>
<td>Grade VI - 15</td>
</tr>
</tbody>
</table>

**DIFFICULTIES IN HANDWRITING**

<table>
<thead>
<tr>
<th>Check List of Difficulties</th>
<th>Norms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed too low</td>
<td>(Letters per minute)</td>
</tr>
<tr>
<td>Poor letter formation</td>
<td>Grade II - 35</td>
</tr>
<tr>
<td>Poor position of hand, pencil, paper, etc.</td>
<td>Grade III - 45</td>
</tr>
<tr>
<td>Irregular height</td>
<td>Grade IV - 55</td>
</tr>
<tr>
<td>Irregular spacing</td>
<td>Grade V - 65</td>
</tr>
<tr>
<td>Irregular slant</td>
<td>Grade VI - 75</td>
</tr>
</tbody>
</table>

**Hand preference:** Right . . . . . Left . . . . .

**RULED LINES FOR WRITING OR SPELLING**

---

**NORMS FOR WORD RECOGNITION AND ANALYSIS**

<table>
<thead>
<tr>
<th>LIST</th>
<th>GRADE</th>
<th>NUMBER OF CORRECT WORDS¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Word Recognition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L</td>
</tr>
<tr>
<td>A — B or C</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>56</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>68</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>86</td>
</tr>
</tbody>
</table>

¹ See Manual concerning credits for easier lists.

**CHECK LIST OF DIFFICULTIES IN WRITTEN RECALL**

- Unaided recall scanty
- Poorly organized recall
- Inaccurate memories and guesses
- Avoids use of new words in recall
- Laborious writing
- Spelling difficulty impedes recall
PSYCHEGRAM (Pupil Record)
John B. Dantley

I. Initial Data
Name: ____________________________ Telephone: ____________________________
Date: ____________________________ City: ____________________________
Birth date: ____________________________ Place: ____________________________
Family: ____________________________ Age: ____________________________
II. Parentage
Father: ____________________________ Mother: ____________________________
III. Environment
Home Conditions
Number of rooms: ____________________________ Heat: ____________________________
Ventilation: ____________________________ Has child his own room: ____________________________
Cleanliness: ____________________________ Order: ____________________________
Man atmosphere: ____________________________ Disturbed: ____________________________
Picture: ____________________________ Social Interests: ____________________________
Church membership: ____________________________
Sisters: ____________________________ Brothers: ____________________________

treatment of child (indulged, malnourished, excluded)
By father: ____________________________ By mother: ____________________________
By brother: ____________________________ By sisters: ____________________________

IV. Social Interests of the Child
Play—Does child play alone?
Playmates—same sex ______ age ______ opposite sex ______ age ______
Influence on associates: ____________________________
Influence of associates: ____________________________
Work—In what way is child useful in the home?
Brands ______ Other tasks: ____________________________
Caring for younger children: ____________________________
Reading—books ______ newspapers ______ magazines ______
Amusements—theater ______ How often ______ movies ______ How often ______

V. Special Interests
Attitudes—in the home:
toward Father: ____________________________
toward mother: ____________________________
toward brothers: ____________________________
toward sisters: ____________________________
toward animals: ____________________________
in school:
toward work: ____________________________
toward teacher: ____________________________
toward companions: ____________________________

Does child receive an allowance? ____________ How much? ______
How is it spent? ____________________________ Is child taught to save? ______

VI. Health
Any diseases or peculiarities at birth? ______

---

Note: This form is a standardized template for recording information about a child's education and social environment. The fields are designed to capture demographic, familial, and behavioral data. The form is used in educational settings to assess and monitor student progress and needs.
What diseases has child had?

Date

Effects

Remedial Measures (at home or school)

---

To what extent... height... weight... overwidth... underweight...

Posture—correct... stooping... nervous... balanced...

Vision—normal... what defected?

Speech—prolonged baby talk... lisping... mumbling...

Stammering...

Condition of nose—adenoids... feet... flat... shell.

Condition of mouth... decayed...

Tenderness—where... where... cause... when...

Facial expression—what...

Antitoxins—what...

Convulsive attacks—fainting... staring... crying... holding breath...

Overactivity...

Temper tantrums...

Pursuit... to gain attention...

To gain relief...

To gain other ends...

Nervous habits—habit motions of the mouth... of body...

Health habits

Sleep—alone... with whom...

Sleep... easiness...

Sleep-walking...

Bedtime... rising-time...

Hours sleep...

Type of sleep... good... poor... restless... wakeful...

Appetite—normal... capricious... excessive... insufficent...

Cleanliness—how often bathed... teeth brushed...

Daily bowel movement...

V. Morals (a social conduct)

Unfortunate sex habits... lack of shame... of modesty... lying...

Deceitful...

Stealing...

Fire-setting...

Generally destructive...

True...

Profane...

Obscene...

Interest in religion...

VIII. Personality Traits (mental conditions... exaggerations)

Withdrawing of attention and interest from real life...

Day-dreaming...

Introversion...

Shyness...

Lack of self-confidence...

Fear of particular objects...

General timidity...

Unusual attachments or dislikes...

Procrustes or unusual sex manifestations...

Lack of modesty...

Excessive modesty...

Unusual interest...

VIII. Educational Progress

Age at entering school...

Grades skipped...

Repeated...

Reasons...

Attitudes toward... teacher... pupils...

IX. Traits:

1. active...

2. inactive...

3. affectionate...

4. unaffectionate...

5. alert...

6. absent-minded...

7. careless...

8. conscientious...

9. cranky...

10. emotional...

11. frank...

12. impulsive...

13. kind...

14. leader...

15. mild...

16. moody...

17. obedient...
RATING SCALE
White House Conference

In the rating scale which follows, please let the ratings represent your own judgments. Do not consult anyone in making them.

In rating the child on a particular trait, disregard every other trait but that one.

Indicate your rating by placing the check on the line just where you think it ought to be. You do not have to place your check just above a descriptive phrase. If you think the rating falls between two phrases, you may place your check at the appropriate point on the line.

1. Is the child easily fatigued?

<table>
<thead>
<tr>
<th>Unusually</th>
<th>Marily shows</th>
<th>Normal</th>
<th>Does not</th>
<th>Shows</th>
</tr>
</thead>
<tbody>
<tr>
<td>vigorous</td>
<td>fatigued</td>
<td>endure</td>
<td>quick</td>
<td>exhaustion</td>
</tr>
</tbody>
</table>

2. What is his physical output of energy?

<table>
<thead>
<tr>
<th>Sluggish</th>
<th>Slow</th>
<th>Usual speed</th>
<th>Energetic</th>
<th>Unusually active</th>
</tr>
</thead>
</table>

3. Is he skilful or awkward in work and play?

<table>
<thead>
<tr>
<th>Graceful</th>
<th>Handles</th>
<th>Moderate</th>
<th>Clumsy</th>
<th>Fumbles</th>
</tr>
</thead>
<tbody>
<tr>
<td>clever with self well</td>
<td>skill</td>
<td>drops things</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Is he slovenly or neat in personal appearance?

<table>
<thead>
<tr>
<th>Unkept</th>
<th>Careless</th>
<th>Neat and clean</th>
<th>Concerned</th>
<th>Fastidious</th>
</tr>
</thead>
<tbody>
<tr>
<td>about dress</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. How does he impress people with his physique and bearing?

<table>
<thead>
<tr>
<th>Excites admiration</th>
<th>Very</th>
<th>Fairly good</th>
<th>Unfavorably</th>
<th>Repulsive</th>
</tr>
</thead>
<tbody>
<tr>
<td>titch</td>
<td>favorably</td>
<td>impression</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. How does the child impress you with regard to masculine or feminine traits? (If a boy, rate on first line; if a girl, rate on second line.)

<table>
<thead>
<tr>
<th>&quot;Sissy&quot;</th>
<th>Effeminate</th>
<th>Average boy qualities</th>
<th>Quite</th>
<th>Entirely masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>qualities</td>
<td>masculine</td>
<td>masculine</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>&quot;Tomboy&quot;</th>
<th>Boyish</th>
<th>Average girl qualities</th>
<th>Quite feminine</th>
<th>&quot;Clinging vine&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>qualities</td>
<td>Coquette</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. To what extent does the child associate with members of the opposite sex?

<table>
<thead>
<tr>
<th>Always</th>
<th>Gives much time to them</th>
<th>Usual interest</th>
<th>Infrequent</th>
<th>Avoids them</th>
</tr>
</thead>
<tbody>
<tr>
<td>with them</td>
<td>for his age</td>
<td>association</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. What is his classroom behavior?

<table>
<thead>
<tr>
<th>Willingly</th>
<th>Very orderly</th>
<th>Usually obedient</th>
<th>Somewhat obedient</th>
<th>Somewhat wild</th>
</tr>
</thead>
<tbody>
<tr>
<td>obeys all rules</td>
<td>Disorderly</td>
<td>disturbance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Is the child a problem in the community?

<table>
<thead>
<tr>
<th>Usually</th>
<th>Somewhat wild</th>
<th>Usually</th>
<th>Very well</th>
<th>&quot;Model Child&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>well-behaved</td>
<td>behaved</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Is he shy or bold in social relations?</td>
<td>Bold, Confident, Usually, Somewhat timid, Fully poised, Sensitive</td>
</tr>
<tr>
<td>10. Does he stay by himself or among his associates?</td>
<td>Always, Occasionally, Seldom, No longer</td>
</tr>
<tr>
<td>11. Does he like others or does he assert himself?</td>
<td>Servile, Submissive, Always, Assertive</td>
</tr>
<tr>
<td>12. Is he contrary or submissive?</td>
<td>Contrary, Submissive, Always, Submissive</td>
</tr>
<tr>
<td>13. Is he contrary or submissive?</td>
<td>Contrary, Submissive, Always, Submissive</td>
</tr>
<tr>
<td>14. Is he a follower or independent?</td>
<td>Always, Occasionally, Seldom, No longer</td>
</tr>
<tr>
<td>15. Is he sensitive or reserved?</td>
<td>Sensitive, Reserved, Always, Reserved</td>
</tr>
<tr>
<td>16. Is he emotional or calm?</td>
<td>Sensitive, Reserved, Always, Reserved</td>
</tr>
<tr>
<td>17. Is he nervous or poised?</td>
<td>Nervous, Poised, Always, Poised</td>
</tr>
<tr>
<td>18. Is he irritable or calm?</td>
<td>Irritable, Calm, Always, Calm</td>
</tr>
<tr>
<td>19. Is he himself or himself?</td>
<td>Himself, Himself, Always, Himself</td>
</tr>
<tr>
<td>20. Is he generally depressed or joyous?</td>
<td>Depressed, Joyous, Always, Joyous</td>
</tr>
<tr>
<td>21. Is he industrious or lazy?</td>
<td>Industrious, Lazy, Always, Lazy</td>
</tr>
<tr>
<td>22. Is he successful or unsuccessful?</td>
<td>Successful, Unsuccessful, Always, Unsuccessful</td>
</tr>
<tr>
<td>23. Is he, gentle or refined?</td>
<td>Gentle, Refined, Always, Refined</td>
</tr>
</tbody>
</table>
3.

24. Is he stingy or generous?

| Open-handed | Very generous | Moderately generous | Somewhat stingy | Rarely does anything for anyone |

25. Is he frank or deceitful?

| Can never believe him | Sometimes lies | Usually frank | Always frank |

26. Is he honest or dishonest?

| Very strict | Dependable | Honest | Sometimes dishonest | Often steals and cheats |

27. Is he rude or courteous?

| Rude | Sometimes saucy | Good-mannered | Courteous | Elegant |

28. Is he loyal to his friends?

| Takes blame to friends | Will not protest friends | Will "tattle" |

29. What is his record in school work?

| Superior | Good | Average | Poor | Failing |

30. How intelligent is the child?

| Feeble-minded | dull | Equal of average | Very brilliant |

31. Is he slow or quick in learning?

| Exceedingly rapid | Agile-minded | Ordinary speed |

32. Is he absent-minded or wide-awake?

| Continually absorbed in self | Frequently wide-awake | Usually present |

33. Is he slovenly or careful in his thinking?

| Precise | Consistent | Moderately careful | Inexact | Very slovenly |

34. Is his attention sustained?

| Very difficult to keep at task | distracted until complete |

35. Is he indifferent or does he take an interest in things?

| Consuming interest | Usual curiosity | Rarely interested |

If you wish to give additional information about the child, please do so. All information which throws light upon the character, personality or background of the child will be helpful.
OUTLINE FOR PERSONNEL REPORT
BY TEACHER OR PARENT (Sherman)

I. Emotional Behaviors

A. Does the child have emotional outbursts—temper tantrums, crying, cruelty to animals and children, sudden rebellious outbursts?
   1. How often do they appear?
   2. To what conditions have these reactions been observed?

B. Periods of elation—"happy moments".
   1. How frequently do they appear?
   2. What does the child say about himself at the time?
   3. With whom is he most frequently elated, or to whom does he show this elation?

C. Periods of depression.
   1. How often does the child appear to be depressed?
   2. What does he do at these periods?
   3. What condition causes these?
   4. What conditions bring him back to normal?

D. Complaints of the child.
   1. Does the child complain of feeling exceptionally ill?
   2. To what does he blame this feeling?
   3. Does he ever attempt to make the teacher or others sympathetic towards him?

E. Fears.
   1. Name the fears of the child.
   2. Does he cry, pale or complain when he is afraid?
   3. Does he become frightened often?

F. Likes.
   1. What does he like to do most?
   2. Does his routine suffer because of his likes?

G. Dislikes.
   1. Name his dislikes.
   2. How does he react to them?

H. Behavior problems.
   1. Does he sit at his desk or is he restless?
   2. What classroom activity causes his restlessness?
   3. Does he sit at his desk, blink his eyes, make faces, twist his neck or arms, etc.? How often? When? Give specific instances.

I. Sex interests.
   1. Does he ask questions pertaining to sex? State them.
   2. Does he masturbate? How frequently? When?
   3. Does he annoy children of the opposite sex?
   4. Does he distribute sex information? What kind?
   5. Does he use bad words? When?
   6. Does he tell dirty jokes? To whom?
II. Social Behavior.

A. Play.
1. What games does he like to play?
2. Does he play in large or small groups?
3. Is he a follower or leader?
4. Does he like to be alone?
5. Does he attempt to dominate others physically?

B. Companions.
1. Approximately how many friends does he have?
2. Does he have special chums?
3. Describe his friends—are they younger, older, or of the same age?
4. Does he play with children of the opposite sex?
5. Does he appear self-conscious in the presence of children of the opposite sex?
6. Does he like to be with any one teacher?
7. Does he belong to any gangs? What kind?

C. Truancy.
1. Is he anxious to come to school regularly?
2. Does he play truant? With whom?
3. What does he do during his truant periods?

D. Misbehavior.
1. Does he attempt to get the attention of the other children in the classroom? By what means?
2. Does he create a disturbance in the room? How?
4. Does he steal? What? Under what conditions? What does he do with the articles?
5. Does he appear to daydream in the classroom? What time, and how often? Has he told you of them? Give the content of some of his phantasies if you know them.

E. Social Problems.
1. What problem has he presented?
2. How have these been handled in the classroom? (By punishment, discussion, correction, etc.)
3. What have been the results of such treatment?
III Personality Traits.

A. Complaints about the child.
   1. What are your criticisms of the child?
   2. What are the complaints of the other pupils?

B. Egozentricity.
   1. Is he aggressive in the classroom or elsewhere?
   2. Does he try to annoy other children or the teacher?
   3. Does he make "cute" remarks and perform antics when the teacher's back is turned?
   4. Does he ask many questions? That kind?
   5. Does he interrupt answers for the questions asked, or correct the recitation of other pupils?
   6. Does he volunteer immediately and try to boast the other children to a task?

C. Timidity.
   1. Is it difficult to make him recite?
   2. Does he hesitate in speech when reciting?
   3. Does he require urging to stand up before the class?
   4. Does he sulk when asked to perform some task or does he appear distressed? When?
   5. Does he like to sit in the front or the back of the room?

D. Reaction to others.
   1. Do the other pupils like to be with him?
   2. Do the other pupils make fun of him? How does he react to that?
   3. What does he do when he cannot have his own way?
   4. Does he fight or does he retire when he is crossed by other pupils?
   5. Does he have an attitude about his own personality, and does he explain his success or failure in that way?

E. Promptness.
   1. Does he come to school, or class, on time?
   2. Does he start to work immediately? In the gymnasium does he dress quickly?
   3. Does he hand in work on time?
   4. Does he respond quickly to directions?
   5. Does he put away materials quickly?
   6. Does he put on or remove wraps quickly?

IV. Give your impression of the child.
SOCIO-ECONOMIC STATUS

1. Have you spent two years in any grade? If so, what grades?

2. Have you skipped any grades? If so, what grades?

3. How many years have you lived in the city in which you now live?

4. Name or number of your school

5. Have you any brothers or sisters in this school?

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<tr>
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6. What other schools have you attended?

7. Are you living at home with your parents? If not, with whom?

8. Have you a telephone in your home?

9. Did your father go to high school? to college?

10. Did your mother go to high school? to college?

11. Do you have your own room in which to study?

12. Do you take private lessons in music? in dancing?

13. Does your mother belong to any clubs? Name of clubs

14. How often do you go to the movies?

15. How often do you go to the dentist?

16. How many servants do you have in your home? all the time part time

17. Does your family own a car? What make?

18. How many magazines are taken in your home?

19. About how many books are in your home?

20. How many rooms are in your home?

21. What is your father's occupation?