MASTER'S THESIS

A STUDY OF THE CAUSATIVE FACTORS FOR READING RETARDATION IN THE EIGHTH GRADE IN THE PARKWAY SCHOOL

BY

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A STUDY OF THE CAUSATIVE FACTORS FOR READING RETARDATION IN THE EIGHTH GRADE IN THE PARKWAY SCHOOL

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by

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CHAPTER I

INTRODUCTION

The necessity of reading is dominant in our modern life. A poor reader, or non-reader, is maladjusted in both his work and recreational activities. If one is to be efficient in any occupation, it is necessary to do a certain amount of reading. The non-reader is denied many occupational opportunities, and the person with undeveloped reading skills finds many occupations beyond his ability.

Equally as important is the ability to read for recreational and educational purposes. Many people find enjoyment and relaxation in reading. Limited or undeveloped reading skills deprive them of many recreational opportunities. Any person who wishes to keep informed on local, national, or international affairs must be able to read with comprehension.

Due to the demands of modern society, reading is more important in every phase of school work now than ever before. A child with limited reading abilities finds his educational progress blocked as well as the ability to successfully meet the requirements of higher subject matter. It has been well established that failures in school are often due to inability to read comprehensively. Inability to read with understanding promotes discouragement, a feeling

of inferiority, maladjustment in social living, and a limitation of satisfactory achievement.

Over a period of several years, numerous methods in the instruction of reading have been introduced and practiced in the various school systems.[1] The first approach in the American schools was the memorizing of the alphabet. This followed a routine of memorizing the letters of the alphabet, spelling and pronouncing of the syllables, and last, the recognition of the words and phrases. It was during this period that oral reading and recitations were stressed. During the latter half of the nineteenth century, the word "method" was introduced and rather reluctantly accepted. Parents became disturbed when their children did not know the names of the letters in the alphabet. Due to children being unable to recognize new words in settings that were not familiar to them, the phonic systems were developed and used. Educators soon learned that this method caused laborious attempts to spell by sound.

It was during the period following the First World War that rapid silent reading was stressed.[2] Some of our

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[1] Paul Witty, Reading in Modern Education (Boston: D. C. Heath and Company, 1949), p. 4.

[2] Ibid., p. 6.

educators advocated that oral reading be completely omitted. Written and objective tests were widely distributed and enthusiastically used. The ability to grasp the central thought of a paragraph, remember unimportant details and follow directions were highly recommended as a standard measurement of reading achievement.

The present trend is to present reading as one phase of the language arts program and to put into effect and use the methods of teaching reading which will be in keeping or agreement with the desired objectives.

Reading as a meaningful experience is being stressed, and the reaction of the child to the various ideas with which he is confronted is the most important feature of his reading program. It has been stated by Witty[3] that

> It is evident that the present day approach emphasizes the necessity for starting the reading process with materials that are close to the child's own experience and continuing with instructions in the subject matter that fulfills his changing needs for reading. Thus, a concern for the pupil and his welfare has replaced the primary interest in methods of instruction. Moreover, in a balanced reading program the selection of materials of instruction is governed by the characteristics of each group and the ends to be obtained through reading.

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[3] Ibid., p. 7.

Although reading has been emphasized in the primary grades, it is also a great concern in the upper grades and even through high school and college. It is therefore important that careful guidance in comprehensive reading be continued throughout the educational life of a child. This study was made to study the possible causes for the retardation of reading in the eighth grade of the Parkway School, Deep Gap, North Carolina.

I. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to determine the causative factors of retardation of reading in the eighth grade students of the Parkway School; (2) to determine the relation, if any, of each of these factors to reading ability; and (3) to obtain an over-all picture of the most influential factors in relation to reading.

Importance of the study. Many needs of an individual are met successfully through effective reading, either for educational or recreational purposes. Since reading is considered an all-school function with every teacher who assumes full responsibility for promoting growth in reading, a study of the causes of retardation cannot be over-emphasized. Children advancing from the eighth grade to high school find

it necessary to adjust to a phase of school life in which more extensive reading is required.

Reading retardation is of great concern to every classroom teacher, and progress in all subjects depends, to a great extent, on the ability to read effectively. Too often children are unfairly held responsible for their inability to read without any diagnosis or comprehension of the basic factors involved in reading disability. This study was made to locate the possible causes of retardation in reading of the eighth grade students in the Parkway School, with the objective in mind of using the factors involved in this study as a basis for improving reading abilities.

Location of school. The Parkway School is located in the northwestern part of North Carolina on United States Highway number 421 and the Blue Ridge Parkway, seven miles east of Boone, the county seat of Watauga County. This school is approximately 100 miles northwest of Charlotte, 95 miles west of Winston Salem, and 60 miles east of Bristol, Tennessee.

Sources of data. Information for this study was obtained from the use of the Otis Quick-Scoring Mental Ability Tests, the Iowa Silent Reading Test, Haggerty-Olson-Wickman Behavior Rating Schedules, and the Mental

Health Analysis Test. Both sections of the eighth grade students in the Parkway School took these tests.

Additional information was obtained by the use of the Snellen Eye Chart, the whisper method of testing hearing, and the number of absences was found by the use of accumulative records.

Methods of investigation. The investigation for this study was made through the participation of the children in the various tests. The students, under careful supervision of the two eighth grade teachers, took the tests. Testing of vision and hearing was also examined by the two eighth grade teachers, while the writer investigated the absences.

CHAPTER II

PAST FINDINGS OF INFLUENCING FACTORS IN RETARDED READERS

Although reading seems to be easy for some children, it is a complicated and difficult task. To read effectively, a child must vigorously devote himself, physically and mentally, to the work. Children who are in poor physical condition find this a very trying and sometimes exasperating experience. A child suffering from physical frailities or defects may apply himself to individual or group work for a few minutes and then let his mind wander off into some other channel. Many times, when the child's attention is again turned to classroom work or activities, he has missed part of the instruction and therefore, may become confused. This may cause inattentiveness and negligence in school work, or it may create a negative attitude toward the task. He may become sensitive and easily upset because of his failures, and therefore develop an emotional strain or maladjustment.

Illness or physical defects in various forms cause untold absences from school every year, which is a contributing factor to retardation in learning to read. This is especially true during the early years of reading.

Durell[1] says that a child who has been introduced to the recognition and meaning of new words for a certain length of time, may, after an extended absence from school, be unable to read the assignments after he returns. This, of course, places him at the bottom of the class, and it may discourage him to the extent of feigning illness in an attempt to avoid unpleasant situations.

Reading interests of the child should be given careful consideration. These interests vary from year to year and every opportunity to promote growth in reading along these interests should be taken.

During the first years of school, children show their interests in reading by asking for stories to be read to them. They seem to find keen enjoyment in colorful illustrated books about familiar happenings and animals. Amusing jingles, poems, and short stories are among their varied interests. Also stories holding a pleasant surprise are on the preferred list in the primary grades. In the middle grades, the desire and interests in reading material seems to follow along the lines of adventure, action, excitement, thrill, humor, bravery, sports and inventions. It has been found that as boys advance in age, they turn

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[1] Donald D. Durrell, Improvement of Basic Reading Abilities (New York: World Book Company, 1940), p. 288.

to realistic stories in which adventure dominates. Girls of the same age prefer stories with the home as the center of interest.

During the adolescent period, scientific interests are strongest. It has been shown by Witty[2] that these interests are at their peak when opportunities for appropriate investigations are offered. Children of this age want accurate and valid information and become extremely interested when given the opportunity to delve into this field. It has been found that when children become interested in a certain topic and feel a real need for information, they will employ the use of books of increased reading difficulty.

During the past few years, the extensive reading of comic books in the elementary grades has become a very common and prevalent factor. In the majority of studies made, it was found that this activity reaches a high interest in the lower grades and continues as one of the favorite types of reading material throughout high school. This seems to indicate that intelligent direction to children's interest in comic books should be given careful consideration. Since children's reading interests are

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[2] Paul Witty, Reading in Modern Education (Boston: D. C. Heath and Company, 1949), p. 36.

easy to develop, comic books should not be used as a center of the reading program, but more or less regarded as an activity which parallels the child's interest in the adventure and thrilling stories on radio and television. Unless this problem can be approached intelligently and in a carefully directed manner, the reading tastes of boys and girls may become shoddy and cheap.

Intelligence. Various investigations indicate that scores on intelligence tests are affected by variations of the environmental factors. The ability to learn to read serves as a standard measure of importance but more important is the ability to use reading as an aid for mental performances.[3] It is important to realize that the intelligence quotient refers to the fact that ability to learn may develop more slowly in some children than others.

At one time, too much emphasis was placed upon the intelligence quotient, and the stability of this measure was then greatly overestimated. The intelligence of a child was also believed to be unchangeable; however, during recent years there have been noticeably marked improvement

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[3] Lester R. Wheeler, "The Relation of Reading to Intelligence," School and Society (New York: The Society for the Advancement of Education, Inc., 1949), pp. 225-227.

in the ability to learn. This improvement of the learning process has been found in children who were provided with favorable environmental situations for learning. Studies also reveal that the intelligence quotient will decrease where unfavorable conditions or deprivations exist. Many children have shown better adjustment in their social activities as well as their academic achievements when placed in a richer and more meaningful environment. For this reason, children of all levels of intelligence should be provided with many opportunities as outlets for their pattern of thinking. It has been found that better reading exists when activities are broad enough to meet the needs of the mentally superior and the mentally immature in such a way that harmony exists in classroom activities.

The intelligence quotient, to a certain degree, seems to reflect ability to learn to read, therefore, the learning ability is an essential factor in determining the extent of reading ability. This can be seen in the case of a low reading score with comparatively high scores on all other subjects. This would certainly indicate a definite problem in reading rather than in general low intelligence. The intelligence test does not always indicate or predict the success of reading ability. In meeting the needs of children, the results of an intelligence test should be used along with certain abilities and interests of the children. Through

various experimental studies, it has been found that in all stages of reading, the higher the intelligence quotient, the greater the possibility of learning to read with ease. Gates[4] states that

> Children with intelligence quotients below 80 on the average find learning to read a difficult and slow process. The low normal group, ranging from 80 to 90, are somewhat slower and more prone to difficulties and failures than those in the range from 90 to 110. In general, the correlation between success in reading and the intelligence quotient is fairly high.

Certainly it is desirable that a good intelligence test be given to determine, to a certain degree, the maturity of learning ability. According to Tinker,[5] due to the possibility of detrimental results to the child and the parents, the outcome of an intelligence test should be kept strictly confidential. Children would not be able to accept the results with understanding and few parents have the training and experience sufficient enough to comprehend the meaning of test results. In many instances, the reactions of the parents would create a difficult situation

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4 Arthur I. Gates, The Improvement of Reading (New York: The Macmillan Company, 1947), p. 142.

5 Miles A. Tinker, Teaching Elementary Reading (New York: Appleton-Century-Crofts, Inc., 1952), p. 26.

with the child. This might, in turn, have an unfortunate effect upon his emotional and social development.

Emotional Disturbances. Many times a frustrated and emotionally disturbed child has been given up as a slow reader. It has been found that a disturbed emotional balance has a very definite influence upon the ability of a child to learn to read effectively. Fears, resentments, and anxieties are among the psychological blocks that interfere with the learning processes.

Case studies have confirmed the idea that the recognition of emotional disturbances is very important in the study of individuals with reading disabilities. Recent experimental studies of the emotions have aided greatly the understanding of child behavior. In the past it was believed that emotional children inherited the tendencies for these disturbances, and for many years this theory hindered any forward movement in the study of emotional behavior. However, during the past fifteen or twenty years, experimental studies have discarded this theory and progress has been made in recognizing the importance of helping children to overcome their psychological blocks effectively. As a result of these experimental studies, it has been found that emotions are not inherited but result from bad environmental situations

and unhappy experiences. Poor environment during early childhood makes it very difficult for a child to successfully meet new and difficult situations without great emotional strain. Emotional instability or maladjustment produces fear, worry or a negative reaction to a learning situation, especially reading. Several studies have been made in the emotional characteristics of good readers in comparison with the poor ones. The results confirmed the view that the children who are prone to emotional distress are more handicapped in learning to read than the ones who are free from frustration.

Gates[6] has shown that neglected children or those who do not experience a feeling of security lack emotional balance. Their failure to learn to read may be because they feel insecure and unappreciated. In some cases a child may strive to gain attention and a feeling of importance by bringing home a report of a reading difficulty. He may also get attention in the schoolroom through this same procedure. Hostility, either in the home or in school, affect different children in a different way. In some cases, this may be a challenge to do better work, while in others, it causes an emotional upset so deep that they are incapable of learning to read. This will eventually

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[6] Gates, op. cit., pp. 111-112.

give rise to fighting back, which in turn usually results in failure in the reading lessons.

Many times, parents are too concerned over the child's success in learning to read at a rapid rate of speed. Overly anxious parents may constantly compare their child's progress with that of another child. In turn, this anxiety is conveyed to the child, who begins to become anxious over his ability to learn to read. The longer this situation exists, the more it interferes with the learning process, until eventually the emotional strain is so great that retardation or failure in reading results. This trend is also true in the case of an overly concerned teacher.

In many of the studies made in the field of the retarded reader, it was discovered that in some instances, parents have guarded and supervised a child so much that he has not learned to meet difficult situations without continued personal assistance. In the classroom, a child becomes bewildered when the teacher fails to give him undivided attention. Being unable to proceed on his own initiative, a child in this situation is under an emotional frustration. As a result, he may fail to learn to read properly, or he spends a good percentage of his time devising a method of getting attention. In many cases the overprotective parent is in actuality rather dominating. The child may react by being actively concerned with

resisting domination rather than learning to be an effective reader.

Rivalries among other siblings sometimes cause emotional strain in some children.[7] Occasionally, this situation may produce reading excellence. However, in many cases, the unfavorable comparing of reading achievements with that of another sibling may result in devastating emotional disturbances.

Maladjustments are more likely to occur among children who are more susceptible to emotional turmoil, however, they should not be regarded as expressions of constitutional weaknesses but rather as victims of unfortunate personal influences. Educators and teachers should realize that these undesired attitudes in children may develop in home situations which, outwardly, seem to offer everything to be desired.

Physical Factors. Before learning can take place, a child must have a well-developed body. Experimental studies have shown that physical disorders may produce poor reading, or in some cases, non-readers. Research in the study of retarded readers have shown that almost any kind of physical defect can affect the learning process.

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[7] Ibid., p. 114.

Among the physical deficiencies to be seriously considered and probably one of the most important is defective vision. Eyesight must be sufficient enough to provide clear vision of the material to be read and at the same time, strong enough to maintain freedom from strain. Certainly, vision is the one factor most obviously involved in the reading process. It has been said by Gray[8] that

> It is reasonable to infer that, in so far as eye defects are related to general health and well-being, they may contribute to the complex out of which efficient reading performances emerge. Good vision is as important in many other activities as in reading. For these reasons attention should be given to visual factors in any diagnosis of reading difficulty that presumes to be adequate.

In the actual reading process, a child reads with much more than his eyes. The interested reader will become so absorbed in what he is reading that many times there will be complete unawareness of eye strain. The good reader must make quick movements and very brief pauses along the lines of the reading material, and at the same time, keep the two eyes in focus as well as in proper adjustment.[9] As a rule,

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[8] William S. Gray, Reading in General Education Washington, D. C.: American Council on Education, 1940), p. 311.

[9] Marion Monroe, Growing into Reading (Chicago: Scott, Foresman and Company, 1951), pp. 141-142.

children with usual handicaps are very sensitive to glare, therefore, attention should be given to over decoration and brightly colored objects in the classroom.

As a result of experimental studies of vision in relation to learning to read it has been found that various types of defective vision affect the ability to read in different ways. Many of the studies reveal that certain defects are found among the more retarded readers, or those who find difficulty in reading. At the same time, it has been shown that among the good readers are those who have the same visual defect. This is due to the fact that the milder defects in vision may show little relationship to the effectivenss of learning to read as long as the learning process is under normal or ordinary situations. Children with these mild defects in vision will, with continuous reading, tire more easily than those with normal vision.

Children with serious visual defects are the ones who are handicapped in their learning to read, and if not corrected will become difficult problemswith which to deal. In many cases, the mere correction of the visual defect does not completely eliminate the reading disability, especially if this correction comes in the latter years of their school work. In many cases learning to read under the handicap of defective vision has produced bad reading habits, or most likely, a dislike for reading. Unless corrections in vision

are made early, children seem to have a tendency to become very self-conscious if compelled to wear glasses, and many times refuse to permit corrective measures to be taken.

Among the reading problems is the child's lack of visual memory for words. Many studies that have been made in defective vision have revealed that children in this particular circumstance seem to know certain words readily, while the next day there seems to be no recognition.[10] In working with children like these, even though the teacher attempts to find and present interesting reading materials in various ways, the pupil still fails to remember the words. This produces discouragement on the part of the child, and he often resigns himself to being an inefficient reader. In a problem of this kind, there is a possibility that some children do not maintain a normal fusion of words or images at a close distance or that they may fuse with some types of print better than others. It is true that if a double image is seen at times, the word would look different to the reader at other times.

Another reading problem that always accompanies poor vision is visual fatigue at first, followed by physical fatigue later. During the first few minutes of reading, a

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[10] Louise Farwell Davis, Recent Trends in Reading by Gray (Chicago: The University of Chicago, 1939), p. 139.

child with defective vision will make few errors. As the child continues reading, he may start squirmming, blinking or rubbing his eyes, holding the paper closer to his eyes or sighing.[11] Slow visual responses require such excessive effort in the use of the eyes that continued reading results in eye fatigue.

Many of the retarded readers who manage to pass achievement tests spend far too much time studying. This situation leaves little time for participation in other school activities, which, in many cases produces maladjustment in social living. At the same time these pupils are very uncomfortable while using their eyes continuously in close work. It seems imperative that we seriously consider all the various instruments and methods now available to detect defective vision and attempt to put them in use. According to Davis,[12] it is true that

> Surely the relation to reading skills of visual difficulties of a functional nature have, up to the present time, been studied in a limited manner and the surface has only been scratched.

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[11] Ibid., p. 141.

[12] Ibid., p. 143.

Before a child can become an efficient reader, he must be able to hear sounds clearly and then reproduce them accurately. If he is unfortunate enough to possess defective hearing, he receives wrong impressions from his teachers and classmates. Words and sentences become an intermingled and unmeaningful jumble of words. Many times a child with defective hearing is very inattentive or indifferent to classroom activities. As a result, his learning process as well as his reading ability is hindered. Inability to hear accurately may subject a child to severe emotional tensions and create a feeling of inefficiency as well as an inferiority complex. Many times the situation is made worse by the teachers or parents assuming that the child is lazy or disinterested in school work. In experiemntal studies made by Bend,[13] it was found that among the schools not using phonics, there was not a great difference in the reading ability of the pupils with hearing defects and those with normal hearing. On the other hand, in the schools where oral instruction was fundamental, the differences were great. This seems to be evident enough that the hard-of-hearing pupils are severely handicapped where oral instruction is predominant. In school programs where there is a great deal of silent reading, more progress is noticeable.

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[13] Gates, op. cit., p. 95.

Defective hearing may be caused by some permanent or incurable physical condition from birth. In some cases, an infectious childhood disease, lacking in proper medical treatment, may cause a loss of hearing. Ignorance in the nature of various diseases and negligence in the care of these illnesses may cause permanent injury to the ears. In some cases, temporary irritation following an infection from a cold or an excessive amount of wax in the ear may cause difficulty in hearing. Loss of hearing in instances like these are usually temporary but should be detected immediately and corrected as soon as possible.

Children who are unfortunate enough to have defective hearing are at a great disadvantage, due to the fact that corrective measures are very limited. Studies have shown that these cases should be given every advantage possible as well as special attention in oral instruction or work.[14] Some hard-of-hearing children are very sensitive and find it difficult to face the world with a hearing aid. It is in the early stages of school that these children should be made to feel independent through self-help cards or with the aid of printed material. Defective hearing can be detected quickly and accurately through the use of an audiometer,

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[14] Ibid., p. 96.

which can be purchased at a reasonable cost and is of great value in the school system.

The Social Factor. One of the most important needs of a child is that of personal love and affection. This should come from the home, and when it does not, the child very often strives for attention in some other form. The need for social status and social acceptance is a constantly revealing factor in children at school. Children who are shown social approval and appreciation by others are better adjusted children. In many instances children who are not accepted by the group will go to any extreme in order to gain recognition. If this recognition cannot be gained through normal behavior, children will often engage in behavior or behavioral attitudes that are unacceptable. It is important that a child have a feeling of belongingness in the group as well as a feeling that he is important and is needed for the advancement of the group. Witty[15] says that in order for a child to become integrated as an individual, he must believe in himself to the extent that when he experiences failure, he must still have faith in his capacity for

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15 Paul Witty and David Kopel, Reading and the Educative Process (Boston: Ginn and Company, 1939), p. 301.

success. Witty[16] states that most studies in regard to reading have neglected social sensitivity and social status of students and its effect on school activities.

The increasing importance of group activities among eighth grade students tend to take more of their interest and time. This may leave less time for reading, however, in cases where there is social maladjustment more time may be spent on reading. Although reading may be temporarily pushed aside, it is believed by most writers that successful social adjustment is of great value in relation to reading.

Children must have a fair share of success and when social satisfaction has been experienced, there is personal satisfaction from knowing that a job has been well done and that he has been socially accepted by the group. It is of increasing importance that children must feel worthy and important because of what they can achieve and contribute. Children often feel neglected or left out in classroom activities because of meager contributions, which tends to develop a feeling of inferiority or self-consciousness. This, in turn, is reflected in their reluctance to participate freely in classroom activities.

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16 Loc. cit.

Mental Health. Of all the educational factors that are related to the welfare of children, none are of more importance than the mental health of a child. Griffin[17] says

> A teacher of an average class of forty children may expect that in later life seventeen to twenty-six of her pupils will suffer from conditions ranging from unhappiness and a sense of futility to criminal behavior and insanity.

The above statement seems to be proof enough that this factor should be given careful consideration. Although many instances of mental ill health come from influences and environmental situations in the home, many of these difficulties arise in school. The mental well-being of a child changes from year to year and the successful training of a child revolves around the compatiability of the home and school.

Each child has a personality development different from that of everyone else. In considering the mental health of a child, it is necessary to think in terms of the sum total of his attitudes, habits, and tendencies. The personality of a child is reflected in his behavior and everyday attitudes. Past studies show that many everyday problems arise, however, the important thing is to remember that these problems are

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[17] J. D. M. Griffin, S. R. Laycock, and W. Line, Mental Hygiene (New York: American Book Company, 1940), p. 5.

an indication that some disturbing element needs to be eliminated.[18]

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[18] Ibid., p. 81.

CHAPTER III

FINDINGS OF THIS STUDY

Various causative factors of reading retardation in the eighth grade students at the Parkway School were given careful consideration. The students studied were, in general, similar to any other rural school children and have the average rural school opportunities. One environmental fact that has played an influential part on this study has been the consolidation of six small schools. Although consolidation has been successful, a slight undercurrent of resentment could be detected at the time tests were given, which was in the early fall.

Many factors have been found to contribute to reading retardation, but the writer believed the factors studied in this chapter to be the major causes for retardation in reading. A comparison was made between the ten best readers and the ten poorest readers and their relation of reading ability to each factor studied. The intelligence quotients of the students were taken from the results of the Otis Quick-Scoring Mental Ability Tests,[1] taken by the pupils and scored by the two eighth grade teachers at the Parkway School. The Iowa Silent

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[1] Arthur S. Otis, Otis Quick-Scoring Mental Ability Tests (New York: World Book Company, 1939).

Reading Tests[2] were given to the students, and their reading ranks were tabulated from the results. The Mental Health Analysis Test[3] was given to the students. This test consists of ten factors that are influential in the mental health of a child. From these ten factors, the writer studied the results of the tests of Physical Defects, Emotional Stability, and Social Participation. A total mental health rank was given each child and based on the total score of the ten factors in the mental health test.

The Snellen Eye Chart[4] was used to check the eyesight of each child and the "whisper" method was used in checking defects in hearing. Although many schools use audiometers for testing hearing, the writer believes that, by carefully supervising, the "whisper" method was sufficient enough to detect hearing defects. The writer obtained the number of absences for each child over a seven year period, and each child was ranked according to the total number of absences.

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2 H. A. Greene and V. H. Kelley, Iowa Silent Reading Tests (New York: World Book Company, 1939).

3 Louis P. Thorpe and Willis W. Clarke, Ernest W. Tiegs, Consultant, Mental Health Analysis--Intermediate Series (Los Angeles: California Test Bureau, 1946).

4 Snellen Eye Chart (New York: National Society, Prevention of Blindness, Inc.).

In order to get an over-all picture of the affects of all the factors on reading, a total rank of all factors studied was given to each child. These ranks were made to show the accumulative affects of all the factors.

Relation of reading to intelligence quotient. It was found that the intelligence quotient compared favorably to the ability to read efficiently and effectively. Table I indicates the relation of this factor. Data for this study was taken from the results of the Otis Quick-Scoring Mental Ability Tests[5] given in the early fall.

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[5] Otis, op. cit.

TABLE I

RELATION OF READING TO INTELLIGENCE QUOTIENT

Highest ten		Lowest ten	
Rank in reading	Rank in intelligence quotient	Rank in reading	Rank in intelligence quotient
1	1	31	38
2	8	31	29
3	2	33	31
4	5	34	37
5	11	34	33
7	4	36	33
7	13	37	36
7	13	37	33
9	35	39	38
10	3	40	40

Table I shows the ten highest ranking students in reading and their corresponding rank in intelligence and the ten lowest ranking students in reading and their corresponding rank in intelligence. It will be noted that the student who ranked highest in reading also ranked highest on the intelligence test. Case number two in reading showed a rank of eighth in intelligence, while the student who was in third position in reading stood second in intelligence. The fourth ranking student in reading was in fifth position on the intelligence test, while the pupil who ranked fifth in reading fell to eleventh position in intelligence. Out of the three students who ranked seventh in reading, one ranked fourth in intelligence, while the remaining two ranked thirteenth. It will be interesting to note that the ninth rank in reading fell to thirty-fifth in intelligence, however, the chronological age of this pupil was two years and nine months above eighth grade age level. The pupil who ranked tenth in reading ranked third in intelligence.

In comparing the ten best readers with the ten poorest, it was found that the students who ranked thirty-first in reading ability fell to the thirty-eighth position and twenty-ninth in intelligence. The pupil in thirty-third position in reading showed a higher rank in intelligence. It will be observed that the two students with the same reading rank of thirty-fourth were thirty-seventh and

thirty-third in intelligence, while the thirty-sixth rank in reading also ranked thirty-third in intelligence. While the pupil with the rank of thirty-ninth in reading was thirty-eighth in intelligence, it will be noted that the student who ranked lowest in reading was also at the bottom of the class in intelligence. The reader will note that, in general, reading ability decreasedaccordingly to the intelligence quotient of the ten poorest readers.

It is fairly obvious from the data shown in the preceding table that the intelligence of a pupil has a significant relationship to reading. It seems logical to assume that results from an intelligence test indicate the ability to learn to read as well as the extent to which that learning may take place. One rather outstanding finding from this comparison was the pupil who ranked ninth on the reading test and fell to thirty-fifth on the intelligence test.

The general picture of this study shows that the pupil with a fairly high intelligence quotient usually learns to read well, while the pupil with a low intelligence quotient reads slowly and inefficiently. This comparison of intelligence to reading revealed that the pupil who ranked first in reading also had the highest intelligence quotient, while the lowest rank in reading had the lowest intelligence rank.

Relation of reading to physical defects. Children who are aware of their physical defects often feel inferior, which in turn causes unhappiness and social disapproval. Data concerning this factor as a cause of reading retardation was taken from the students viewpoint as well as the examination of the students for physical defects. The test was one of the ten taken from the Mental Health Analysis Test,[6] and from the two hundred items in this test, the items pertaining to physical defects were tabulated, and the children were ranked according to their awareness of their physical defects.

It has been said by Durrell[7] that almost any form of physical defects can hinder the reading and learning process of a child. Although many studies have been made concerning the inferior feeling children sometimes develop toward their physical defects, the writer found little relationship between this attitude and the ability to read.

Table II shows that two of the ten best readers were comparatively free from physical defects, while the remaining eight were rather self-conscious of physical defects. Although six of the ten poorest readers recognized their physical defects, the remaining four seemed to feel physically fit.

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[6] Ibid.

[7] Donald Durrell, Improvement of Basic Reading Abilities (New York: World Book Company, 1940), p. 282.

TABLE II

RELATION OF READING TO PHYSICAL DEFECTS

Highest ten		Lowest ten	
Rank in reading	Rank in physical defects	Rank in reading	Rank in physical defects
1	26	31	4
2	14	31	20
3	20	33	39
4	4	34	37
5	29	34	10
7	20	36	4
7	20	37	35
7	20	37	39
9	4	39	37
10	32	40	10

Table III shows the ranks of the average readers as compared with their corresponding ranks in physical defects. Out of this study of the twenty average readers, the writer found the awareness of their physical defects had very little to do with their ability to read.

TABLE III

RELATION OF RETARDED READERS TO PHYSICAL DEFECTS

Average readers	
Rank in reading	Rank in physical defects
11	26
12	32
13	4
13	21
15	4
16	14
17	14
19	35
19	35
19	30
23	26
23	14
23	32
23	16
23	32
26	4
27	14
27	20
29	26
30	26

Relations of reading to eyesight. The Snellen Eye Chart[8] was used to detect the visual defects of the students. Reading ranks were used along with the direct results of the Snellen Chart, rather than ranks in defective vision. These eyesight tests were given at two different intervals, at the beinning of the fall term and again in January, with only one variation, that one being case number five. Table III shows the results of the Snellen Chart in relation to the reading ability of the students tested.

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[8] Snellen Eye Chart, op. cit.

TABLE IV

RELATION OF READING TO EYESIGHT

Highest ten			Lowest ten		
Rank in reading	Eyesight L	R	Rank in reading	Eyesight L	R
1	20/20	20/20	31	20/15	20/15
2	20/70	20/15	31	20/20	X
3	20/50	20/40	33	20/20	20/20
4	20/20	20/20	34	20/20	20/40
5	X	20/15	34	20/30	20/30
7	20/40	20/40	36	20/40	20/30
7	20/40	20/30	37	20/40	20/40
7	20/40	20/20	37	20/30	20/40
9	20/20	20/20	39	20/50	20/40
10	20/15	20/20	40	20/20	20/20

Of the first four students, two were found to have noticeable visual defects. These two hold positions in reading of second and third, while numbers one and four have, according to the Snellen Eye Chart,[9] good eyesight. The student ranking fifth in reading has excellent eyesight in the right eye, while the ability to see with the left eye has diminished completely as far as reading is concerned. The loss of sight in this eye has been gradual and was due to an eye injury received during this student's third year in school. Going further, the reader will observe that there were minor visual defects in the next three students who stood seventh in reading. It was found that the pupils ranking ninth and tenth in reading had good eyesight.

In comparing the ten poorest readers with the ten best in relation to their eyesight, it was found that of the two who were in thirty-first position in reading, one had good eyesight while the other one had good eyesight in the left eye and no vision at all in the right eye. With the exception of the students ranking thirty-third and fortieth, the writer found visual defects in the remaining six.

This study shows that seven of the ten poorest readers had defective vision, whereas there were six cases found to have visual defects among the upper ten readers. Although

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[9] Loc. cit.

there is very little relation shown in this comparison, there is a very slight indication that visual defects play a small part in reading ability. Many of these cases with visual defects very often complain of headaches and during reading periods, it was found that reading efficiency was lowered considerably. It is the opinion of the writer that, with the addition of high school work, unless corrections are made in some cases, reading efficiency will gradually decrease. Witty[10] states that defective vision is, without a doubt, a hindrance to reading, causing eyestrain or discomfort and in many cases individual help, but it does not necessarily disrupt the learning process.

Although there is a very slight margin in relation of reading to eyesight, it seems plausible to conclude that retarded readers are more likely to have defective vision, while the best readers, from a general viewpoint, are more apt to have fewer visual defects.

Relation of reading to hearing. In testing the hearing of the students, the examiner spoke, in low tones, to the child, who was seated approximately twenty feet away. Each student was asked to repeat what had been said. Table IV shows reading ability of the ten best and the ten poorest

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[10] Paul Witty, Reading in Modern Education (Boston: D. C. Heath and Company, 1949), p. 80.

readers as compared to the results of the hearing tests which are shown as normal or defective.

TABLE V

RELATION OF READING TO HEARING

Highest ten		Lowest ten	
Rank in reading	Hearing	Rank in reading	Hearing
1	Normal	31	Defective
2	Defective	31	Normal
3	Normal	33	Normal
4	Normal	34	Normal
5	Normal	34	Normal
7	Normal	36	Normal
7	Normal	37	Defective
7	Defective	37	Normal
9	Normal	39	Normal
10	Normal	40	Normal

The extent to which defective hearing interferes with reading depends in part on certain environmental factors in the classroom, such as the seating position of the child, the teacher's voice, and the method of teaching reading. Table IV shows that two of the ten best readers were found to have slight hearing defects, and the same number of cases was found among the ten lowest in reading. Past studies have shown that hard-of-hearing pupils are handicapped in school systems where the instructional program depends upon oral methods. Bend[11] found that hard-of-hearing pupils learn to read well when the method of teaching does not depend on oral methods.

The writer found no relation of defective hearing to reading among these eighth grade students.

Relation of reading to absences. Due to transportation difficulties, such as walking distances to bus lines, early morning and late afternoon bus schedules, and hazardous roads during winter months, a listing was made of absences over a seven year period. The number of the absences was taken from the accumulative records of each child. Table VI shows the reading positions of the ten best and ten poorest readers in the class and a listing of their absences over a seven year period.

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[11] Gates, op. cit., p. 95.

TABLE VI

RELATION OF READING TO ABSENCES

Highest ten			Lowest ten		
Rank in reading	Number of absences	R	Rank in reading	Number of absences	R
1	16	5	31	52	22
2	48	21	31	63	24
3	14	3	33	84	32
4	30	10	34	256	39
5	1	1	34	70	27
7	76	30	36	288	40
7	21	8	37	52	22
7	112	35	37	86	34
9	16	5	39	238	38
10	45	19	40	158	36

Studies concerning this factor have not been extensively made, but because of the transportation and climatic influences found in the vicinity of the Parkway School, the writer felt that a study of absences might prove to be of significance. It is true that children who are absent a good percentage of the time start lagging behind in their school work, and in due time become discouraged and disinterested.

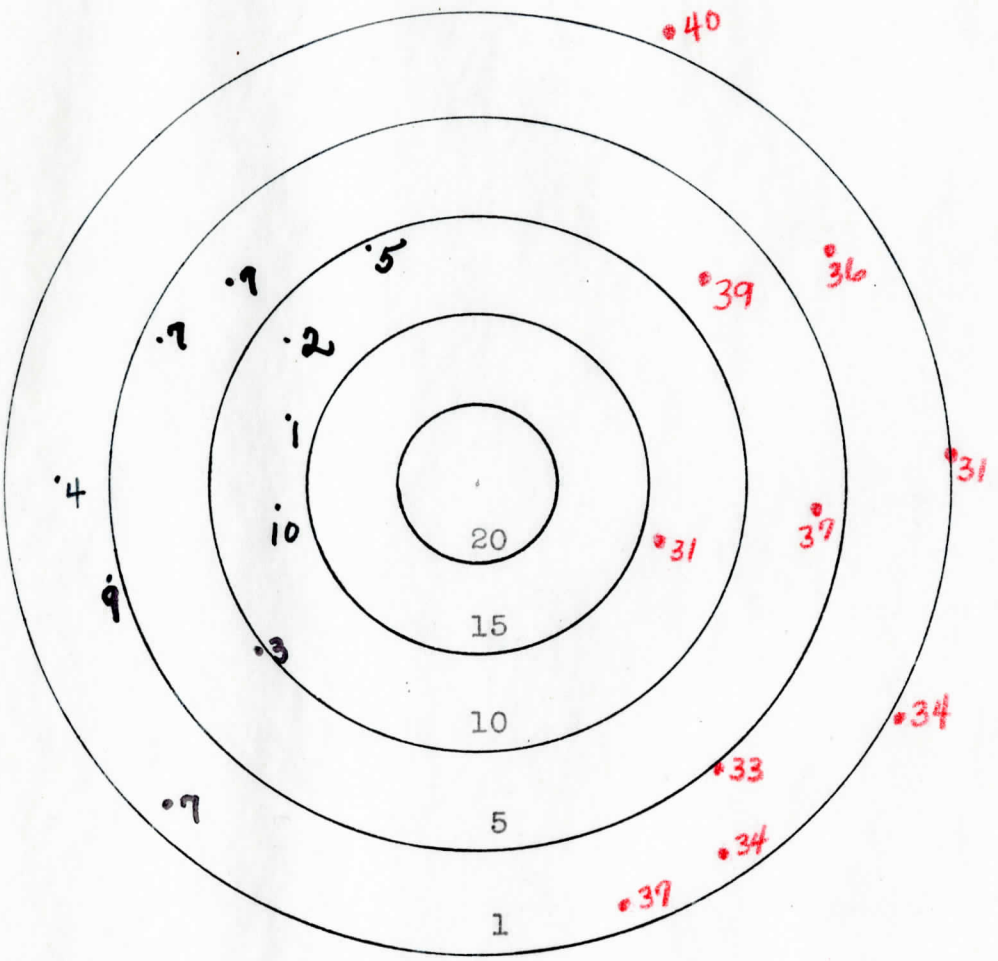
It was found that the ten best readers had a total of three hundred and seventy-nine absences over a seven year period while the ten poorest readers were found to have a total of fourteen hundred and forty-nine. From this listing, we may assume that the students who attend school regularly are more likely to be good readers, while the poor readers are found to have a larger number of absences. In conclusion, it seems logical to say that there is a fairly high relation in the number of absences, over a period of time, to reading ability.

The children were also ranked according to the number of absences shown. It will be noted that seven of the ten best readers ranked in the upper half of the class while all of the ten poorest readers were in the lower half of the class.

Relation of reading to social acceptance. A vital influence in the progressiveness of reading is the extent to which a pupil is socially accepted by his or her classmates. Being socially accepted gives a child a feeling of belongingness, which is necessary to satisfactory adjustment in school. Results of the social acceptance ranks or positions were taken from questionnaires in which the students listed their first three choices with whom they preferred to work while serving on committees. The writer made possible the need for as many committees as necessary for class activities and for participation of the entire class. The first choices were given a score of three points; second choices were given two points, and third choices were given one point. Each child was given a total score, taken from their number of times chosen. Diagram I is a socio-gram of the ten best readers as compared to the ten poorest readers.

DIAGRAM I

SOCIO-GRAM SHOWING THE SOCIAL ACCEPTANCE OF THE TEN BEST AND TEN POOREST READERS



● = Ten best readers

● = Ten poorest readers

The numbers, one through ten and thirty-one through forty, are the reading ranks of the ten best and ten poorest readers.

The distance of the social acceptance ranks from the center of the socio-gram indicates the degree of social acceptance. The social acceptance of the ten best ranks in reading is indicated by the blue circles, while the red circles indicate the social acceptance of the ten poorest readers.

Diagram I shows that the ten best readers are, generally, more socially accepted. Of the ten poorest readers, two were isolates, which indicates that they were not chosen at all. In the over-all picture of the socio-gram, it is fairly obvious that the best readers are also more socially accepted by their classmates.

The students were also ranked according to their social acceptance by the group. These ranks are shown in Table VII. Table VII shows the relation of reading ability to social acceptance found among the eighth grade students.

TABLE VII

RELATION OF READING TO SOCIAL ACCEPTANCE

Highest ten		Lowest ten	
Rank in reading	Rank in social acceptance	Rank in reading	Rank in social acceptance
1	1	31	15
2	3	31	18
3	7	33	18
4	20	34	37
5	6	34	37
7	15	36	24
7	13	37	13
7	37	37	29
9	29	39	9
10	3	40	37

It was found that the best reader in the class was also the most accepted of the group. It is interesting to note that the second and tenth cases in reading ability ranked the same in social acceptance, which was third. While both pupils show the same degree of popularity, the writer observed that the student who ranked second in reading is quiet, but very co-operative with the rest of the class, while the tenth pupil in reading shows the tendency to demand attention from the class members. This seems to indicate that the pupil ranking second is more concerned with reading, while the tenth pupil in reading is more interested in the relationships with other students. The third position in reading stood seventh in social acceptance, while the student who ranked fourth in reading fell to twentieth rank in the social acceptance of the group. The fifth rank in reading was found to be sixth in social acceptance. Of the three students who fell in the seventh rank in reading, one was in fifteenth position in social acceptance, one thirteenth, while the other one made a low social acceptance rank of thirty-seventh. It was found by the writer that out of these three positions in reading, the one who scored low in acceptance by the other students is more interested in reading and makes no effort to be socially accepted by the rest of the class. The student who ranked ninth in reading was found to be in the low position of social acceptance, which

placed him twenty-ninth.

The comparison of the ten poorest readers and the ten best readers in relation to their social acceptability shows fairly obvious significance. Of the two who ranked thirty-first in reading, one ranked fifteenth and the other one eighteenth in social acceptance, while the thirty-third rank was also eighteenth in popularity. Going further, the reader will note that the two students who ranked thirty-fourth in reading was in the same position in social acceptance, which was thirty-seventh. In the next position the writer found the thirty-sixth child in reading to be twenty-fourth in social acceptance, while the two who fell in the thirty-seventh rank showed ranks of thirteenth and twenty-ninth in popularity. It is observed that the thirty-ninth child in reading has a high social acceptance position of ninth. The reader will note from Table I that this same child ranked thirty-eighth in intelligence. It is reasonable to assume that this low intelligence quotient has limited the reading ability of this student, and with this limitation, he has sought and won the pleasure of being socially accepted by his classmates.

Results of Table VII show a rather distinctive relationship between efficient reading and the factor of social acceptance. With the exception of one student, who ranked thirty-ninth in reading and ninth in social acceptance, the ten poorest readers were also comparatively low in

popularity. Although two of the ten best readers were low in social acceptance, it is fairly obvious that the ten students who scored highest in reading, in the over-all picture, ranked highest in social adjustment. Therefore, it is to be assumed that students who are self-confident and who know that they are socially accepted by others will more likely be among those who have little or no difficulty in reading.

Relation of reading to social participation.

Table VIII was constructed from the results of one of the ten factors taken from the Mental Health Analysis Test.[12] Of the two hundred items in this test, the items pertaining to social participation were tabulated and each child was ranked according to their desirability or willingness to actively engage in social activities.

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12 Mental Health Analysis Test, loc. cit.

TABLE VIII

RELATION OF READING TO SOCIAL PARTICIPATION

Highest ten		Lowest ten	
Rank in reading	Rank in social participation	Rank in reading	Rank in social participation
1	31	31	8
2	17	31	8
3	8	33	37
4	17	34	34
5	12	34	31
7	27	36	8
7	23	37	24
7	3	37	3
9	37	39	37
10	17	40	40

While social acceptance, Table VII, plays a part on effectual reading, there is very little relation of social participation to the ability to read. On rare occasions, over-participation in social activities may tend to retard the pupil's progress in reading. The writer found this tendency in four cases among the ten poorest readers. In observing these students, it has been quite obvious that the attempt to participate socially has been of more concern to them than reading. However, in the over-all picture, it may be assumed that the extent to which pupils participate in social activities has little to do with whether or not they are good readers.

Relation of reading to emotional stability. Many studies have shown that children who are unable to approach classroom situations with self-confidence and security are often emotionally maladjusted. Table IX shows the relation of emotional stability to reading as found in the eighth grade students in the Parkway School. Results of this study were taken from one of the ten factors in the Mental Health Analysis Test,[13] which consisted of two hundred items. The items concerning their emotional stability were tabulated, and each child was ranked according to their self-confidence and security in the classroom.

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[13] Loc. cit.

TABLE IX

RELATION OF READING TO EMOTIONAL STABILITY

Highest ten		Lowest ten	
Rank in reading	Rank in emotional stability	Rank in reading	Rank in emotional stability
1	4	31	11
2	4	31	37
3	34	33	13
4	2	34	13
5	24	34	34
7	17	36	37
7	4	37	27
7	30	37	34
9	24	39	17
10	8	40	17

In comparing reading with freedom from emotional instability, there seemed to be greater deviations among the ten highest scores. It will be observed that numbers one and two in reading were in fourth position in emotional stability, with number three in thirty-fourth position. The student that stood fourth in reading ranked second in emotional stability, while the fifth and ninth ranks in reading showed the same position in emotional stability, which was twenty-fourth. The three students who stood seventh in reading showed ranks of seventeenth, fourth, and thirtieth in freedom from emotional disturbances. The pupil who ranked thirtieth in emotional stability was found to be in the upper third of the class in intelligence. Therefore, it can be assumed that the relatively high intelligence quotient has offset, to some extent, the emotional instability factor of this student. It was found that the pupil who ranked tenth in reading ranked eighth in emotional stability.

It is fairly obvious that the positions of the ten lowest pupils in reading compare quite favorably with their ranks in emotional stability. The writer found two students who ranked thirty-first in reading. Of these two, one ranked eleventh in emotional stability while the other one was thirty-seventh. The thirty-third student in reading was thirteenth in emotional stability. Of the two who stood thirty-fourth in reading efficiency, one stood thirteenth

in freedom from emotional instability, while the other one fell to thirty-fourth position. The thirty-sixth rank in reading was thirty-seventh in emotional stability, while the two who ranked thirty-seventh in reading stood twenty-seventh and thirty-fourth in their emotional adjustment. The reader will observe that the two lowest scores in the ability to read ranked the same in freedom from emotional instability, which was seventeenth.

Of the ten best readers in the class, fifty per cent were found to have tendencies toward emotional instability. Durrell[14] suggests that occasionally the reading of a child may be affected by general emotional conditions. These emotions are often attached to some particular situation, and the child may respond to this upset by taking interest in some other phase of school work, such as reading. Although the third best reader scored low in emotional stability, the writer is inclined to believe that this was due to the death of the child's mother.

It is fairly obvious that in the over-all picture of the ten poorest readers, there is evidence that their ability to read has been affected by their emotional instability. From this study, the writer found that,

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[14] Durrell, op. cit., p. 284.

generally, the poorest readers were also more maladjusted in emotional stability than the ten best readers.

In conclusion and in comparison of the ten best readers and their ranks in emotional instability with those of the ten poorest readers, it is logical to assume that emotional instability plays a definite part in the ability to read, although there may be exceptions.

Relation of reading to mental health. Information for the relation of this factor to reading was obtained from the total scores of the ten factors found in the Mental Health Analysis Test,[15] which included two hundred items in regard to mental health. The writer feels that this test accurately reveals the mental health of the eighth grade students in the Parkway School. Table X shows the relation of this factor to retardation of reading among the ten best and the ten poorest readers in the class.

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15 Mental Health Analysis Test, loc. cit.

TABLE X

RELATION OF READING TO MENTAL HEALTH

Highest ten		Lowest ten	
Rank in reading	Rank in mental health	Rank in reading	Rank in mental health
1	10	31	6
2	4	31	19
3	16	33	40
4	3	34	37
5	18	34	31
7	12	36	12
7	4	37	32
7	8	37	39
9	27	39	38
10	14	40	14

The frame of mind in which a child works and lives plays a part in the ability to read. Nine out of the ten best readers rank in the upper half of the class in mental health with one falling in the lower half. Of the ten poorest readers, we find only four in the upper half, while the remaining six show low ranks in the lower half of the class. From this comparison we may assume that there is a relatively high relation between mental health and retardation of reading.

Table XI was constructed by averaging the ranks of all factors studied for each child. This shows the average rank of each child.

TABLE XI

AVERAGE RANKS OF TOTAL FACTS STUDIED

Highest ten		Lowest ten	
Rank in reading	Average ranks in all factors	Rank in reading	Average ranks in all factors
1	10	31	6
2	4	31	19
3	16	33	40
4	3	34	37
5	18	34	31
7	12	36	12
7	4	37	32
7	8	37	39
9	27	39	38
10	14	40	14

Table XI shows the average ranks of the total factors studied as related to the corresponding ranks in reading. Of the ten best readers only one had an average rank that fell in the lower half of the class, while six out of the ten poorest readers were found to be in the lower half of the class.

It is fairly obvious that, in the over-all picture, the best readers are among the highest ranks in the class and show greater freedom from the various factors studied, while the poorest readers are among the lowest ranks in the class and their reading ability was found to be more affected by the factors studied.

Although the intelligence quotient was found to have a higher relation to the retardation of reading, the writer is of the opinion that no one factor is the cause of reading retardation but that reading ability is affected by all of the factors.

SUMMARY

In summarizing the various factors that were studied and their relation to the retardation of reading, the writer felt that an over-all picture of the ranks of each factor would be helpful. For convenience, Table XII was constructed to show the ranks of the ten best readers and their ranks

in each influencing factor with the ten poorest readers and their positions in each factor.

It is obvious from Table XII that in an over-all picture, the ten best readers had higher intelligence quotients, while those lowest in reading were also found to be lowest in intelligence. Although, there were exceptions, the awareness or consciousness of physical defects was found to have very little affect on the reading ability of either group. It is the opinion of the writer that physical defects found in this study were of minor importance. Of the ten best readers, six were found to have defective eyesight, while there were seven with defective vision among the ten poorest readers. It can be assumed that the defects found in vision had very little, if any, affect on reading retardation of either the ten best or the ten lowest ranks in reading. There were only four minor defects found in hearing, therefore, it can be assumed that the auditory ability of these students has not affected their reading efficiency. It is fairly obvious from Table XII that the students in the lowest reading ranks have more emotional disturbances than the ten best readers. The ten best readers were found to have a total of 379 absences while the lowest readers ran up a total of 1,347 absences. This indicates that reading retardation of these eighth grade students has been, and still is, affected by their absences.

Social acceptance plays an important role in the ability to read effectively, while the desire to participate in social activities is of minor importance. Of those that were the ten best in reading, only one was found in the lower half of the class in mental health, while the greater percentage of the ten poorest readers were in the lower half of the class. This comparison clearly indicates that the mental well-being of a student is a very definite factor in retardation of reading.

Of all the factors involved, the writer has concluded, from this study, that the intelligence quotient is, by far, the most influential factor in reading retardation.

TABLE XII

COMPARISON OF THE TEN BEST READERS WITH THE TEN POOREST IN READING AS RELATED TO THE VARIOUS FACTORS STUDIED

Highest ten												Lowest ten											
Reading rank	I. Q. rank	Physical defects rank	Eyesight Left	Eyesight Right	Hearing	Absences rank	Social acceptance rank	Social participation rank	Emotional stability rank	Mental health rank	Average rank of total factors	Reading rank	I. Q. rank	Physical defects rank	Eyesight Left	Eyesight Right	Hearing	Absences rank	Social acceptance rank	Social participation rank	Emotional stability rank	Mental health rank	Average rank of total factors
1	1	26	20/20	20/20	Normal	5	1	31	4	10	11	31	38	4	20/15	20/15	Defective	22	15	8	11	6	14
2	8	14	20/70	20/15	Defective	21	3	17	4	4	10	31	29	20	20/20	X	Normal	24	18	8	37	19	12
3	2	20	20/50	20/40	Normal	3	7	8	34	16	13	33	31	39	20/20	20/20	Normal	32	18	37	13	40	30
4	5	4	20/20	20/20	Normal	10	20	17	2	3	8	34	37	37	20/20	20/40	Normal	39	37	34	13	37	33
5	11	29	X	20/15	Normal	1	6	12	24	18	14	34	33	10	20/30	20/30	Normal	27	37	31	34	31	29
7	4	20	20/40	20/40	Normal	30	15	27	17	12	17	36	33	4	20/40	20/30	Normal	40	24	8	37	12	22
7	13	20	20/40	20/30	Defective	8	13	23	4	4	12	37	36	35	20/40	20/40	Defective	22	13	24	27	32	27
7	13	20	20/40	20/20	Normal	35	37	3	30	8	20	37	33	39	20/30	20/40	Normal	34	29	3	34	39	30
9	35	4	20/20	20/20	Normal	5	29	37	24	27	23	39	38	37	20/50	20/40	Normal	38	9	37	17	38	30
10	3	32	20/15	20/20	Normal	19	3	17	8	14	13	40	40	10	20/20	20/20	Normal	36	37	40	17	14	27

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

It is the purpose of this chapter to summarize the data considered in this study. For obtaining the correlation of each of the factors as related to retardation of reading the correlation formula $1 - \frac{6\ 2\ D^2}{N\ (N^2-1)}$ was used. The writer found that the intelligence quotient in relation to reading had a correlation of .75, which was the highest of the nine factors studied. This indicates that the intelligence quotient of these eighth grade students has more relation to the retardation of reading than any of the other factors. Absences was found to be second in relation to reading with a correlation of .55. Mental health was third in relation to reading with a correction of .43. Social acceptance was fourth in relation to reading with a correlation of .39. Self-consciousness or awareness of physical defects showed a small margin of correlation when related to retardation of reading. Although emotional instability has been found to be of major importance in many other studies, the writer found a correlation of .17 in this factor which indicates that the emotional stability of these students had little relation to their reading ability. The willingness of the students to actively

participate in social activities was found to have a correlation of .16, which shows very little relation to the retardation of reading.

CONCLUSIONS

This study suggests that:

1. The intelligence quotient of the eighth grade students was found to be closely interwoven with reading retardation.

2. The number of absences plays an important part in the reading retardation of students.

3. The influences of mental health or frame of mind under which a child works plays an important role in the ability to read.

4. The social acceptance or social approval of students by others, plays a part in reading disability.

5. The children were found to be relatively free from self-consciousness of their physical defects or physical appearance.

6. The emotional life of these students showed little significance in their ability to read.

7. Social participation of these students has very little to do with whether or not they have reading difficulties.

8. Out of the forty students surveyed defective eyesight was at a minimum. Lack of adequate vision was not found to be a frequent cause of reading retardation and obviously did not set apart the children with reading defects.

9. The writer found only four with defective hearing. This study shows that no relation was found in auditory defects and reading retardation.

Results of this study seems to indicate that reading retardation, among the eighth grade students in the Parkway School, has resulted from a variety of factors rather than any one of the factors studied. It is the opinion of the writer that reading difficulties are individual problems, and in order to realize success or achievement in reading, each problem must be given individual attention.

As a result of the study, the writer suggests the following problems in which there is a need for further investigations.

1. What are the possibilities of a closer relationship between the home and school where the mental well-being of a child is concerned?

2. To what extent can the school go in helping children to overcome their emotional maladjustment?

3. How can the school more adequately meet the social sensitivity and social needs of each individual child?

4. What are the possibilities of the home and school working together more closely or detecting physical defects and taking the proper corrective measures?

5. How can the school program be organized to more effectively meet the need for satisfactory participation in social activities?

6. What, if any, are the possibilities of the school and home successfully meeting the problems that influence the number of absences?

7. What can the school do to provide better environmental conditions under which the learning ability of the students can be improved?

8. What can the school and teachers do toward giving more attention to the individual reading problems, and at the same time, provide more opportunities for wider experiences?

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APPENDIX

TABLE XIII

A SUMMARY OF THE FACTORS INFLUENCING READING

Rank in reading	Rank in I. Q.	Rank in physical defects	Eyesight Left	Eyesight Right	Hearing	Absences No.	Absences Rank	Rank in social acceptance	Rank in social participation	Rank in emotional stability	Rank in mental health	Average rank of total factors
1	1	26	20/20	20/20	Normal	16	5	1	31	4	10	11
2	8	14	20/70	20/15	Defective	48	21	3	17	4	4	10
3	2	20	20/50	20/40	Normal	14	3	7	8	34	16	13
4	5	4	20/20	20/20	Normal	30	10	20	17	2	3	8
5	11	29	X	20/15	Normal	1	1	6	12	24	18	14
7	4	20	20/40	20/40	Normal	76	30	15	27	17	12	17
7	13	20	20/40	20/30	Normal	21	8	13	23	4	4	12
7	13	20	20/40	20/20	Defective	112	35	37	3	30	8	20
9	35	4	20/20	20/20	Normal	16	5	29	37	24	27	23
10	3	2	20/15	20/20	Normal	45	19	3	17	8	14	13
11	20	26	20/20	20/20	Normal	16	5	24	34	39	36	26
12	20	32	20/20	20/30	Normal	37	14	9	23	30	35	23
13	20	4	20/20	20/20	Normal	65	25	9	17	8	7	13
13	23	21	20/20	20/20	Normal	44	18	34	17	34	34	26
15	7	4	20/15	20/15	Defective	39	6	37	34	8	23	18
16	26	14	20/20	20/20	Normal	43	17	24	27	24	11	17
17	8	14	20/20	20/20	Normal	84	32	24	17	37	20	21
19	15	35	20/20	20/20	Normal	68	26	11	23	17	30	22
19	23	35	20/20	20/20	Normal	37	14	29	24	8	30	23
19	29	30	20/20	20.20	Normal	35	13	24	17	30	28	24
23	5	26	20/20	20/20	Normal	74	29	15	8	27	23	18
23	10	14	20/20	20/20	Normal	14	3	5	3	30	17	11
23	16	32	20/20	20/20	Normal	12	2	29	17	24	23	20
23	26	16	20/20	20/20	Normal	24	9	29	28	17	28	21
23	26	32	20/20	20/20	Normal	78	31	29	8	17	23	23
26	17	4	20/20	20/15	Normal	47	20	29	1	4	1	10
27	13	14	20/15	20/15	Normal	31	12	18	35	1	2	13
27	20	20	20/20	20/20	Normal	73	28	11	28	21	33	23
29	17	26	20/20	20/20	Normal	30	10	37	37	24	20	24
30	29	26	20/15	20/15	Normal	185	37	20	35	11	20	25
31	29	4	20/20	X	Defective	52	22	15	8	11	6	14
31	38	20	20/15	20/15	Normal	63	24	18	8	37	19	12
33	31	39	20/20	20/20	Normal	84	32	18	37	13	40	30
34	33	37	20/30	20/30	Normal	256	39	37	34	13	37	33
34	37	10	20/30	20/30	Normal	70	27	37	31	14	31	29
36	33	4	20/40	20/30	Normal	288	40	24	8	37	12	22
37	33	35	20/40	20/40	Defective	52	22	13	24	27	32	27
37	36	39	20/30	20/40	Normal	86	34	29	3	34	39	30
39	38	37	20/50	20/40	Normal	238	38	9	37	17	38	30
40	40	10	20/20	20/20	Normal	158	36	37	40	17	14	27